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Faculty of Management Studies and Commerce

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Shaping Regions for Resilience, Inclusion, and Sustainability

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(ICCM - 2026)

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**A CONCEPT PAPER OF PERCEIVED RISKS ON BUY NOW PAY LATER (BNPL)
ADOPTION INTENTION: A PERCEIVED RISK THEORY PERSPECTIVE**

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Abstract

Purpose: This study aims to examine the impact of perceived psychological, social, and performance risks on consumers' intention to adopt Buy Now Pay Later (BNPL) services. Grounded in Perceived Risk Theory, the study seeks to address the limited systematic understanding of how different risk dimensions influence BNPL adoption, particularly in emerging markets such as Sri Lanka.

Design/methodology/approach: A systematic literature review was conducted using a PRISMA-based approach. Relevant studies were retrieved from four major academic databases: ScienceDirect, Emerald Insight, IEEE Xplore, and ResearchGate. An initial pool of 253 articles was identified, and after applying screening and eligibility criteria, 85 studies were selected for final analysis. The study synthesizes existing empirical findings to evaluate the impact of perceived risk dimensions on BNPL usage intention.

Findings: The findings reveal that perceived psychological risk has the strongest negative influence on BNPL adoption intention, primarily due to consumer anxiety and concerns regarding future financial obligations. In contrast, perceived social risk and perceived performance risk were found to have less significant or inconsistent effects on adoption intention. The results highlight the dominant role of emotional and cognitive factors in shaping consumer decision-making in the BNPL context.

Research limitations/implications: This study is limited by its reliance on secondary data and the exclusion of primary empirical validation. Additionally, the focus on selected databases may limit the comprehensiveness of the literature. Future research should incorporate empirical data and explore moderating or control variables such as risk tolerance in different cultural contexts.

Originality/value: This study contributes to the literature by providing a structured and comprehensive synthesis of perceived risk dimensions in BNPL adoption. It extends the application of Perceived Risk Theory in fintech and offers insights for practitioners and policymakers to enhance transparency and reduce psychological barriers in digital financial services.

Keywords: Buy Now Pay Later (BNPL); Buying Intention; Perceived Performance Risk; Perceived Psychological Risk; Perceived Social Risk

1. Introduction

1.1. Background of Study

Financial technology has advanced very rapidly, significantly changing the way consumers use goods and services within the world's digital economy. One of the important innovations in such technological advancements is the 'Buy Now, Pay Later' (BNPL) system. It is a way of payment in which consumers can buy products or services and pay them in installments. This is due to increased use of e-commerce, the widespread of smartphones, and greater access to financial services ([Wei et al., 2025](#)). BNPL (Buy Now, Pay Later) services operate in a simpler and more organized manner, with less paperwork.

BNPL services have gained more popularity in Asian countries, including India, Indonesia, and Malaysia, ([Abed & Alkadi, 2024](#)). Being rather new in Sri Lanka, BNPL is still spreading quickly, particularly among the younger generation, who are urban and semi-urban residents and actively engage in online purchases. The addition of BNPL solutions to retail and e-commerce platforms by local providers like Mintpay and Koko is an indication that the consumer payment preferences are changing. The psychological and perceptual factors that determine the intention of Sri Lankan consumers to use BNPL are under-researched.

Perceived risk is also an important factor in the adoption of new financial technologies, because uncertainty about possible adverse effects may play a significant role in the decision making of consumers. Perceived risks in the framework of BNPL might be based on the worries about repayment requirements, the lack of awareness about the reliability of the services, and the fear of social or financial stigma ([Jangir et al., 2023](#)). Perceived Risk Theory put forward by [Baker \(2001\)](#) offers a good perspective through which to view the process through which consumers evaluate the possibility of negative outcomes when making a financial decision. The further developments of this theory point at several dimensions of perceived risk - out of which psychological, social, and performance risks have special implications in the use of BNPL ([Jacoby & Kaplan, 1972](#); [Stone & Grønhaug, 1993](#)).

Whereas the BNPL adoption drivers, including trust, convenience, and perceived usefulness, have been covered globally ([Abed & Alkadi, 2024](#)), little empirical evidence has been conducted on the psychological factors of perceived risk, particularly in emerging economies. Additionally, the studies conducted in Sri Lanka have mainly focused on the trends in digital banking and e-commerce ([Wasantha Premarathne, 2016](#)), and little has been done regarding BNPL. This poses a research gap with regard to the effect of psychological, social, and performance risk perceptions as they affect the intention to use BNPL among consumers in Sri Lanka. This gap demonstrates the necessity to empirically investigate the effect of various aspects of perceived risk in determining the intention of consumers to utilize BNPL services in the Sri Lankan setting. Thus, the proposed research will fill this gap by concentrating on three central research questions: (1) How does perceived psychological risk affect BNPL buying intention? (2) How does perceived social risk affect BNPL buying intention? (3) How does perceived performance risk affect BNPL buying intention? Consistent with these questions, the study is informed by the following objectives: (1) To evaluate the influence of perceived

psychological risk on BNPL buying intention. (2) To assess the impact of perceived social risk on BNPL buying intention. (3) To investigate the effect of perceived performance risk on BNPL buying intention.

2. Theoretical Framework

Perceived risk theory which was first proposed by [Bauer and Bauer \(1960\)](#) and this theory suggests that consumer decision making is characterized by uncertainty and therefore it is not unusual to find people rating the probable negative consequences before making a purchase. In this view, consumers do not react to the objective attributes of a product or service, but to the subjective considerations on the potential negative implications of the choice. Subsequent researchers extended the initial concept by Bauer to a multidimensional framework comprising of financial, performance, psychological, social, time, and physical risks ([Jacoby & Kaplan, 1972](#)). Further studies has always verified the multidimensionality of perceived risk in consumer behavior, and proved that it is a strong predictor in the adoption of technology-based services ([Featherman & Pavlou, 2003](#)).

The theory is based on the assumption that consumers will minimize or evade negative consequences in case of uncertainty. It implies that in cases when the effects of the decision are not clear, people can postpone, alter, or avoid the purchase altogether. The other main assumption is that the perception of risk is influenced by the individual experience, social, and situational factors, and the response of the consumers is highly contingent upon their surroundings and familiarity with the service. Other studies on the adoption of digital finance also emphasize that perceived risk is a key factor that restricts user adoption, particularly in a setting where consumer protection is weak and regulatory clarity is low ([Yousafzai, Pallister, & Foxall, 2003](#)).

The applicability of Perceived Risk Theory to the current research is due to the specifics of the BNPL services that introduce the issue of uncertainty concerning the repayment responsibility, the reliability of the services, the processing of the data, and the evaluation of the social judgment. In spite of the convenience and affordability of BNPL, many consumers, especially in developing economies, feel that they are facing a lot of risks, as they lack the understanding of it, their digital financial literacy is low, and they lack defined norms regarding digital credit ([Jangir et al., 2023](#)). Recent research on BNPL shows that consumers lack trust in the payment terms, hidden fees, and the platforms that provide such services. As a result, their sense of risk increases, and therefore, their willingness to use this service appears to decrease. ([Xie et al., 2021](#)). According to the perceived risk theory, the psychological and social barriers that consumers face when using BNPL services are anxiety, fear, and mental discomfort. Thus, it is usefull for identifying the barriers Sri Lankan consumers face in using BNPL and for obtaining new valuable data for further research on fintech services ([Limbu, Wolf, & Lunsford, 2012](#); [Oliveira et al., 2016](#)).

2.1. Buy Now, Pay Later Service

Buy Now, Pay Later (BNPL) is a modern digital payment method that allows consumers to receive goods or services immediately and pay the corresponding amount later within a predetermined period, often interest-free or at a low interest rate, in installments. The popularity of this model is due to the ease and flexibility of this model. As opposed to the classic credit cards, BNPL can usually be provided with little to no credit scrutiny, and it is also provided on point of sale, which makes it especially attractive to younger and more financially restricted customers ([Zhu, 2025](#)).

According to [Jing et al. \(2024\)](#) BNPL has increased the access to flexible credit to the Gen Z population in Malaysia, However, BNPL also comes along with perceived risks. [Raj, Jasrotia and Rai \(2024\)](#) state that although perceived benefits encourage adoption, uncertainty of the repayment and privacy concerns can discourage of consumers toward BNPL. The notion of [Silva, Perera and Kumara \(2023\)](#), goes further in that perceived risk is also important in the use of digital financial services in general.

2.2. Sri Lankan Applications of BNPL

In Sri Lanka, BNPL is on the rise with the help of fintech-based payment applications and online platform collaborations. These services are becoming popular with young and technologically advanced consumers, especially in urban regions.

Koko Pay: Buy Now Pay Later (BNPL) services whereby customers can make purchases and pay in instalments within a short time frame. It is widely applied in web-based shopping and minor service purchases ([Chamuditha & Colombage, 2025](#)).

Mint Pay: A digital payment platform that also provides BNPL services, but the product is mainly used to buy consumer goods, including clothes, electronics, and personal care items.

The convenience and concerns raised by user experiences in online forums include late fees, lack of transparency, and responsiveness of services. These new problems highlight the significance of perceived social, psychological, and performance risks in the process of BNPL adoption in Sri Lanka ([Chamuditha & Colombage, 2025](#)).

2.3. Buying Intention of BNPL

Buying intention in the case of Buy Now Pay Later (BNPL) services is the readiness of a consumer to make deferred payment purchases. Perceived Risk Theory suggests that the presence of greater perceived risks will adversely affect the buying intention. It is important to understand the impact of these risk perceptions. [Ajzen \(1991\)](#) states that buying intention indicates the motivational variables that influence consumer behavior to take action. BNPL enables consumers to receive the goods without paying immediately, and this increases short term affordability and encourages buying behavior ([Raj, Jasrotia, & Rai, 2024](#)). Nevertheless, perceived risk also plays a crucial role in this intention because consumers consider the

uncertainty and the possible adverse consequences of delayed payments ([Zhao & Khaliq, 2024](#)).

There are several dimensions of perceived risk that influence the intention of consumers to use BNPL. Perceived social risk is a situation where consumers are afraid of being negatively judged by peers or family because they are using deferred credit services, which can decrease the desire to purchase. The perceived psychological risk is the emotional stress, expected regret, or anxiety that comes with the commitment to future debt obligations that can deter consumers using BNPL. Perceived performance risk indicates the fear that the bought products would not live to their expectations or that the repayment procedures would be inconvenient or troublesome reducing the chances of adoption ([Raj, Jasrotia, & Rai, 2024](#)).

It has been confirmed through empirical literature that such feelings of risk regarding BNPL usage have an impact. [Ali and Aziz \(2022\)](#) have shown that having trust and reliability in an online platform helps consumers reduce their perceived social and performance risks, which in turn may increase their purchase intention.

Overall, the purchase intent toward BNPL is a multidimensional process that is based on the interplay of convenience, perceived social, psychological, and performance risks of a person.

2.4. Perceived Risk

The concept of perceived risk is central in the consumer behavior literature, It can be defined as subjective perception of a consumer regarding the possible adverse situations that the usage of a product, service, or technology ([Kesharwani & Singh Bisht, 2012](#); [Thakur & Srivastava, 2014](#)). In the world of digital finance, the risk perception assumes a crucial part in formulating user behavior. Although BNPL is positioned as an easy and interest-free payment method, it generates concerns in terms of their overcommitting financially, trusting in the service and exposure to consumer data [Raj, Jasrotia and Rai \(2024\)](#).

Perceived risk is multidimensional in the conception. According to classifications in consumer and fintech studies, there are six basic categories, namely, financial risk, performance risk, psychological risk, social risk, time risk, and security/privacy risk. For the case of digital financial services, [Silva, Perera and Kumara \(2023\)](#) stress that such dimensions often appear in the process of assessing this type of service and they significantly differ in their impact on behavior intention.

Perceived risk is a declared part in the meantime adoption behavior with effortful information as empirical signs in the BNPL setting ([Raj, Jasrotia, & Rai, 2024](#)). Based on this, at the very least, this paper will consider three of the dimensions of risks that relate most to the use of a BNPL plan: social risk, psychological risk, and performance risk.

Perceived social risk is the fear of being socially disapproved or being negatively affected by reputational damage due to the use of BNPL services. Perceived psychological risk is the feeling of inner pressure, worry, or guilt over the use of BNPL. Perceived performance risk is related to the risks that the BNPL service will not work as it is supposed to, including, but not limited to, hidden fees, unclear terms, or unreliability.

2.4.1. Perceived Social Risk

Perceived Social Risk is the fear or concern that the purchase decision of a consumer may result in disapproval, criticism, or negative judgment by other people in the social circle, including family, friends, or peers. The importance of Perceived Social Risk as a dimension of perceived risk was first identified by [Jacoby and Kaplan \(1972\)](#), who pointed out that consumer behavior is frequently based on the attitudes and responses of people who are important to them. This type of risk is the expectation of the consumer towards social consequences that might arise due to the purchase and not the financial or functional implications of the purchase. In the context of Buy Now, Pay Later (BNPL) services, individuals may hesitate to use such options due to the fear that society may perceive them as financially unstable or irresponsible.

Perceived Social Risk on BNPL Buying Intention

The influence of Perceived Social Risk on purchase intentions is supported with a significant number of studies particularly when it comes to financial and online shopping. [Maisara, Hamad and Yusuf \(2022\)](#) found out that Perceived Social Risk had an exceptional impact on reducing the online shopping practice in Zanzibar where shopping people were fearful of ridicule by their colleagues. Some of the measures of Perceived Social Risk used in the research included embarrassment and fear of friends or family members discovering about their purchases, which directly affect the chances of purchasing financial services like BNPL.

On the same note, [Lakchan and Samaraweera \(2023\)](#) found that Perceived Social Risk was a powerful negative predictor of purchase intention in the Sri Lankan fast fashion market. Their results are consistent with the theory that the fear of social disapproval in collectivist cultures where social perception is the most important can significantly decrease the adoption intentions of services such as BNPL.

However, PSR does not have the same impact in every situation. On the other hand, publicly observable or symbolic financial choices increase the social risk and decrease the buying intention. Negative social appraisal may deter the consumers to have the intention of using such services ([Park & Jun, 2003](#)). Thus, it can be predicted that BNPL buying intention will decrease when there is perceived social risk.

H₁: Perceived social risk impacts BNPL buying intention.

2.4.2. Perceived Psychological Risk

Perceived psychological risk is the emotional unease, anxiety or mental uneasiness felt by consumers who fear that their buying decisions will result in regret, loss of self-esteem or inner dissatisfaction ([Featherman & Pavlou, 2003](#)). Psychological risk is focused on the negative emotional outcomes that consumers expect to occur as a result of the purchase process, e.g. guilt or anxiety. Psychological risk, unlike financial or performance, is not related to the functional features of the product but to the inner emotional response of the consumer to his or her buying decision. It comprises fear of regret in the future, guilt, or emotional load in regard to financial obligations ([Featherman & Pavlou, 2003](#)). Thus, the hypothesis of the study is that the higher the level of psychological risk, the more negative the impact on the buying intention.

Perceived Psychological Risk in BNPL Services

The psychological risk notion has gained particular importance in the sphere of Buy Now Pay Later (BNPL) services which are quickly becoming popular. The psychological environment is different because BNPL enables consumers to decouple the purchase and the payment. Recent studies identify psychological risk as one of the key factors influencing user intentions and further use of BNPL. [Raj, Jasrotia and Rai \(2024\)](#) claim that impulsive BNPL customers are usually guilty and regretful, particularly when younger consumers lack full knowledge of the financial consequences. [Kumar, Salo and Bezawada \(2024\)](#) underline that peer pressure and emotional reasons are the powerful factors that stimulate the BNPL adoption; nevertheless, the same customers can experience anxiety about the unintentional repayments. This fear is a psychological threat that puts off the repetition of using BNPL services. [Zhu \(2025\)](#) goes further to elaborate that psychological distance caused by separating payment and purchase in BNPL can decrease the pain of payment during purchase but increase the emotional pain when repayment is due.

H₂: Perceived psychological risk impacts BNPL buying intention.

2.4.3. Perceived Performance Risk

Perceived Performance Risk is the fear or the concern that a product or a service will not perform as expected and will lead to dissatisfaction, regret or a loss of trust. Performance risk was first recognized by [Jacoby and Kaplan \(1972\)](#) as a central dimension of the perceived risk, and it was pointed out that consumers are not only influenced by the financial aspects of the purchase but also by the uncertainty of functional performance.

Performance risk is especially important in the context of digital financial services like Buy Now Pay Later (BNPL) since consumers are highly dependent on technology and third parties to provide them with smooth and correct transactions. Such uncertainty can make consumers unwilling to commit, thereby decreasing their intention to use BNPL. According to [Stone and Grønhaug \(1993\)](#), claim that performance risk occurs when there is a threat of system malfunction or product failure, or inefficient services. [Pham Thi, Pham and Duong \(2024\)](#) used this information in BNPL, which said that customers may hesitate to use the services where they anticipate delays, system failure, or failure to obtain the advertised outcome.

Perceived Performance Risk on BNPL Buying Intention

The empirical research has been consistent in indicating that Perceived Performance Risk is a strong put-off to online purchasing habit and the desire to utilize BNPL services. In a study of the adoption of FinTech in the markets, [Jain and Raman \(2022\)](#) concluded that system crashes, technical failures, and unpredictable results of transactions were extremely reduced and decreased consumer trust which reduced the adoption intention of digital financial services

Although there is a lot of evidence of the negative effects of PPR, there are reports of moderating factors that can reduce the effects. [Zhao and Khaliq \(2024\)](#) separated pre and post transaction risks. They came to the conclusion that PPR has less influence on digitally literate

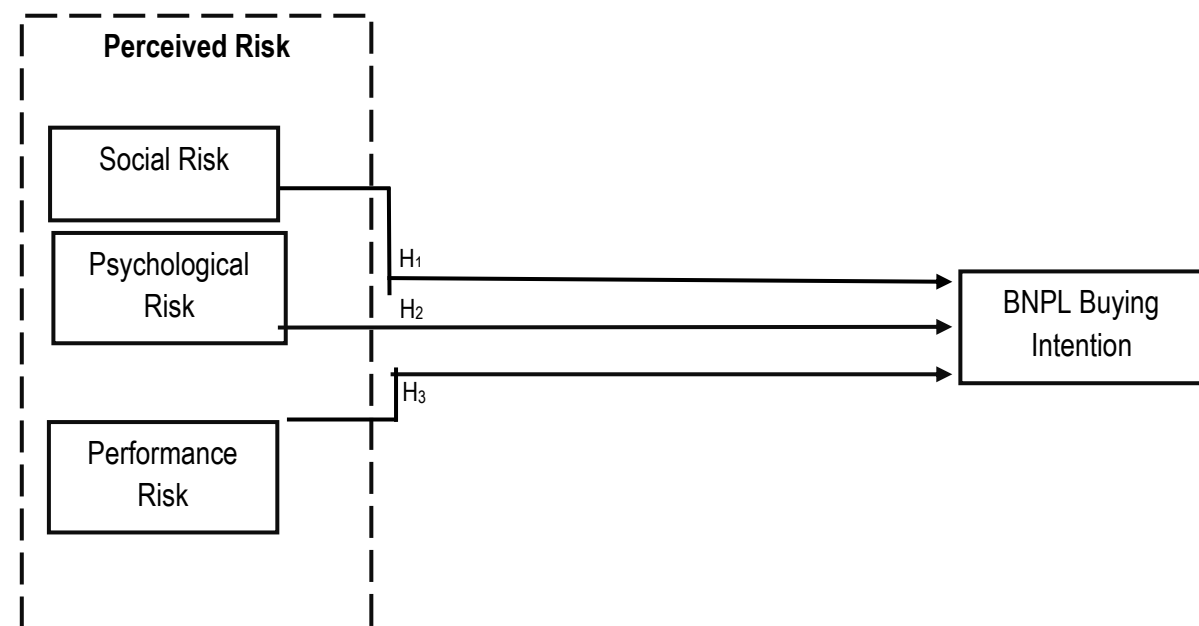
and experienced consumers because the familiarity with online shopping reduces the uncertainty

H₃: Perceived performance risk impacts BNPL buying intention.

3. Conceptualization

3.1. Conceptual Framework

Based on our discussion and review of the literature, we have derived the following conceptual framework.



Source: Author's Own Work

Figure 1 : Conceptual Framework

3.2. Methods

The PRISMA flow diagram presents the systematic flow of how the literature review in this study on BNPL usage intention was carried out. The first search was conducted in four large academic databases, Science Direct, Emerald Insight, IEEE Xplore, and ResearchGate using appropriate keywords. There were 253 retrieved publications.

During the initial screening stage 34 articles were removed due to their lack of correspondence with the key categories of BNPL usage intention. Most of them were excluded due to overlapping records (29 articles), lack of information (2 articles), or irrelevance to the focus of the research (3 articles).

The rest 219 articles were then reviewed through title and abstract screening. Thirty-nine publications were deleted because they did not match the inclusion criteria. The ones that were left (180 articles) were further screened according to the keywords and contextual relevance and 52 more articles were excluded. A total of 85 articles were then read fully to determine the

contextual fit and 43 of them were excluded, leaving 45 publications that satisfied all eligibility criteria and were used in the current study to extract and analyze data.

This methodical approach made the quality and relevance of the chosen literature even stronger, which gave credibility and focus of the study results.

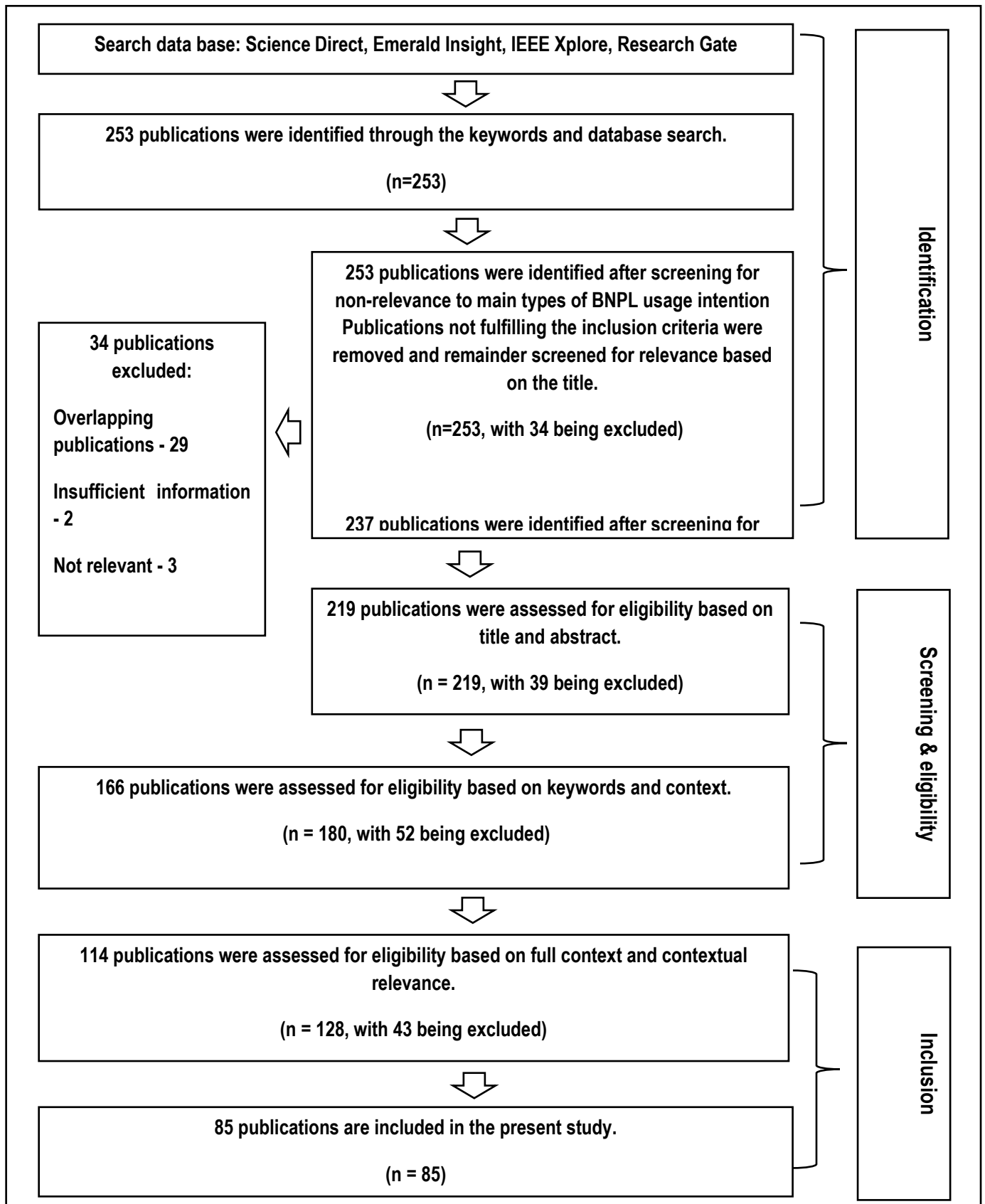


Figure 2

4. Finding and Discussion

The PRISMA-based systematic literature analysis revealed 85 studies that are relevant to the study topic and explore the Buy Now, Pay Later intent to use and risk factors. The results reveal that perceived risk is a multidimensional construct that drives consumer adoption behaviour especially in the context of digital financial services.

In line with the Perceived Risk Theory [Bauer and Bauer \(1960\)](#), the literature reviewed reveals that the consumers consider negative implications before adopting BNPL services. Among the specified dimensions, perceived psychological risk will turn out to be the most crucial factor affecting the intention to use BNPL. In other studies, it is stated that due to deferred payment structures, consumers are anxious, stressed, and fearful of financial obligations in the future. These affective issues decrease the readiness of users to embrace BNPL services, which confirms H2 according to which perceived psychological risk is negatively associated with BNPL buying intention.

Conversely, the results concerning the perception of social risk are contradictory. Although there is some empirical evidence that social judgment and peer perception may drive financial behaviour, particularly in collectivist societies, most of the recent literature has shown that social risk has little or no impact on the adoption of BNPL. This can be provided by the growing acceptance of digital payment solutions, which makes the use of deferred payment service less stigmatized. Hence, the justification of H₁ is weak and circumstantial.

Equally, the perceived performance risk was observed to play a less significant role on the BNPL usage intention in a consistent manner. Despite the literature on the issues of reliability of the system, transaction errors, and data security, changes in fintech platforms and consumers becoming more familiar with online services seem to diminish the issues. Consequently, numerous studies show that there is a significant association between performance risk and adoption intention, which has a low level of support that H₃.

On the whole, the results indicate that emotional and psychological issues are more important aspects compared to functional or social ones in determining the behaviour of BNPL adoption. This shows that it is necessary to address the internal consumer perceptions instead of only concentrating on technological advances.

Theoretically, this review supports the relevance of the Perceived Risk Theory in explaining the fintech adoption, especially among the emerging markets. It also highlights the necessity to address the multidimensional nature of the perceived risk in analysing consumer decision-making.

5. Conclusion and Implication

This paper has conducted a systematic review of the available literature on Buy Now, Pay Later (BNPL) use intention through the PRISMA process and especially explored the aspect of perceived risk dimensions. The results shows that the perceived psychological risk is the most significant variable that has negative impact on the intention of consumers to use BNPL services because it produces emotional discomfort, anxiety, and worries about future financial

commitments. Conversely, perceived social risk and perceived performance risk have lower consistency and tend to have less importance on BNPL adoption in the studies reviewed.

These results support the applicability of the Perceived Risk Theory, which points to the fact that behavioural intentions of consumers are highly influenced by their perceptions of the possible negative consequences, especially the emotional and cognitive ones. The paper also reveals that the effect of various risk dimensions is not even, and the perceived risk as a multidimensional construct is significant to consider in fintech adoption studies.

In a practical sense, service providers in the BNPL business should focus on methods that minimize psychological issues, including enhancing the level of transparency in the terms of repayment, offering effective and prompt communication channels, and integrating platforms that would help people plan their finances and monitor their payments. The emotional uncertainty issue can be a significant boost to consumer confidence and acceptance. Although social and performance risks are not as critical, it is still relevant to maintain reliable systems and establish a positive brand image to keep the trust.

Policy-wise, the regulators need to encourage consumer protection and financial awareness programs to make sure that people use BNPL services responsibly. To reduce perceived risks and facilitate sustainable development of digital financial services, it is possible to improve financial literacy and make terms transparent and disclosed.

Altogether, this paper provides an addition to existing literature in the area of synthesis of available evidence on the adoption of BNPL and identification of psychological risk as a dominant factor in consumer behaviour. It offers a scope to the future research to delve further into risk-related variables in the various settings and changing digital financial landscapes.

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AI MARKETING ADOPTION AMONG WOMEN ENTREPRENEURS IN JAFFNA: SOCIO-CULTURAL AND ETHICAL DRIVERS

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Abstract

Purpose: This study investigates the critical factors influencing the adoption success of Artificial Intelligence (AI) marketing innovations among women entrepreneurs in the Jaffna District, Sri Lanka. The primary objective is to evaluate how socio-cultural identities and ethical boundaries shape the integration of advanced digital tools in a post-conflict, traditional economic environment.

Design/methodology/approach: A quantitative research design was employed, collecting data from 105 women-owned enterprises. The study utilized Exploratory Factor Analysis (EFA) to validate the structural integrity of the 10-variable model to test the research hypotheses. This rigorous statistical approach was chosen to ensure the reliability of measuring complex, subjective socio-cultural constructs.

Findings: The statistical analysis reveals that Social Capital and Digital Network Engagement are the strongest drivers of AI adoption, facilitating knowledge sharing through informal digital communities. Conversely, Gendered Norms, Privacy Concerns, and Algorithmic Bias were identified as significant barriers. However, the study finds that when entrepreneurs navigate these social boundaries through supportive peer networks and perceived data security, the likelihood of successful AI implementation increases significantly.

Research limitations/implications: This study has some important limitations. First, the research was restricted only to women entrepreneurs in the Jaffna District, which has a remarkable post war and traditional cultural context; therefore, the findings cannot be fully generic to other regions of Sri Lanka. Second, a cross-sectional design was used, meaning data were collected at one point in time, so the study could not interrogate how AI adoption attitudes and usage may change over time or after training and experience. Third, the sample size of 105 respondents, although acceptable for PLS-SEM analysis, limits the ability to conduct more advanced analyses such as comparisons between sectors or different age groups and may reduce the statistical power of the results.

Originality/value: This research contributes to the technology adoption literature by integrating the "Double Burden" socio-cultural theory into traditional technology acceptance models. It provides a rare empirical insight into the digital empowerment of women in regional Sri Lankan economies, offering a strategic framework for NGOs and policymakers to design inclusive AI literacy programs that move beyond technical training to address deep-seated social and ethical constraints.

Keywords: AI Adoption; Digital Empowerment; Jaffna; Social Capital; Women Entrepreneurs

1. Introduction

1.1. Background

In This twenty first century global business environment is identified by the accelerating integration of Artificial Intelligence (AI) technologies, which offer Small and Medium Enterprises (SMEs) a powerful device for market advantage and functional efficiency (Usman, 2024). AI-powered marketing analytics, specifically, are recognized for their possibility to enhance meaningful decision making and campaign effectiveness (Edifier, 2025). For women entrepreneurs in increasing economies, the successful adoption of the innovations is crucial for achieving long term employment, fueling financial independence, and overcoming resource constraints (Amar Jothi & Vignesh, 2024).

However, the adoption journey is not steady. The literature clearly indicates that women entrepreneurs run into different obstacles when combine innovative technologies, such as Generative AI (GenAI) tools (Anabtawi, 2024). These obstacles are often taking root in deeply entrenched socio-cultural factors that define the entrepreneur's Cultural Identity and Social Boundaries. For example, the burden of Gendered Norms and the "Double Burden" (De Silva, 2021), combined with the constraints of the Family Role (Gunawardane, 2023), severely limit the time and energy available for complex technology learning and implementation. On the other hand, positive social factors, such as strong Social Influence / Digital Network Engagement, are critical for knowledge sharing and peer mentorship, thereby mitigating structural barriers to success (Ossai, 2024; Ditta-Amichai).

Also, the probability of adoption is formed by the entrepreneur's internal characteristics, namely their Innovativeness (Mando Ngwe & Jaravaza, 2020) and the firm's Entrepreneurial Culture for Innovation (Edifier, 2025). These elements interact with practical constraints, including non-related to money risks like Algorithmic Bias & Privacy Concerns (Anabtawi, 2024) and market constraints like Perceived Financial Costs of Implementation (Dilshan, 2024). The communication of these variables is particularly significant in the context of Jaffna, Northern Sri Lanka, where the traditional culture and unique after the war environment create a highly restrictive set of Gendered Norms (Emmanuel & Saroor, 2022,) that heavily negotiate the success of digital innovation.

1.2. Research Problem

The main problem addressed by this research is the lack of an integrated practical model that explain the Adoption Success of AI Marketing Innovations by at the same time review both socio cultural limitations and entrepreneurial feature in a certain, culturally conservative come out market.

Remain studies in Sri Lanka focus on moreover general digital success using social media tactics (Jayasuriya, 2025) or the subsistence of gender-based barrier (Gunawardane, 2023), but they do not associate these socio-cultural factors directly to the adoption of advanced AI marketing technology. Without a combined understanding of how Gendered Norms, Social Influence, and intrinsic Innovativeness interact to predict Adoption Success, efforts to digitally empower women entrepreneurs in regions like Jaffna remain fragmented and inefficient.

Women in Jaffna face AI adoption restrictions due to low self-efficacy (Gunawardane, 2023) and poor assisting position (Dilshan, 2024). Intense privacy concerns (Anabtawi, 2024) and weak digital network participation (Ditta-Amichai, 2024) further stall success, producing a gap between technology and growth.

1.3. Objectives of the Study

01. To identify what are the factors that contribute to AI adoption among women entrepreneurs in the Jaffna District.
02. To identify major essentials for encouraging AI adoption among women entrepreneurs in the Jaffna District.

1.4. Research Questions

01. What are the factors that contribute to AI adoption among women entrepreneurs in the Jaffna District?
02. What are the major essentials for encouraging AI adoption among women entrepreneurs in the Jaffna District?

1.5. Significance of the Study

This study provides a diverse framework for understanding AI marketing adoption by integrating social, psychological, and technical reasons. hypothetically, it expands standard models by show that gendered norms (De Silva, 2021) and social influence (Zhang & Jiang, 2025) are main predictors of adoption success (Dilshan, 2024). By calculating self-efficacy (Gunawardane, 2023) and creativity (Mando Ngwe & Jaravaza, 2020), the research connections internal psychological traits to technical mastery.

Moreover, it breaks new ground by measuring moral and structural barriers, such as algorithmic bias and privacy concerns (Anabtawi, 2024), alongside facilitating conditions (Dilshan, 2024). Almost, the study notifies post conflict recovery in Jaffna by emphasizing how social capital (Gunawan Sha, 2023) and digital network engagement (Ditta-Amichai, 2024) can overcome constructive isolation. These understandings allow legislators to move beyond common training toward an entrepreneurial culture (Edifier, 2025) that supports inclusive digital growth. Eventually, this 10-variable model offers a guideline for approving women to control AI as a catalyst for economic resilience and financial independence.

2. Literature review

2.1. Global

Table 1: literature Review Sri Lanka

Title And Author	Theory	Methodology	Key Findings
Empowering Women Entrepreneurs: Navigating the Adoption of Generative AI Tools Through Innovation Diffusion Theory.	Rogers 'Innovation Diffusion Theory (DOI), extended to include Privacy Concerns and GenAI Bias.	Population: Women entrepreneurs in small and medium enterprises. N: 224 women entrepreneurs. Data: Cross-sectional survey (Feb–Apr 2024). Analysis: Structural Equation Modeling (SEM) (AMOS 26).	Trialability and visibility demonstrated a positive influence on GenAI adoption. solitude Concerns and Algorithmic Bias delineated significant negative barriers. These factors reported for 53% of the variance in adoption rates.
Anabtawi (2024)			
Leveraging AI and Digital Networks: Empowering Decision-Making Among Women and Youth Entrepreneurs in Developing Economies.	Social Cognitive Theory (SCT), Technology Acceptance Model (TAM), supplemented by Empowerment Theory.	Population: Women and youth entrepreneurs in developing economies. N: 350 (Survey) + 25 (Key Informants). Data: Mixed-methods (Survey + In-depth Interviews). Analysis: SEM (SPSS AMOS); Thematic Analysis (NVivo).	AI-powered analytics tools revealed a significant positive correlation with enhanced financial decision-making confidence (Women). Digital network involvement substantially facilitated market information and strategic planning capabilities (Youth).
Dr. Ignatius Onwusa Ossai, (2025). Nigeria.			
Platform empowerment: Facebook's role in facilitating female micro-entrepreneurship in tourism.	Empowerment Theory, Platform Empowerment, and Entrepreneurial Stages.	Population: Female tourism and hospitality micro-entrepreneurs. N: 3214 posts + 12 semi-structured interviews. Data: Ethnographic (Facebook posts) and semi-structured interviews. Analysis: Thematic analysis (Grounded in ethnography/interviews).	Facebook supports empowerment as a: (1) Learning Resource; (2) Informal Entrepreneurial Ecosystem; (3) Self-Development Tool; and (4) Business Development Exchange.
Morakot Ditta-Amichai. (2024) Thailand/Developing Countries.			

Business environment and adoption of AI: Navigation for internationalization by new ventures in emerging markets.	Technology Organization and Environment (TOE) framework.	Population: Transport tech startup founders across Africa. N: 18 founders. Data: Qualitative (Semi-structured interviews, online via Zoom). Analysis: Interpretative phenomenological methodology (Thematic Analysis).	Founders identified key hurdles: data scarcity, human resource constraints, and regulatory obstacles amid institutional voids. Institutional voids are also viewed as opportunities for AI innovation.
Moayad Moharrak. (2024) Africa (Transportation Sector).			
Women entrepreneurial intentions in subsistence marketplaces: The role of entrepreneurial orientation and demographic profiles in Zimbabwe.	Theory of Planned Behavior (TPB), Entrepreneurial Event Model, and Liberal Feminist Theory.	Population: Prospective women entrepreneurs in rural markets of Manicaland Province. N: 192 women. Data: Structured questionnaire (translated into Shona). Analysis: Structural Equation Modeling (SEM) (Smarts).	Innovativeness and Risk-Taking Ability showed a significant positive relationship with entrepreneurial intention. Proactiveness and demographic profiles (Age, Education, Family Business Background) were not significant.
Lucia Mando Ngwe & Divaries C. Jaramana, (2020). Zimbabwe.			

2.2. Sri Lanka

Table 2: literature Review Global

	Theory	Methodology	Key Findings
Title and Author			
The Influence of AI-Driven Marketing Analytics on Strategic Decision-Making in Private Educational Institutes in Sri Lanka: Moderator Role of Organizational Culture	Conceptual framework testing the influence of AI-driven Marketing Analytics on strategic decision-making, with Organizational Culture as a moderator.	Population/Sample: 225 managers, decision-makers, and administrative staff in private universities. Data Collection Method: Structured questionnaire survey. Analysis Tool: SPSS v26 (for reliability, regression, and moderator analyses).	A positive and statistically significant impact of AI-driven marketing analytics on strategic decision-making was found. Organizational culture is a critical moderator; innovation-oriented cultures adopt AI technologies more effectively.
(Edifier, Pramudika, & Fernando, 2025)			

Adoption success of Technology using Generative AI apps for the E-Commerce Platforms in Sri Lanka	Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) were used to develop the conceptual framework.	Population/Sample: Engineering and development process-related employees in Sri Lanka. Data Collection Method: Questionnaires with five-point Likert scales and close-ended questions. Analysis Tool: IBM SPSS 21 (data cleaning/demographics) and PLS-SEM (SmartPLS 4) (preliminary data analysis).	Software Generative AI apps were found to be productive, effective, and capable of retaining users with a positive intention to use them in E-commerce. High implementation costs negatively impact adoption, while low training and maintenance costs positively affect the intention to adopt.
(Dilshan, Wijayanayake, Asanka, & Karunarathna, 2024)			
Reputation of Entrepreneur Mediates the Business Performance: A Study of Women-owned Small Enterprise in Sri Lanka	Focuses on the impact of entrepreneurial network relationships (knowledge sharing, innovation, transaction cost, market opportunities) on business performance, with reputation as a mediator.	Population/Sample: 384 women entrepreneurs registered in the chamber of commerce. Sampling: Simple random sampling. Data Collection Method: Primary data collected via questionnaire. Analysis Tool: Partial Least Square (PLS) Structural Equation Modelling (SEM).	Transaction cost, reputation, market opportunity, and knowledge sharing all have a significant positive impact on WOSE performance. Innovation positively and significantly mediates the impact of knowledge sharing on performance.
(Gunawansha 2023)			
Glass Ceiling and Women's Career Development: Evidence from Sri Lankan Logistics Field	Explores the phenomenon of the "glass ceiling"—invisible obstacles women face when attempting to advance in their careers.	Population/Sample: Ten women executives employed in the field of logistics in Sri Lanka. Sampling: Purposive selection. Data Collection Method: Qualitative research approach, in-depth interviews. Analysis Tool: Thematic analysis.	The major factors identified as contributing to the glass ceiling are: self-efficacy, family role, social capital, and organizational culture.
(Gunawardane2023)			
Empowerment Through Women Entrepreneurship: A Case from the Beauty Salon Sector in Sri Lanka	Sen's capability approach and Kabeeer's empowerment framework were used to interpret the conditions of empowerment.	Population/Sample: Twelve women entrepreneurs who own beauty salons in the outskirts of the capital city. Data Collection Method: Focus group discussions/collaborative workshop. Analysis Tool: Interpretation using Sen's capability	Women face challenges such as difficulty maintaining a healthy work-life balance, the double burden, and tiresome multi-tasking. Entrepreneurial agency was found to improve their status, well-being,

(De Silva 2021)	approach and Kabeer's economic security, sense of self-worth, and value within their families.

2.3. Research Gap (lacunae)

regardless of the global surge in AI adoption, an important contextual and conceptual gap exists in current literature about female micro-entrepreneurs in post-conflict, growing regions like the Jaffna District. present technology adoption models, such as TAM and UTAUT, primarily focus on technical utility and performance expectancy in Western or urban settings, often overlooking the socio-cultural friction unique to traditional societies.

2.4. Justification of Variable

Table 1: Justification of variable

Name of the Variable	Justification	Key Reference & Author(s)	Key Finding from Paper
Dependent Variable (DV): Adoption Success of AI Marketing Innovations	This is the core outcome variable. It measures the degree to which AI marketing technologies are successfully utilized and contribute to the entrepreneur's business growth, which is the goal your IVs seek to predict.	Dilshan, 2024	Directly measures and models the "Adoption Success" of AI apps, finding that they are perceived as productive and effective and capable of retaining users, establishing a strong DV measure.
Independent Variable (IV1): Gendered Norms	This variable operationalizes Cultural Identity and Social Boundaries by measuring the time constraints and social expectations placed on women. High burdens are expected to negatively restrict the time and energy available for learning and implementing complex AI tools.	De Silva, 2021 & Gunawardane, 2023	highlights women face challenges like the "double burden" and difficulty maintaining a "healthy work-life balance." & identified "Family Role" as a major glass ceiling factor inhibiting career advancement.
Independent Variable (IV2): Social Capital	This variable represents how Social Boundaries manifest as resource channels. Strong, supportive networks provide access to information (knowledge sharing) and technical aid, thus facilitating AI adoption. Restrictive networks can act as barriers.	Jayasuriya, 2025 & Gunawansha, 2023	found that maintaining a "strong online network" was critical for the success of female micro-entrepreneurs. & found that "knowledge sharing" through networks has a significant positive impact on performance.

Independent Variable (IV3): Entrepreneurial Culture for Innovation	This variable captures the entrepreneur's organizational mindset regarding technology and risk-taking (a direct proxy for the effect of Cultural Identity on business strategy). This internal culture dictates the openness to adopting new ideas like AI.	Ediriweera, 2025	Found that Organizational Culture is a critical moderator, specifying that "innovation-oriented cultures" are more effective at adopting and utilizing AI technologies.
Independent Variable (IV4): Algorithmic Bias	This variable addresses the Cultural Identity and Social Boundaries by measuring the non-economic fears that AI tools may reflect societal inequalities or infringe upon privacy/security, both of which are significant, validated adoption barriers for women.	Anabtawi (2024)	The study found that GenAI Bias and Privacy Concerns have a significant negative influence on GenAI adoption among women entrepreneurs. Research confirmed that women are more apprehensive about sharing personal information online, highlighting a gendered vulnerability that hinders technology adoption.
Independent Variable (IV5): Social Influence	This captures how Social Boundaries are navigated. It measures the extent to which the collective network (peers, mentors) provides vital validation, market information, and support—all of which are necessary resources for successful adoption in challenging environments.	Anabtawi (2024)	Observability (witnessing peer success) significantly and positively affects the adoption of new technology by providing credible social proof.
Independent Variable (IV6): Innovativeness	This core psychological variable measures the internal drive to experiment and seek new solutions. It is essential for adopting AI Marketing Innovations and is confirmed as a dominant trait necessary for success in resource-scarce contexts.	Mandongwe & Jaravaza (2020)	Innovativeness showed a significant positive relationship with entrepreneurial intention. This trait is characterized by a tendency to experiment and favour original approaches to problem-solving.
Independent Variable (IV7): Self-Efficacy	Measures the internal psychological belief in one's ability to use AI. Essential for overcoming the "internal glass ceiling" in tech.	Gunawardane. (2023)	Identified as a major "Glass Ceiling Factor" that prevents women from advancing in technical and professional domains.
Independent Variable (IV8): Facilitating Conditions	Evaluates the availability of hardware, internet, and technical support needed to sustain AI marketing activities.	Dilshan. (2024)	High-quality infrastructure and support systems are significant predictors of the adoption success of generative AI apps in Sri Lanka.

Independent Variable (IV9): Privacy Concerns	Addresses the trust deficit regarding data security. High concern acts as a "braking mechanism" for women in traditional markets.	Anabtawi. (2024)	Alongside bias, perceived risks to data privacy significantly inhibit women entrepreneurs from fully trusting and adopting AI.
Independent Variable (IV10): Digital Network Engagement	Focuses on informal learning and mentorship through online communities (Facebook/WhatsApp) to bypass structural isolation.	Ditta-Apichai. (2024)	Digital networks act as "empowering agents" and virtual classrooms that provide the social support needed for tech adoption.

2.5. Research Hypotheses

Gendered Norms (GN)

Gendered norms in traditional societies mention to the socio-cultural prospects and household duties that often create a "double burden" for women. In the background of Jaffna, these norms can limit the time and independence required to master new technologies (De Silva, 2021).

The study hypothesises that:

H1: There is a significant negative relationship between Gendered Norms and the adoption success of AI marketing innovations

Social Capital (SC)

Social capital entails the networks of relationships and community trust that allow a business to function effectively. For female entrepreneurs, approach to community-based resources and common support acts as a bridge to digital transition (Gunawansha, 2023). The study hypothesises that:

H2: There is a significant positive relationship between Social Capital and the adoption success of AI marketing innovations

Entrepreneurial Culture (EC)

Entrepreneurial culture illustrates the internal organizational environment that motivates risk-taking, creativity, and proactive innovation. A culture that hugs change is essential for micro-entrepreneurs to change from traditional methods to advanced AI tools (Ediriweera, 2025). The study hypothesises that:

H3: There is a significant positive relationship between Entrepreneurial Culture and the adoption success of AI marketing innovations

Algorithmic Bias (AB)

numerical bias refers to the noticed or actual unfairness and lack of cultural sensibility in AI outputs. When women entrepreneurs understand AI tools as biased or unrepresentative of their local context, trust in the technology diminishes (Anabtawi, 2024).

The study hypothesises that:

H4: There is a significant negative relationship between Algorithmic Bias and the adoption success of AI marketing innovations

Social Influence (SI)

Social influence is the scope to which an individual perceives that important others (peers, family, or mentors) believe they should use a new technology. In leftist regions like Jaffna, the thoughts of a trusted social circle are primary forecasters of tech adoption (Ditta-Apichai, 2024; Jayasuriya, 2025). The study hypothesises that:

H5: There is a significant positive relationship between Social Influence and the adoption success of AI marketing innovations

Innovativeness (IN)

Innovativeness is determined as an individual's instinctive willingness and interest to experiment with new technologies before others. High personal creativeness allows entrepreneurs to master the initial fear of technical difficulty (Mandongwe & Jaravaza, 2020). The study hypothesises that:

H6: There is a significant positive relationship between Innovativeness (Creativity) and the adoption success of AI marketing innovations.

Self-Efficacy (SE)

Self-efficacy refers to the internal psychological opinion in one's own ability to successfully execute the technical tasks needed to operate AI marketing tools. Without this "internal mastership," entrepreneurs are unlikely to implement involved digital solutions (Gunawardane, 2023). The study hypothesises that:

H7: There is a significant positive relationship between Self-Efficacy and the adoption success of AI marketing innovations.

Facilitating Conditions (FC)

Facilitating conditions comprise the technical infrastructure, such as steady internet, modern hardware, and the accessibility of technical support. These external resources are essential for sustaining AI operations in developing local economies (Dilshan, 2024). The study hypothesises that:

H8: There is a significant positive relationship between supporting Conditions and the adoption success of AI marketing innovations.

Privacy Concerns (PC)

Privacy concerns involve the perceived risks regarding data security and the unofficial use of personal or business information by AI platforms. High levels of concern regarding data safety act as a barrier to full technological consolidation (Anabtawi, 2024). The study hypothesises that:

H9: There is a significant negative relationship between Privacy Concerns and the adoption success of AI marketing innovations

Digital Network Engagement (DNE)

Digital network involvement refers to active involvement in online business communities (e.g., WhatsApp or Facebook groups) for informal learning and consultancy. These networks provide the social support needed to avoid structural isolation in post- clash zones (Ossai, 2024; Ditta-Apichai, 2024). The study hypothesises that:

H10: There is a significant positive relationship between Digital Network Engagement and the adoption success of AI marketing innovations.

2.6. Conceptual Framework

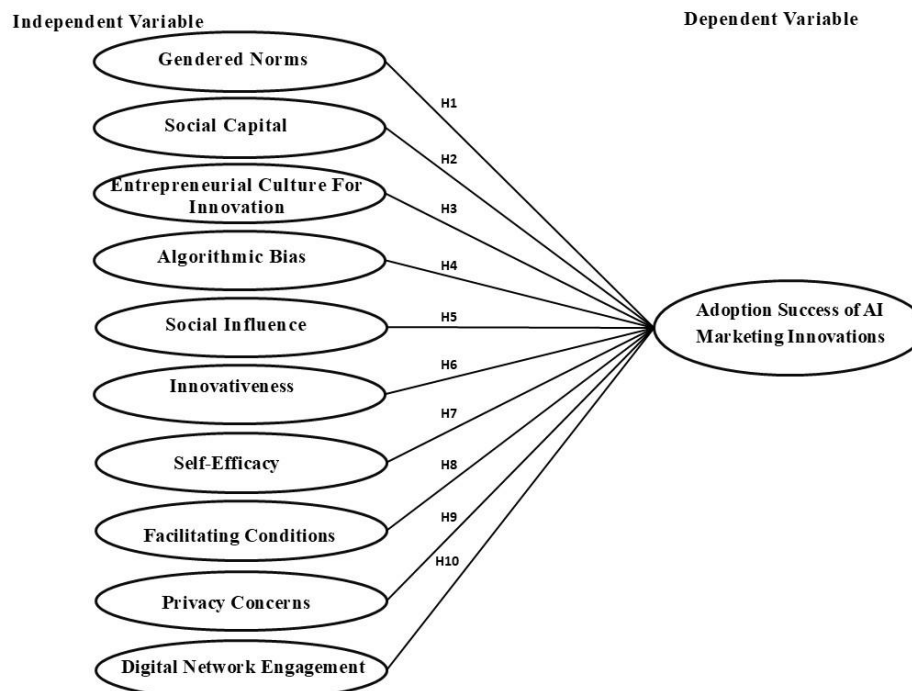


Figure 3: Conceptual framework

2.7. Operationalization

Table 2: Operationalization

Variable (Construct)	Name	Shortened Questionnaire	Key Reference & Supporting Paper
Dependent (DV): Success of AI Marketing Innovations	Variable Adoption of AI	DV1: AI tools have made my marketing efforts more effective and productive. DV2: AI tools have improved the quality and accuracy of my marketing decisions.	Dilshan (2024)
Independent (IV1): Gendered Norms	Variable	IV1.1: Difficulty maintaining work-life balance limits time for AI learning/implementation. IV1.2: Prioritizing my family role limits my capacity for AI professional development.	De Silva (2021)
Independent (IV2): Social Capital	Variable	IV2.1: My strong network provides support and information to adopt AI. IV2.2: I rely on knowledge sharing from contacts more than formal resources for new AI tools.	Gunawansha (2023)
Independent (IV3): Entrepreneurial Culture for Innovation	Variable	IV3.1: My business has an "innovation-oriented culture" that prioritizes new AI tools. IV3.2: AI use is viewed as essential for competitiveness and effective strategic decisions.	Ediriweera (2025)
Independent (IV4): Algorithmic Bias	Variable	IV4.1: Concerns about unauthorized data access/surveillance discourage me from sharing data with AI platforms. IV4.2: I feel uncomfortable providing the sensitive data required by AI marketing tools.	Anabtawi (2024)
Independent (IV5): Social Influence	Variable	IV5.1: Seeing peers use AI successfully encourages my own adoption. IV5.2: My digital networks provide peer mentorship critical for learning complex AI methods.	Ditta-Apichai (2024)
Independent (IV6): Innovativeness	Variable	IV6.1: I am willing to invest resources to test AI tools on a limited basis. IV6.2: I consider myself a highly creative entrepreneur who seeks novel solutions.	Mandongwe & Jaravaza (2020)
Independent (IV7): Self-Efficacy	Variable	IV7.1: I am confident that I can master the skills required to use AI marketing tools for my business. IV7.2: I believe I have the technical ability to navigate AI applications without needing constant assistance.	Gunawardane (2023)

Independent (IV8): Conditions	Variable Facilitating	IV8.1: I have access to the necessary hardware (smartphone/computer) and stable internet for AI marketing. IV8.2: There are specific people or technical support resources available to help me if I face difficulties using AI tools.	Dilshan (2024)
Independent (IV9): Concerns	Variable Privacy	IV9.1: I am concerned that using AI marketing tools might lead to unauthorized disclosure of sensitive business data. IV9.2: The fear of potential data breaches or security risks makes me hesitant to fully adopt AI technologies.	Anabtawi (2024)
Independent (IV10): Network Engagement	Variable Digital	IV10.1: I actively participate in online business groups (e.g., Facebook, WhatsApp) to stay updated on marketing tech. IV10.2: Engaging with digital business communities has provided me with necessary mentorship for digital innovations.	Ditta-Apichai (2024)

3. Methodology

3.1. Methodological Justification for Analysis Tools

Exploratory Factor Analysis (EFA)

The study used Exploratory Factor Analysis (EFA) to evaluate the structural validity of the research instrument.

Dimensionality Reduction: With 10 independent variables, EFA ensured that the measurement items correctly loaded onto their intended constructs without significant cross-loading.

Sample Adequacy: The choice was statistically supported by the Kaiser-Meyer-Olkin (KMO) measure of .879, which is classified as “Great,” and a significant Bartlett’s Test of Sphericity ($p < .001$), confirming the data was suitable for factor extraction.

3.2. Research Approach

This research applies a quantitative research approach using a logical reasoning strategy to empirically test hypothesized connections between socio-cultural, psychological, and technical-ethical factors and the adoption success of artificial intelligence marketing innovations. Consistent with standard methodologies in Sri Lankan technology studies, this approach applies a structured questionnaire to collect numerical data for statistical validation through Partial Least Squares Structural Equation Modeling, as demonstrated by Dilshan (2024) and Gunawansha (2023), who utilize this deductive framework to ensure results are scientifically exact, objective, and generalizable to the target population of women entrepreneurs in the Jaffna District.

3.3. Research Design

The proposed research utilizes a quantitative, logical design based on a positivist model to test hypothesized relationships within a 10-variable framework. organized as a cross-sectional survey, the study investigates how socio-cultural, psychological, and techno-ethical factors

influence AI adoption success among women entrepreneurs in Jaffna. Following Dilshan (2024) and Ediriweera (2025), this strategy confirms TAM and UTAUT theories within a local context. Using a mono-method approach, the study employs PLS-SEM to identify significant indicators.

3.4. Population and Sample

The study aims 209 registered women entrepreneurs in the Jaffna District, a group navigating the “double burden” of household and business management (De Silva, 2021). A sample size of 100 (47.8% of the population) was chosen, satisfying the statistical power conditions for PLS-SEM (Gunawansha, 2023). Utilizing Simple Random Sampling, the operation ensures equal inclusion probability and minimizes bias, improving generalizability. This approach matches with Dilshan (2024), providing a strong dataset to empirically test the 10-variable conceptual framework within the Sri Lankan SME sector.

3.5. Research Tools

The research instrument is a bilingual (English and Tamil) questionnaire structured into three sections to capture data for the 10-variable framework. Section A gathers demographic data related to the “double burden,” while Sections B and C use 22 items on a 5-point Likert scale to measure socio-cultural, psychological, and techno-ethical factors. Validated through expert pre-testing and a 10% pilot study, the instrument ensures language accuracy and reliability for the Jaffna context, as supported by Dilshan (2024) and Ediriweera (2025).

3.6. Pre-Testing

The pre-testing of the survey tool was a critical validation stage conducted to ensure the clarity, cultural relevance, and technical accuracy of the measurement items before official data collection. This process involved a two-stage evaluation: first, Face and Content Validity were established through expert reviews by academic lecturers and industry specialists, who verified that the 22 items correctly represented the socio-cultural, psychological, and techno-ethical constructs (Dilshan, 2024; Ediriweera, 2025). Second, grammatical validation was performed to ensure the bilingual (English and Tamil) questionnaire effectively communicated technical AI concepts to entrepreneurs in the Jaffna District. This strict screening confirmed that the instrument was free from uncertainty and that the 5-point Likert scale was a suitable metric for capturing the operators of digital empowerment and adoption success among the target population (Gunawansha, 2023).

3.7. Pilot Study and Instrument Validation

A pilot study of 10 participants (10% of the target sample) is vital to validate the research instrument’s clarity before main data collection. In alliance with the “10-times rule” for PLS-SEM (Dilshan, 2024), it confirms statistical power for the 10-variable framework while testing the technical feasibility of hybrid data collection (Google Forms and interviews). Preliminary findings show high engagement, with most respondents choosing “Strongly Agree,” “Agree,” or “Neither Agree nor Disagree,” suggesting the Tamil translation of complex AI terms is

accessible. This trial ensures the study remains methodologically sound and culturally appropriate for busy Jaffna entrepreneurs managing a “double burden” (De Silva, 2021).

4. Data analysis

4.1 Demography Profile

Table 3: Demography Profile

	Item	Frequency	Percent
Age	20-30	4	3.8
	31-40	13	12.4
	41-50	47	44.8
	51-60	24	22.9
	Other	17	16.2
Education	G.C.E. Ordinary Level (O/L) or below	34	32.4
	G.C.E. Advanced Level (A/L)	20	19.0
	Diploma/Certificate (Vocational or Technical)	44	41.9
	Bachelor’s Degree	7	6.7
Marital	Single / Never Married	3	2.9
	Married	90	85.7
	Divorced / Separated	6	5.7
	Widowed	6	5.7
Children under the age of 18 live in their household	0	31	29.5
	1	37	35.2
	2	25	23.8
	3 or more	12	11.4
Business Type	Retail and Trading (e.g., general merchandise)	4	3.8
	Services (e.g., Salon, catering, tuition)	7	6.7
	Manufacturing (e.g., Food processing, handicrafts)	89	84.8
	Agriculture / Fisheries	5	4.8
Years Of Operation	1–3 years	15	14.3
	4–6 years	47	44.8

	7–10 years	27	25.7
	More than 10 years	16	15.2
Number Of Employees	1 (Self-employed only)	25	23.8
	2–5 employees	49	46.7
	6–10 employees	19	18.1
	More than 10 employees	12	11.4
Primary Platform for Marketing and Customer Engagement			
Physical Shop	No	7	6.7
	Yes	98	93.3
Facebook	No	67	63.8
	Yes	38	36.2
Instagram	No	103	98.1
	Yes	2	1.9
WhatsApp	No	77	73.3
	Yes	28	26.7
Website	No	100	95.2
	Yes	5	4.8
AI Use	Yes	44	41.9
	No	61	58.1
Avg Hours Business Family	61–80 hours	25	23.8
	More than 80 hours	80	76.2

4.2 Reliability and validity

Table 4: Reliability

Reliability		
Items	Cronbach's Alpha	Items
Gendered Norms	.760	2
Social Capital	.710	2

Entrepreneurial Culture for Innovation	.782	2
Algorithmic Bias	.734	2
Social Influence	.740	2
Innovativeness	.767	2
Self-Efficacy	.784	2
Facilitating Conditions	.778	2
Privacy Concerns	.849	2
Digital Network Engagement	.814	2

The internal viscosity of the research instrument was analyzed using Cronbach's Alpha for the ten constructs, each calculated by two items. According to Hair. (2019), a Cronbach's Alpha value of .70 or higher is considered the standard threshold for acceptable reliability in social science research.

Table 5: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.879
Bartlett's Test of Sphericity	Approx. Chi-Square	1282.816
	df	190
	Sig.	.000

The KMO value was .879, outstanding the recommended value of .60 (Kaiser, 1974), which signifies excellent sampling sufficiency. Furthermore, Bartlett's Test of Sphericity reached statistical significance ($(X^2_{190}) = 1282.816$, $p < .001$), Conforming the factorability of the correlation matrix. simultaneously, these results confirm that the data is appropriate for further multivariate analysis.

4.3 Descriptive statistics (SD of Each question)

Table 6: Descriptive Statistics

Descriptive Statistics		
Statements	Mean	SD
Gendered Norms / Family Role & Double Burden		
My difficulty maintaining a work-life balance prevents me from spending enough time on learning and implementing AI marketing.	4.10	0.510
The expectation that I prioritize my traditional family role limits my capacity to attend professional development for AI technologies.	4.06	0.618
Social Capital / Network Strength		
My strong network of other entrepreneurs provides me with necessary support and information to adopt AI marketing innovations.	4.15	0.647
I rely on knowledge sharing from my professional contacts more than formal resources when assessing new AI tools.	4.11	0.625
Entrepreneurial Culture for Innovation		
I manage my business with an "innovation-oriented culture" that makes adopting new AI tools a high priority.	4.08	0.631
My business culture views the use of AI as essential for staying competitive and making effective strategic decisions.	4.06	0.497
Algorithmic Bias		
Concerns about the risk of unauthorized data access or surveillance strongly discourage me from sharing necessary data with AI marketing	3.95	0.611
I feel uncomfortable providing the sensitive business data that AI marketing tools require for optimal performance.	3.96	0.619
Social Influence / Digital Network Engagement		
Seeing other women entrepreneurs in my network successfully use AI marketing tools encourages me to adopt them.	4.12	0.567
My digital business networks provide peer mentorship or support that is critical for learning complex AI marketing methods.	4.12	0.615

Innovativeness		
I am willing to invest resources (time/money) to test AI marketing tools on a limited basis before committing fully to the technology.	4.03	0.642
I consider myself a highly creative entrepreneur who actively seeks to introduce novel solutions to the market.	3.97	0.627
Self-Efficacy		
I am confident that I can master the skills required to use AI marketing tools for my business.	4.08	0.661
I believe I have the technical ability to navigate AI applications without needing constant assistance from others.	4.01	0.580
Facilitating Conditions		
I have access to the necessary hardware (smartphone/computer) and stable internet required to run AI marketing applications.	4.06	0.569
There are specific people or technical support resources available to help me if I face difficulties using AI tools.	3.97	0.563
Privacy Concerns		
I am concerned that using AI marketing tools might lead to the unauthorized disclosure of my sensitive business data.	3.99	0.596
The fear of potential data breaches or security risks makes me hesitant to fully adopt AI technologies in my business.	3.95	0.611
Digital Network Engagement		
I actively participate in online business groups or social media forums (e.g., Facebook, WhatsApp) to stay updated on new marketing	4.02	0.571
Engaging with digital business communities has provided me with the mentorship and advice I need to use digital innovations effectively.	4.06	0.586

4.4 EFA (Rotated components matrix (Factor loading), Total variant explained matrix)

Table 7: Rotated Component Matrix

Rotated Component Matrix ^a										
	Component									
	1	2	3	4	5	6	7	8	9	10
PC2	.862									
PC1	.755									

FC2	.812			
FC1	.759			
EC1	.795			
EC2	.791			
DNE2	.799			
DNE1	.715			
SE1	.738			
SE2	.732			
SI2	.826			
SI1	.566			
SC2	.770			
SC1	.646			
GN1	.839			
GN2	.637			
IN2	.748			
IN2	.488			
AB2	.762			
AB1	.521			
Extraction Method:	Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.				

a. Rotation converged in 9 iterations.

Following the benchmarks established by Kaiser (1958) and Hair. (2019), a clean ten-component structure emerged, explanation for a significant destiny of the total variance. All items displayed strong factor loadings (ranging from .488 to .862), confirmed the recommended threshold of .40 for practical significance.

Table 8: Total Variance Explained

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
			Cumulative %			Cumulative %			Cumulative %
	Total	% of Variance		Total	% of Variance		Total	% of Variance	

1	9.539	47.697	47.697	9.539	47.697	47.697	2.057	10.284	10.284
2	1.470	7.349	55.046	1.470	7.349	55.046	1.962	9.811	20.095
3	1.139	5.693	60.740	1.139	5.693	60.740	1.919	9.597	29.692
4	.948	4.738	65.478	.948	4.738	65.478	1.901	9.507	39.199
5	.814	4.070	69.548	.814	4.070	69.548	1.866	9.328	48.527
6	.750	3.749	73.297	.750	3.749	73.297	1.644	8.220	56.747
7	.734	3.670	76.967	.734	3.670	76.967	1.553	7.764	64.510
8	.678	3.390	80.357	.678	3.390	80.357	1.542	7.711	72.221
9	.627	3.137	83.494	.627	3.137	83.494	1.453	7.263	79.484
10	.570	2.849	86.343	.570	2.849	86.343	1.372	6.860	86.343
11	.458	2.290	88.633						
12	.403	2.017	90.651						
13	.375	1.874	92.525						
14	.318	1.591	94.116						
15	.254	1.272	95.387						
16	.238	1.191	96.578						
17	.213	1.064	97.643						
18	.198	.992	98.635						
19	.158	.788	99.423						
20	.115	.577	100.000						

Extraction Method: Principal Component Analysis.

The Principal Component Analysis exposed that the ten extracted components considered for a cumulative 86.34% of the total variance, far extraordinary the 60% threshold supported by Hair (2019) for social science research. Following Cattell's (1966) focus on comprehensiveness, the 10-factor solution was retained as it provided a superior balance between data reduction and information preservation. The rotation converged in 9 iterations, resulting in a well-distributed structure where each component contributed significantly to the model's explanatory power.

4.5. Ranking of factor Table

Table 9: Ranking of factor Table

NO	Factors	Coefficient	Roted component	C*R	Rank
1	PC	.364	.862	0.314005218	8
2	FC	.520	.812	0.42234708	4
3	EC	.620	.795	0.492612083	1
4	DNE	.555	.799	0.443419997	3
5	SE	.601	.738	0.443791268	2
6	SI	.502	.826	0.414943181	5
7	SC	.466	.770	0.359054845	6
8	GN	.307	.839	0.257470437	10
9	IN	.442	.748	0.330851573	7
10	AB	.398	.762	0.303466119	9

This table functions as a ranked leaderboard that ranks ten different factors based on their general significance. To decide the final Rank, the researchers multiplied a "Coefficient" by a "Roted component" to produce a final weighted value (C*R). According to the results, factor EC is the most important with the highest total score of 0.4926, while factor GN is the least significant at rank 10; eventually, the table serves to highlight which specific variables, such as EC, SE, and DNE, should be given the most attention or resources in this study.

4.5. Correlation Analysis

Table 10: Correlations

Correlations												
		AIMI	GN	SC	EC	AB	SI	IN	SE	FC	PC	DNE
AIMI	Pearson Correlation	1										
	Sig. (2-tailed)											
	N	105										
GN	Pearson Correlation	.595**	1									
	Sig. (2-tailed)	.000										
	N	105	105									

SC	Pearson Correlation	.678**	.597**	1							
	Sig. (2-tailed)	.000	.000								
	N	105	105	105							
EC	Pearson Correlation	.665**	.541**	.544**	1						
	Sig. (2-tailed)	.000	.000	.000							
	N	105	105	105	105						
AB	Pearson Correlation	.541**	.514**	.529**	.463**	1					
	Sig. (2-tailed)	.000	.000	.000	.000						
	N	105	105	105	105	105					
SI	Pearson Correlation	.583**	.404**	.587**	.501**	.536**	1				
	Sig. (2-tailed)	.000	.000	.000	.000	.000					
	N	105	105	105	105	105	105				
IN	Pearson Correlation	.631**	.562**	.555**	.556**	.631**	.590**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000				
	N	105	105	105	105	105	105	105			
SE	Pearson Correlation	.621**	.483**	.545**	.512**	.599**	.645**	.626**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000			
	N	105	105	105	105	105	105	105	105		
FC	Pearson Correlation	.589**	.467**	.471**	.544**	.501**	.466**	.657**	.539**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		
	N	105	105	105	105	105	105	105	105	105	
PC	Pearson Correlation	.474**	.495**	.516**	.355**	.614**	.515**	.493**	.534**	.294**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.002	
	N	105	105	105	105	105	105	105	105	105	105

DNE	Pearson Correlation	.648**	.523**	.589**	.518**	.594**	.567**	.657**	.588**	.555**	.527**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	105	105	105	105	105	105	105	105	105	105	105

** . Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation analysis verifies strong standard associated validity for the ten-component model. Following Cohen's (1988) conventions, all components showed moderate to large positive correlations with the target variable (AIMI), with coefficients ranging from .474 to .678 ($p < .01$). These results signify that the extracted factors are not only statistically distinctive but also highly relevant anticipate of the primary construct.

4.6. Regression Analysis

Table 11: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.816 ^a	.665	.630	.28784

a. Predictors: (Constant), DNE, EC, PC, FC, GN, SI, AB, SC, SE, IN

A multiple linear regression analysis was executed to evaluate the predictive power of the ten extracted components. The results indicated a strong model fit ($R = .816$), with the predictors accounting for 66.5% of the total variance ($R^2 = .665$, Adjusted $R^2 = .630$). According to Cohen's (1988) criteria for effect sizes, this represents an important and highly significant explanatory effect.

Table 12: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.474	10	1.547	18.676	.000 ^b
	Residual	7.788	94	.083		
	Total	23.262	104			

a. Dependent Variable: AIMI

b. Predictors: (Constant), DNE, EC, PC, FC, GN, SI, AB, SC, SE, IN

The results of the ANOVA test signify that the regression model is a statistically significant predictor of AIMI ($F(10, 94) = 18.676$, $p < .001$). This significance level proves that the association between the ten predictors DNE, EC, PC, FC, GN, SI, AB, SC, SE, and IN and the dependent variable is not due to random chance. According to Hair (2019), this high F-value and the corresponding 'Sig.' of .000 provide the mandatory empirical justification to proceed with interpreting the individual coefficients.

Table 13: Hypothesis Table

Hypothesis	Relationship	Pearson Correlation (r)	Sig. (2-tailed)	Result
H1	Gendered Norms - AIMI	0.595	.000	Supported
H2	Social Capital - AIMI	0.678	.000	Supported
H3	Entrepreneurial Culture - AIMI	0.665	.000	Supported
H4	Algorithmic Bias - AIMI	0.541	.000	Supported
H5	Social Influence - AIMI	0.583	.000	Supported
H6	Innovativeness - AIMI	0.631	.000	Supported
H7	Self-Efficacy - AIMI	0.621	.000	Supported
H8	Facilitating Conditions - AIMI	0.589	.000	Supported
H9	Privacy Concerns - AIMI	0.474	.000	Supported
H10	Digital Network Engagement – AIMI	0.648	.000	Supported

5. Conclusion

5.1. Discussion on research question

This study examined the factors influencing the Adoption Success of AI Marketing Innovations among women entrepreneurs in the Jaffna District. The findings confirm that AI adoption is formed by a blend of socio-cultural, psychological, and technological factors rather than technology alone.

For Research Question 1, the outcomes show that Social Capital, Digital Network Engagement, Self-Efficacy, Innovativeness, and Entrepreneurial Culture are the powerful positive benefactors to AI adoption. Women who received peer support and participated in online business networks were more confident in using AI tools.

For Research Question 2, the research identifies key elements for encouraging adoption: affordable training, Tamil language AI support, community mentoring, reliable internet, and institutional financial assistance. These elements help overcome cultural and resource barriers in the post war Jaffna context.

The Drivers:

Social Capital and Digital Engagement The significant positive relationship between Social Capital (IV2) and AI adoption reflects Gunawansha's (2023) finding that network relationships and knowledge sharing are the primary performance drivers for Sri Lankan women entrepreneurs. Furthermore, the impact of Digital Network Engagement (IV10) confirms the "Platform Empowerment" theory of Ditta-Apichai (2024); platforms like Facebook and

WhatsApp serve as "digital third spaces" where women find essential peer mentorship. This is particularly critical in the Sri Lankan context, as Jayasuriya (2025) noted that such digital participation was a survival necessity during the transition to online business.

The Barriers:

Gendered Norms and Privacy Concerns Conversely, the negative influence of Gendered Norms (IV1) provides empirical support for the "double burden" identified by De Silva (2021), where domestic responsibilities act as an invisible "glass ceiling". Even with high Self-Efficacy (IV7) a key success factor identified by Gunawardane (2023) the data suggests that Jaffna's entrepreneurs face structural time-poverty that limits AI exploration. Additionally, the significant deterrent of Privacy Concerns (IV9) aligns with Anabtawi (2024), who argued that fear of data breaches remains a "distinctive obstacle" for women embracing Generative AI.

Strategic and Environmental Factors:

The positive role of an Innovation Oriented Culture (IV3) reinforces Ediriweera (2025) conclusion that organizational culture is a vital moderator for AI success in Sri Lanka. This implies that women who maintain an "Entrepreneurial Orientation" marked by proactiveness can mitigate some of the technical barriers highlighted by Dilshan (2024) regarding infrastructure and facilitating conditions.

5.2. Implications

Theoretical Contributions

Expansion of Adoption Models: By identifying Gendered Norms (IV1) as a statistically significant barrier, the study validates the "double burden" theory of De Silva (2021), proving that time-poverty is as critical as technical illiteracy in AI adoption.

Validation of Platform Empowerment: The findings provide empirical support for Ditta-Apichai (2024) "Digital Third Spaces," demonstrating that for women in traditional societies, digital engagement (IV10) bridges formal institutional gaps.

Contextualizing Ethical Barriers: The high impact of Privacy Concerns (IV9) adds depth to Anabtawi (2024) findings, suggesting that in post-conflict regions like Jaffna, data security is a fundamental prerequisite for technological trust.

Practical Implications

NGOs and Chambers of Commerce: Initiatives should pivot from formal technical training to "Digital Peer Mentorship" models. Utilizing existing social capital (IV2) through WhatsApp or Facebook learning circles is more effective for local women than traditional classroom settings.

Policy Makers: Digital literacy programs must address the Gendered Norm (IV1) barrier by offering flexible, mobile-first learning modules that allow women to integrate AI education into their domestic schedules.

5.3. Limitations and Recommendations for Future Study

Limitations

This study has some important limitations. First, the research was restricted only to women entrepreneurs in the Jaffna District, which has a remarkable post war and traditional cultural context; therefore, the findings cannot be fully generic to other regions of Sri Lanka. Second, a cross-sectional design was used, meaning data were collected at one point in time, so the study could not interrogate how AI adoption attitudes and usage may change over time or after training and experience. Third, the sample size of 105 respondents, although acceptable for PLS-SEM analysis, limits the ability to conduct more advanced analyses such as comparisons between sectors or different age groups and may reduce the statistical power of the results.

Recommendations for Future Study

Future research should use longitudinal designs to examine changes in AI adoption over time and after training interventions. Studies should include larger and more diverse samples from other districts to improve generalizability. A mixed-method approach with interviews could explore deeper cultural barriers. Comparative studies between male and female entrepreneurs and across different business sectors are also recommended. Additionally, future work should evaluate the impact of Tamil-language AI tools, government subsidies, and digital mentoring programs on real business performance.

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AI-INTEGRATED LLM OPPORTUNITIES IN ENTERPRISE RESOURCE PLANNING SYSTEMS: A COMPREHENSIVE REVIEW

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Abstract

Purpose: Enterprise Resource Planning (ERP) systems remain transaction-centric, limiting adaptability in handling unstructured data, contextual reasoning, and knowledge flows. Recent advances in Large Language Models (LLMs) offer cognitive capabilities to extend ERP functionalities beyond traditional automation. This study examines LLM integration in ERP, addressing gaps in prior research emphasizing predictive analytics, machine learning, or general AI applications over LLM-driven cognitive transformation.

Design/methodology/approach: The study adopts a systematic literature review approach following the PRISMA 2020 protocol, combined with architectural synthesis. A total of 26 peer-reviewed studies published between 2018 and 2025 were analyzed. Bibliometric mapping and thematic synthesis techniques were applied to identify emerging opportunities, integration patterns, and conceptual developments related to LLM integration in ERP systems.

Findings: The findings identify nine key opportunity domains including intelligent user interaction, explainable decision support, contextual process automation, knowledge management, financial and supply chain intelligence, human resource management, compliance support, and ERP customization. The results indicate that LLMs primarily function as augmentative cognitive layers that enhance interaction, interpretation, and contextual automation while preserving core ERP transactional structures. The study further proposes a four-layered LLM-ERP integration architecture consisting of interaction, intelligence, automation, and governance layers.

Research limitations/implications: The study identifies a gap between rapid technological advancements and maturity of governance, with limited empirical validation, underdeveloped risk modeling, and scarce longitudinal implementation evidence. It highlights the need for future research focusing on governance frameworks and real-world LLM-ERP implementations.

Originality/value: This study contributes a structured synthesis and proposes a novel architectural framework that advances ERP research toward a cognitive enterprise systems paradigm, offering practical guidance for responsible and scalable generative artificial intelligence integration.

Keywords: Cognitive Enterprise Systems; Enterprise Resource Planning; Generative Artificial Intelligence; Large Language Models; Systematic Literature Review

1. Introduction

Enterprise Resource Planning (ERP) systems have long served as integrated digital infrastructures supporting finance, human resources, supply chain management, procurement, and operations. Traditional ERP architectures are transaction-centric, rule-driven, and optimized for structured data processing (Soni et al., 2025). While effective for operational control and standardization, these systems demonstrate limited adaptability in handling unstructured data, contextual reasoning, and dynamic enterprise knowledge flows. Enterprise Resource Planning (ERP) systems have evolved from Material Requirements Planning (MRP) systems into integrated enterprise platforms designed to standardize and coordinate organizational processes. Over time, ERP systems expanded to support process standardization. Recent developments such as Intelligent ERP and Cognitive ERP have incorporated advanced analytics, machine learning, and artificial intelligence to enhance decision-making, and workflow optimization (Sarferaz, 2025).

The advancement of Large Language Models (LLMs) introduces new cognitive capabilities into enterprise information systems. LLMs enable natural language understanding, contextual inference, generative reporting, and cross-domain reasoning (Mhaskey, 2024; Sarferaz, 2025). When embedded within ERP environments, these capabilities shift ERP systems from deterministic execution engines to intelligent enterprise platforms capable of interaction, interpretation, and adaptive support.

While prior reviews studies have examined AI integration within ERP systems, they largely focus on specific operational enhancements such as predictive analytics, machine learning optimization, or module-level improvements. Systematic reviews of AI-based predictive analytics for demand forecasting have highlighted improvements in inventory and supply chain management (Fathima et al., 2024). Other studies have explored AI integration opportunities and challenges, emphasizing user experience, interface personalization, and productivity gains (Mhaskey, 2024). Bibliometric and systematic reviews of AI implementation practices across ERP modules have also been conducted, mapping research trends and analyzing keyword relationships within ERP subdomains (Panggabean et al., 2025). Similarly, machine learning-driven optimization has been studied with a focus on real-time decision-making, Industrial IoT integration, and adaptive learning within ERP environments (Jawad & Balázs, 2024). While these studies provide valuable insights, they remain largely module-centric, operationally focused, and centered on traditional AI techniques.

In contrast, the present study expands the scope by focusing specifically on generative AI and Large Language Models (LLMs), examining their potential as cognitive layers that extend ERP capabilities beyond deterministic operations. Methodologically, this study combines a systematic literature review with bibliometric mapping and thematic synthesis, while also proposing a four-layered LLM-ERP integration architecture. Conceptually, it shifts the analytical perspective from operational or predictive enhancements toward a strategic, cognitive enterprise systems paradigm, addressing interaction, automation, intelligence, and governance. This approach not only identifies emerging opportunity domains for LLMs but also highlights

critical gaps in empirical validation, governance, and risk management, offering both theoretical contributions and practical guidance for implementing LLM-enhanced ERP systems.

Despite increasing research interest, current study exhibits several limitations: studies are often fragmented at the module-level analyses, empirical validation is scarce, lack of comprehensive integrated architectural frameworks, insufficient governance, and risk modeling, and much of the work overreliance on conceptual commentary rather than practical evidence. Motivated by these gaps, this study provides an integrated analysis of LLM-driven ERP transformation, offering actionable insights for academia and practice. It highlights how generative AI can enhance enterprise intelligence, decision-making, and the scalability of adaptive digital systems.

This paper addresses these gaps by conducting a systematic literature review on AI-integrated LLM opportunities in ERP systems.

This study aims to systematically identify and synthesize the roles of Large Language Models in ERP systems, and to develop a conceptual framework that supports their effective integration and governance. The review is guided by the following research questions:

RQ1: What functional opportunity domains emerge from integrating LLMs into ERP systems?

RQ2: How do LLMs enhance interaction, automation, and analytical capabilities within ERP environments?

RQ3: What architectural, governance challenges and research gaps characterize current ERP literature?

By addressing these questions, this study aims to provide a comprehensive and structured understanding of how Large Language Models can transform ERP systems into cognitive, adaptive, and strategically intelligent enterprise platforms, offering both theoretical insights and practical guidance for researchers and practitioners navigating the emerging landscape of generative AI enabled enterprise systems

2. Literature review and conceptual foundation

ERP systems evolved from Material Requirements Planning (MRP) to enterprise-wide integration platforms emphasizing process standardization. Recent developments include Intelligent ERP and Cognitive ERP models integrating analytics and AI (Sarferaz, 2025).

LLM Integration Architecture: Enterprise Resource Planning (ERP) systems have undergone a significant evolution over the past decades. Initially emerging from Material Requirements Planning (MRP) systems, ERP solutions primarily focused on optimizing manufacturing and inventory processes. Over time, these systems expanded into enterprise-wide platforms designed to integrate disparate functions, streamline operations, and standardize processes across organizations. The most recent developments in ERP technology include Intelligent ERP and Cognitive ERP models, which incorporate advanced analytics, machine learning, and artificial intelligence to support real-time decision-making, predictive insights, and adaptive workflows (Sarferaz, 2025). Despite these advances, the integration of cognitive capabilities across multiple organizational modules remains an area of ongoing exploration.

Within this evolving ERP landscape, large language models (LLMs) present an emerging opportunity to enhance enterprise systems by providing cross-functional cognitive support.

Several recent review studies have explored AI integration in ERP systems, providing valuable insights into predictive analytics, machine learning optimization, and general AI applications. AI-based predictive analytics has been examined for its impact on demand forecasting across industries, demonstrating improvements in inventory management, decision-making efficiency, and operational planning (Fathima et al., 2024). Broader opportunities and challenges associated with AI integration, including user experience and workflow optimization in ERP systems, have also been explored, highlighting both potential benefits and implementation barriers (Mhaskey, 2024). A bibliometric and systematic review approach has been applied to track AI implementation trends across ERP modules, emphasizing specific advantages in human resources, supply chain management, and sales operations (Panggabean et al., 2025). In addition, the role of machine learning in optimizing ERP processes, enhancing efficiency, and enabling real-time data-driven decisions has been investigated, demonstrating significant impacts across diverse organizational functions (Jawad & Balázs, 2024).

However, existing studies largely adopt module-specific perspectives, limiting enterprise-wide integration. Predictive analytics research emphasizes accuracy but overlooks system-level intelligence and cross-domain reasoning, while machine learning studies focus on efficiency with limited attention to interaction, explainability, and adaptability. Bibliometric analyses further map trends without critically addressing integration depth or implementation challenges. Key gaps include the absence of a unified LLM–ERP architectural framework, limited treatment of LLMs as cross-functional cognitive agents, insufficient focus on governance and explainability, and a lack of empirical validation for large-scale implementation.

While these studies contribute to understanding AI in ERP, they largely focus on predictive analytics, machine learning, or general AI and do not examine the emerging role of Large Language Models (LLMs) as cross-functional cognitive layers. Furthermore, existing reviews lack a unified architectural perspective that links LLM capabilities to interaction, intelligence, automation, and governance across the enterprise system. Unlike previous studies, this review specifically investigates LLM-driven transformation in ERP systems, offering a structured layered architecture that advances from module-level insights to a cognitive enterprise systems perspective, providing both theoretical synthesis and practical guidance for future research.

Given the exploratory scope of the study, formal hypotheses are not developed; instead, a conceptual framework is used to structure and interpret LLM–ERP relationships. Synthesizing insights from the literature, LLM-ERP integration can be conceptualized as a layered framework, where each layer addresses a distinct functional contribution.

LLM-ERP integration can be conceptualized as a layered architecture:

- **Layer 1: Interaction Layer (Conversational Interface):** At the interface, LLMs provide conversational and natural language interactions, facilitating intuitive engagement with system functionalities.

- Layer 2: Intelligence Layer (Reasoning, Explanation, Summarization): The intelligence layer supports reasoning, explanation, and summarization, enabling LLMs to interpret complex data and generate actionable insights.
- Layer 3: Automation Layer (Contextual Workflow Execution): The automation layer translates these insights into contextual workflow execution, bridging decision-making and operational action.
- Layer 4: Governance Layer (Audit, Compliance, Bias Monitoring): The governance layer ensures auditability, compliance, and monitoring for potential biases, safeguarding organizational and regulatory standards.

This layered model/ conceptual framework advances beyond prior module-specific perspectives by positioning LLMs as cross-functional cognitive mediators (see Figure 1).

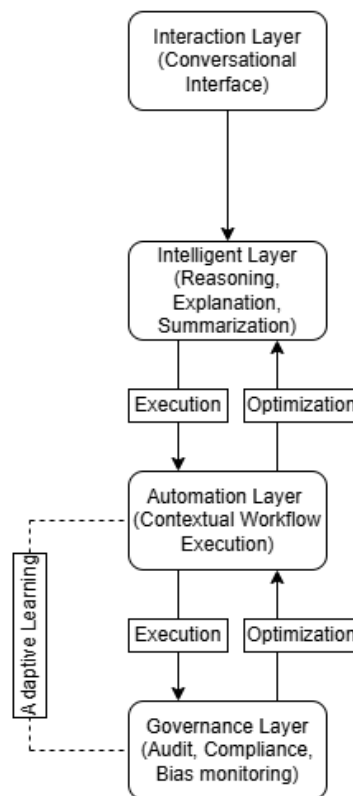


Figure 4: Conceptual Framework

Figure 1 illustrates this conceptual framework, positioning LLMs as cross-functional cognitive mediators that advance beyond prior module-specific perspectives. The literature positions LLMs as augmentative intelligence layers that improve interpretation, usability, and adaptability within ERP environments. This framework provides a structured lens to examine LLM-ERP integration and forms the foundation for the subsequent methodology.

3. Methodology

a. Research Approach and Scope

This comprehensive systematic literature review design guided by PRISMA 2020 protocol to ensure transparency, rigor, and replicability (see Figure 2).

The review focused on identifying and synthesizing research on AI-integrated [Large Language Model (LLM)] opportunities in Enterprise Resource Planning (ERP) systems. The study scope included peer-reviewed journal articles and conference papers published between 2018 and 2025, a period chosen to capture the most recent developments in AI, LLM, and ERP integration. Selecting

this timeframe ensures the review reflects contemporary research trends while maintaining relevance to current ERP architectures and emerging cognitive technologies. This study follows a qualitative, exploratory approach to synthesize existing knowledge rather than test predefined hypotheses.

b. Search Strategy and Keywords

A structured keyword-based search strategy was conducted across four major academic databases: Scopus, Web of Science, IEEE Xplore, and the ACM Digital Library. These databases were chosen for their comprehensive coverage of information systems, computer science, and management research, ensuring access to high-quality, peer-reviewed studies. These databases constitute the research site of this study, providing a multidisciplinary evidence base for ERP and AI literature.

Search terms were developed iteratively through preliminary scoping and prior foundational studies and grouped into three conceptual categories: ERP systems, large language models (LLMs), and generative AI, and intelligent or conversational system capabilities (Anni, 2025).

Boolean operators were applied to combine these categories and ensure both precision and recall. The final search string was adapted slightly to accommodate the syntax requirements of each database, while maintaining consistent logical structure. A representative search query is ("Enterprise Resource Planning" OR ERP) AND ("Large Language Model" OR LLM OR "Generative AI") AND ("Intelligent System" OR "Conversational System" OR "AI-enabled ERP").

The search was limited to peer-reviewed journal articles and conference papers published between 2018 and 2025. Only English-language publications were considered. The search was applied to titles, abstracts, and author keywords to ensure relevance to ERP systems and AI (LLM) integration.

c. Study Selection

The study selection process followed a PRISMA-aligned screening procedure, comprising identification, screening, and inclusion stages (PRISMA flow diagram, 2024) (see Figure 2). The initial database search yielded 678 records through database searches, supplemented by citation tracking, and targeted searches for influential contributions, and methodological cross-

checks. After removing 185 duplicates, 493 unique studies were screened based on titles and abstracts, resulting in the exclusion of 340 studies due to insufficient strategic and organizational relevance or lack of ERP focus. Full-text assessment of the remaining 153 studies led to the exclusion of 127 papers for reasons including lack of explicit ERP-LLM focus ($n = 50$), insufficient strategic relevance or organizational context ($n = 45$), and redundant or purely conceptual or descriptive contributions without practical insights ($n = 32$). The final sample includes 26 studies, with 8 providing substantial theoretical or empirical depth to inform the conceptual framework.

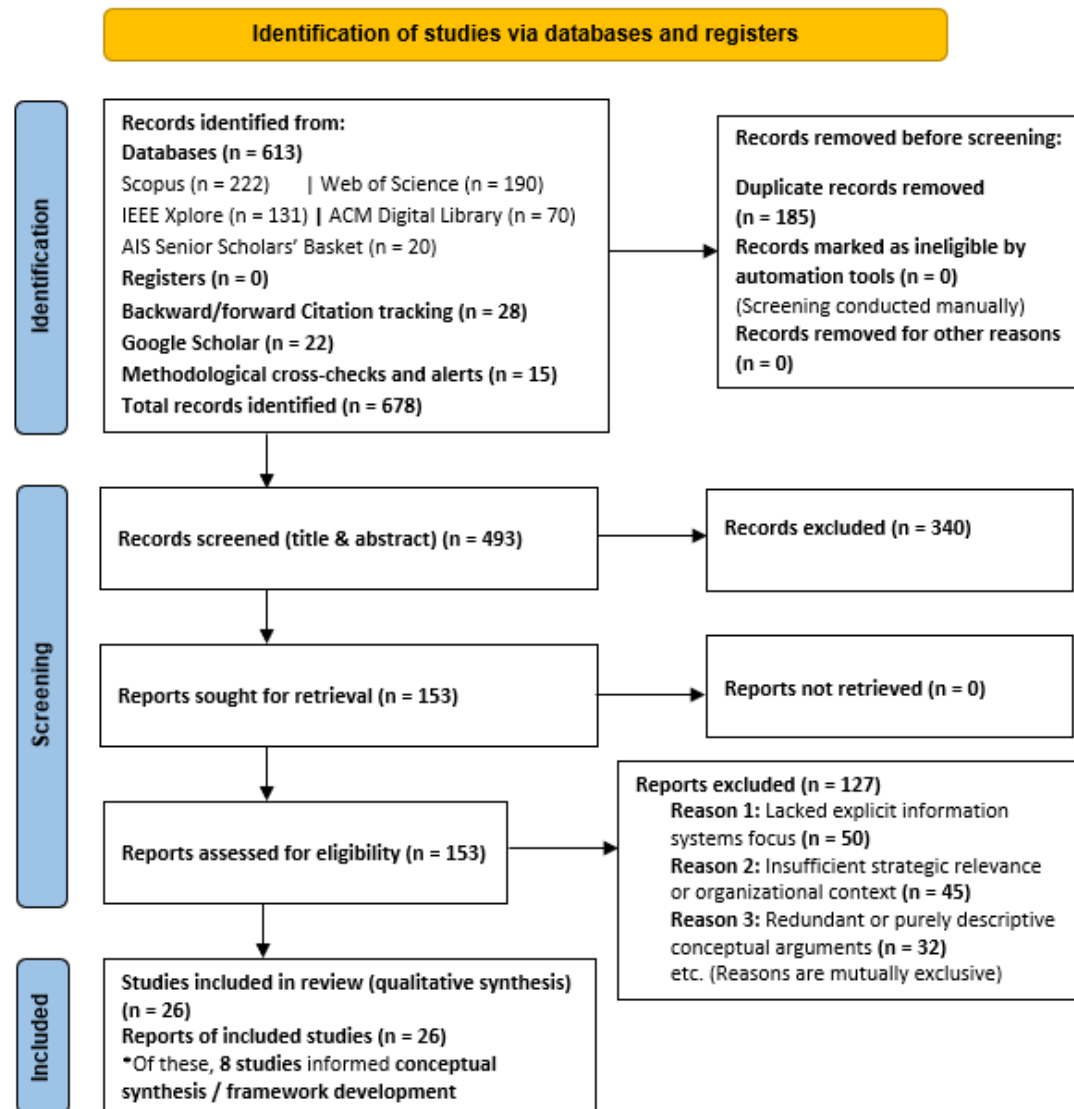


Figure 2: PRISMA 2020 Flow Diagram

d. Inclusion and Exclusion Criteria

Inclusion criteria comprised peer-reviewed studies with explicit ERP-AI (LLM) focus and organizational, addressing system-level relevance, or strategic implications, while exclusions covered purely technical LLM studies without ERP context, non-academic publications, and descriptive opinion pieces.

Quality was ensured through peer-reviewed sources; formal risk-of-bias assessment was not applied due to the exploratory nature of the study.

e. Data Extraction

Data extraction involved systematic coding of each study's objectives, methodologies, ERP modules examined, AI (LLM) capabilities, and reported outcomes. Extracted variables served as analytical measures, enabling cross-study comparison of functionality, domains, and value contributions.

f. Data Analysis

Data analysis combined bibliometric mapping using VOSviewer with thematic synthesis (see Table 1), aggregating findings into higher-order categories related to ERP functionality, value creation, and implementation challenges. Bibliometric mapping identified research trends via keyword co-occurrence, while thematic synthesis enabled qualitative interpretation and categorization.

This dual-method approach ensured both structural mapping and interpretive depth in LLM enabled ERP systems, allowing for a comprehensive understanding of how LLMs enhance ERP systems across functional domains.

Table 1: Thematic Contribution of papers

Theme	Papers
Intelligent User Interaction and Conversational ERP	(Sarferaz, 2025) (Anni, 2025) (Mhaskey, 2024) (Fathima et al., 2024)
Decision Support and Explainable Analytics	(Mhaskey, 2024) (Dachepalli, 2025) (Balaha et al., 2025) (Jawad & Balázs, 2024)
Process Automation and Optimization	(Mhaskey, 2024) (Balaha et al., 2025) (Samaranayake, 2025) (Jin et al., 2025) (Balla, 2025) (Panggabean et al., 2025) (Jawad & Balázs, 2024)
Knowledge Management and Organizational Memory	(Mhaskey, 2024) (Xu et al., 2025) (Dospinescu & Buraga, 2025) (Jawad & Balázs, 2024)
Financial Intelligence and Forecasting	(Mhaskey, 2024) (Keating, 2024) (Konda, 2018) (Fathima et al., 2024)
Supply Chain and Operations Intelligence	(Mhaskey, 2024) (Daios et al., 2025) (Bahroun et al., 2025) (Keating, 2024) (Panggabean et al., 2025)
Human Resource Management	(Mhaskey, 2024) (Soni et al., 2025) (Alabdali et al., 2024) (Dasaklis et al., 2025) (Devaraju, 2024)

Compliance, Risk, and Governance	(Mhaskey, 2024) (Soni et al., 2025) (Nyber, 2021) (Hamzat, 2023)
ERP Customization and Development Support	(Mhaskey, 2024) (Biswas, 2025) (An et al., 2024) (Jawad & Balázs, 2024)

g. Conceptual framework Development

Findings from the qualitative synthesis informed the development of a layered LLM-ERP integration framework capturing interaction, intelligence, automation, and governance dimensions (Figure 1). The resulting framework integrates extracted data, thematic insights, and analytical findings into a coherent model.

This framework not only integrates insights from the selected studies but also provides a replicable blueprint for future research in cognitive enterprise systems. By systematically combining bibliometric and thematic analysis, this methodology ensures rigor, transparency, and replicability while highlighting strategic, architectural, and organizational implications of LLM integration in ERP environments.

4. Results and discussion

The final sample comprised 26 peer-reviewed studies published between 2018 and 2025. The majority of studies adopted conceptual, design-oriented, or cross-sectional research approaches, while longitudinal and large-scale empirical validations were notably limited. The literature remains nascent, with limited empirical validation and practical maturity in LLM-ERP integration.

To analyse the findings, thematic synthesis was conducted based on the he proposed LLM-ERP integration framework (Figure 1), which facilitated the coding and interpretation of opportunity domains, architectural alignment, and governance considerations. Analysis employed iterative coding, thematic grouping, and mapping to the four-layer framework to ensure conceptual consistency.

Thematic synthesis of the literature identified nine major opportunity domains associated with the integration of large language models (LLMs) into enterprise resource planning (ERP) systems. Existing literature indicates that the integration of large language models (LLMs) extend the functional capabilities of traditional ERP systems. Rather than replacing the transactional foundation of ERP systems, LLMs appear to strengthen ERP capabilities through enhanced interaction, contextual reasoning, automation, analytics, and knowledge facilitation (Balla, 2025), enabling ERP systems to better accommodate unstructured information, user queries, and complex operational contexts. Given the systematic literature review design, no formal hypothesis testing was conducted; findings are interpreted against the research questions and conceptual framework.

Most existing ERP intelligence remains primarily structured data-centric and module-specific functionalities with limited cross-functional reasoning, contextual understanding, and natural language interaction. Within this context, Large Language Models (LLMs) offer a significant pathway to enhance ERP systems to better handle unstructured information, natural language

queries, and more complex operational contexts by introducing capabilities for natural language interaction, contextual reasoning, summarization, and decision support across multiple organizational ERP functions.

The findings are discussed across the nine opportunity domains for LLM integration in ERP. The framework (Figure 1) guided the analysis and coding of these key opportunity domains. The discussion below is organized according to the three research questions of the study. This structure allows the findings to be presented more clearly and ensures that each question is answered directly using the evidence synthesized from the reviewed studies.

The first research question; “RQ1: What Functional Opportunity Domains Emerge from Integrating LLMs into ERP Systems?”, focused on identifying the key functional domains emerging from LLM integration in ERP systems. Analysis revealed nine major domains that capture the breadth of LLM-enabled ERP enhancements.

a. Intelligent User Interaction and Conversational ERP

The most visible opportunity domain is intelligent user interaction and conversational ERP. The reviewed studies suggest that LLM-enabled conversational ERP interfaces allow users to interact with ERP modules through natural-language queries rather than structured commands or menu navigation (Mhaskey, 2024; Sarferaz, 2025). This capability reduces technical barriers, enhances usability, and lowers training requirements across functional modules such as finance, human resource management (HRM), supply chain management (SCM), and customer relationship management (CRM), where users often need quick access to system information without deep technical expertise (Daio et al., 2025). The findings suggest that LLMs significantly improve user accessibility, particularly for non-technical stakeholders.

b. Decision Support and Explainable Analytics

Another dominant theme relates to explainable analytics. Several studies show that LLMs can contribute by generating narrative interpretations of dashboards, anomaly detection outputs, and performance indicators (Dachepalli, 2025). This means that ERP systems can move beyond visual displays of data and begin to provide meaningful text-based interpretations that help users understand what the data is showing and why it matters. Instead of relying solely on visual analytics, ERP systems enhanced with LLMs can provide textual explanations that clarify trends and deviations (Balaha et al., 2025). This capability strengthens interpretability and supports managerial decision-making by translating quantitative outputs into contextually meaningful insights.

c. Process Automation and Optimization

Beyond traditional rule-based automation embedded in ERP systems, LLMs introduce contextual reasoning into workflow management. They can support exception handling, dynamic workflow generation, and interpretation of organizational rules (Jin et al., 2025). Unlike deterministic automation scripts, LLM-enabled automation accommodates ambiguity and process deviations, thereby reducing manual intervention in operational routines. This represents a shift from rigid automation toward adaptive process intelligence. In practical terms,

this means that ERP systems enhanced with LLMs may respond better to uncertainty, exceptions, and changing business conditions.

d. Knowledge Management and Organizational Memory

The literature further highlights the role of LLMs as knowledge agents within ERP ecosystems. By summarizing historical transactions, retrieving documentation, and responding to policy-related queries, LLMs enhance institutional memory which helps preserve and spread organizational knowledge more effectively (Xu et al., 2025). These capabilities reduce knowledge silos and support onboarding processes by making procedural and historical information more accessible (Dospinescu & Buraga, 2025). As a result, ERP systems can move beyond being simple repositories of transactions and begin to function more like knowledge-support platforms.

e. Financial Intelligence and Forecasting

Within financial modules, the reviewed studies indicate that LLMs strengthen interpretive capabilities by explaining performance fluctuations, summarizing reports, and contextualizing forecast outputs (Keating, 2024). This narrative augmentation enhances transparency and accountability in financial reporting while preserving structured ERP data integrity (Konda, 2018). Rather than replacing financial analytics engines, LLMs enhance interpretability and communication of financial information.

f. Supply Chain and Operations Intelligence

LLM integration enables ERP systems to combine structured internal data with unstructured external information, such as market trends and disruption signals (Mhaskey, 2024). This contextual reasoning supports more adaptive responses to demand variability, supplier risks, and operational uncertainties (Bahroun et al., 2025). The findings suggest that LLMs can facilitate broader operational awareness within ERP systems by supporting organizations to interpret forecasting results, monitor performance, and respond more intelligently to changing conditions (Keating, 2024; Bahroun et al., 2025).

g. AI-Enabled Human Resource Management

The literature shows that in HRM applications, LLMs support skill mapping, performance summarization, and policy-aligned decision support (Dasaklis et al., 2025). However, the literature consistently cautions against risks related to bias, fairness, and ethical decision-making when applying generative AI to personnel data. This suggests that while LLM-enabled HR analytics offer operational efficiency in HR analytics, they also require strong governance mechanisms to prevent discriminatory or opaque outcomes, ensuring transparent and fair use.

h. Compliance, Risk, and Governance

The reviewed studies show that LLMs also contribute to compliance and regulatory interpretation by mapping legal requirements to ERP process configurations and generating audit-related explanations (Hamzat, 2023). These capabilities are particularly relevant in highly regulated industries where documentation and traceability demands are substantial. By

automating compliance interpretation, LLMs may reduce administrative burdens; however, high-level accuracy, accountability, and oversight remain central concerns.

i. ERP Customization and Development Support

Several studies identify ERP system development and maintenance as an emerging opportunity area. LLMs assist in code generation, documentation interpretation, legacy configuration explanation, and system migration tasks (An, 2024; Biswas, 2025). These functions potentially reduce implementation complexity and accelerate ERP customization. Nevertheless, the reviewed literature also shows that empirical assessments of long-term reliability and integration performance remain limited.

Together, these nine domains comprehensively capture the functional opportunities afforded by LLM integration in ERP systems, directly addressing RQ1.

The second research question; “RQ2: How Do LLMs Enhance Interaction, Automation, and Analytical Capabilities Within ERP Environments?”, focused on how LLMs improve interaction, automation, and analytical capability in ERP environments. The literature suggests that the answer lies in the way LLMs make ERP systems more responsive, interpretable, and flexible.

The findings align with the proposed four-layer LLM–ERP integration architecture. The interaction layer supports intelligent user interaction (Mhaskey, 2024; Sarferaz, 2025). This changes the relationship between users and the system. Instead of learning complex command structures or navigating multiple menus, users can ask questions in plain language and receive useful responses. This enhances accessibility, reduces the learning curve, and supports cross-functional collaboration.

The intelligence layer includes explainable analytics, financial and supply chain intelligence, knowledge management, and AI-enabled HRM. The automation layer encompasses process automation and ERP customization. In terms of automation, the reviewed studies show that LLMs can improve ERP workflow management by introducing contextual reasoning into process execution. Unlike traditional automation, which follows prewritten rules, LLM-based automation can respond more flexibly to exceptions and irregular situations (Jin et al., 2025). This shift from deterministic automation toward adaptive process intelligence reduces manual interventions and increases operational flexibility.

The analytical dimension is also strongly affected. LLMs help ERP systems convert complex output into readable interpretations, which improves explainability and decision support (Dachepalli, 2025; Balaha et al., 2025). Rather than presenting users with raw figures alone, LLMs can summarize trends, explain anomalies, and clarify performance patterns in a way that is easier to understand. This is especially useful in management settings where decision-makers need to interpret financial, operational, or supply chain data quickly and confidently. In combination, these capabilities illustrate the multidimensional contribution of LLMs to ERP systems. The findings show that LLMs enhance ERP systems through three closely connected improvements: more natural interaction, more flexible automation, and more explainable

analytics. These developments directly answer RQ2 and explain why LLMs are seen as a promising extension of ERP functionality rather than a replacement for it.

The third research question; “RQ3: What Architectural, Governance Challenges, and Research Gaps Characterize Current ERP Literature?”, addressed the architectural, governance, and research gaps visible in the current ERP literature. The findings suggest that although the opportunity landscape is wide, the literature remains fragmented in ways that make responsible adoption difficult.

The findings align with a proposed four-layer LLM–ERP integration architecture. The interaction layer encompasses intelligent user interfaces, enabling natural-language communication with ERP modules (Mhaskey, 2024; Sarferaz, 2025). The intelligence layer includes explainable analytics, financial and supply chain intelligence, knowledge management, and AI-enabled HRM. The automation layer covers process automation and ERP customization, while the governance layer addresses compliance, risk, and data protection (Nyber, 2021; Hamzat, 2023). This layered architecture provides theoretical coherence and illustrates how LLM capabilities extend ERP functionality in a structured manner.

Governance and risk remain critical considerations. Despite the extensive opportunity landscape, the reviewed literature consistently identifies critical risks associated with LLM-enabled ERP systems (Mhaskey, 2024). Although the literature highlights many technological benefits of LLM-enabled ERP systems, governance issues remain less developed. Based on the reviewed studies, governance challenges can be grouped into four main risk categories aligned with the proposed Governance Layer: technical, ethical, regulatory, and organizational risks.

Technical risks include hallucination, unreliable outputs, limited explainability, integration difficulties with legacy ERP systems, and scalability concerns (Mhaskey, 2024; Nyber, 2021). Since ERP systems manage critical financial and operational processes, inaccurate or non-transparent AI output may create serious system-level risks. Therefore, validation mechanisms, traceability, and audit trails are essential. Ethical risks relate mainly to bias, fairness, and transparency, particularly in decision support and human resource applications (Dasaklis et al., 2025). Without bias monitoring and human oversight, AI-generated outputs may lead to unfair or opaque decisions. Regulatory risks involve data privacy, compliance with legal standards, cross-border data governance, and auditability requirements (Hamzat, 2023). Organizations must ensure that LLM integration does not weaken regulatory accountability or documentation standards. Organizational risks include limited empirical validation, change management challenges, user trust issues, and unclear human–AI collaboration practices. These four risk dimensions justify RQ3 with the importance of the governance layer in the proposed architecture and highlight the need for structured governance frameworks to support responsible LLM adoption in ERP systems.

Research gaps identified include a predominance of module-level analysis, scarce empirical validation, insufficient integration of comprehensive architectural frameworks, and underdeveloped governance models. Much of the literature remains conceptual rather than

practically validated, highlighting opportunities for future research that combines empirical evidence with architecture-driven, risk-conscious ERP deployment.

The findings demonstrate that LLMs offer significant functional opportunities across multiple ERP domains, enhance interaction, automation, and analytics, and necessitate careful architectural and governance consideration. By systematically addressing RQ1–RQ3, this discussion clarifies both the potential and the limitations of LLM integration, while highlighting the need for empirical validation and structured governance frameworks in future ERP research and practice. Findings indicate a shift from transactional ERP toward cognitive, adaptive platforms, supported by consistent interaction, intelligence, automation, and governance dimensions, though empirical validation remains limited. From a theoretical perspective, this study consolidates fragmented literature into a unified architectural model and offers practical guidance on LLM-enabled ERP opportunities and risks.

5. Conclusion and contribution

This comprehensive review synthesized current research on the integration of Large Language Models (LLMs) into Enterprise Resource Planning (ERP) systems through a PRISMA-guided systematic review. The findings identify nine functional opportunity domains that extend ERP capabilities beyond structured transaction processing toward interaction, contextual reasoning, automation, and knowledge facilitation. Rather than replacing core ERP architecture, LLMs function as augmentative intelligence layers that enhance usability, interpretability, and adaptability across finance, supply chain, human resource management, compliance, and system development modules. The systematic review advances a four-layer LLM–ERP integration architecture comprising interaction, intelligence, automation, and governance layers. This framework provides theoretical coherence by structurally mapping LLM capabilities to ERP functional extensions. However, the literature also reveals critical technical, ethical, regulatory, and organizational risks, emphasizing the necessity of robust governance mechanisms to ensure reliability, transparency, and accountability.

This review makes three primary theoretical contributions to ERP. First, it consolidates fragmented, module-level discussions into an integrated cross-functional perspective on LLM-enabled ERP systems. Second, it develops a structured four-layer architectural framework that clarifies how LLM capabilities extend ERP functionality across interaction, analytics, automation, and governance dimensions. Third, it systematically categorizes governance risks into technical, ethical, regulatory, and organizational domains, strengthening the conceptual foundation for responsible LLM adoption in enterprise environments. By synthesizing these streams into an integrated framework, this study provides a structured foundation for cumulative theory development and future ERP research.

The review contributes a cohesive conceptual synthesis of LLM-enabled ERP transformation. While the technological potential is substantial, sustained scholarly attention to empirical validation, governance design, and human-centered integration will be essential to ensure responsible and effective evolution toward cognitive enterprise systems.

5.1.Implications

Theoretical Implications: The findings reposition ERP systems from deterministic execution engines toward intelligent enterprise platforms supported by cognitive augmentation. The proposed four-layer architecture offers a structured conceptual lens for understanding how LLM capabilities map onto ERP functionality, providing a foundation for theory development, hypothesis testing, and empirical modeling in future research.

Methodological Implications: The review highlights the need for more rigorous empirical investigations to validate conceptual findings. Future studies should employ mixed-method approaches, longitudinal case studies, and controlled experiments to examine operational outcomes, adoption processes, and system performance of LLM-enabled ERP deployments. Incorporating both qualitative and quantitative analyses will strengthen confidence in theoretical assertions and reveal context-specific insights.

Practical Implications: Organizations considering LLM deployment should prioritize augmentative use cases such as conversational querying, narrative reporting, and workflow support where interpretability and usability gains are most immediate, rather than a system replacement initiative. Investment in validation mechanisms, audit trails, bias monitoring, and compliance safeguards is essential to maintain trust and regulatory alignment. Managers must also address change management and human–AI collaboration to ensure effective adoption, and avoid resistance to intelligent ERP tools.

5.2.Limitations

This review is limited to peer-reviewed English-language studies published between 2018 and 2025 and includes a relatively small final sample size ($n=26$). Many included studies are conceptual or design-oriented, with limited longitudinal or large-scale empirical validation. No formal risk-of-bias scoring was applied due to the conceptual nature of the literature. Consequently, findings should be interpreted as an integrative conceptual synthesis rather than empirical confirmation.

5.3.Future Research

Future studies should focus on real-world evaluations of LLM integration in ERP systems, using case studies, experiments, and quantitative assessments to examine operational impact, reliability, and scalability. Research is also needed to develop governance frameworks, including bias detection, ethical oversight, and regulatory compliance models. Further work can refine the proposed four-layer architecture and explore how different LLM capabilities interact across ERP functions. Additionally, studies should investigate human–AI collaboration, usability, and change management, as well as compare adoption patterns across industries, organizational sizes, and technological maturity levels. These efforts will help translate the conceptual potential of LLMs into practical, responsible, and effective ERP solutions.

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**BARRIERS TO WOMEN'S ENTREPRENEURIAL SUCCESS AND SOCIAL
IDENTITY IN SMALL AND MEDIUM ENTERPRISES: A QUALITATIVE STUDY
IN NORTHERN AND EASTERN PROVINCES IN SRI LANKA**

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Abstract

Purpose: In Sri Lanka, female entrepreneurship has emerged as a catalyst for economic development, job creation and social development. Despite the rise in the contribution of women in the Small and Medium Enterprise (SME), women-run enterprises are still underrated as compared to those run by men that hinder their social recognition. Hence this research examines the obstacles to entrepreneurial performance and social identity of women entrepreneurs in the Northern and Eastern Provinces of Sri Lanka.

Design/Methodology/approach: The design was an exploratory qualitative design that used an inductive research approach. Semi structured interviews with 15 purposive sampled women entrepreneurs were used to gather primary data. The sample comprised of women in SME activities in Northern and Eastern Provinces of Sri Lanka. Thematic analysis was used to analyze the collected data to determine the key obstacles affecting entrepreneurial growth, sustainability, and social positioning of women entrepreneurs in these underserved and post-conflict areas.

Findings: The results indicate that the most significant obstacles to women entrepreneurs are a lack of access to finance, socio-cultural factors, household duties, gender roles, and their mobility. Poor business networks, lack of training and family related commitments are other factors that inhibit business growth and innovation. Gender inequality also decreases the confidence, visibility, and social status of women. The paper highlights the necessity of family support, mentorship, financial inclusion, gender-sensitive policies, and inclusive entrepreneurial networks to enhance the performance and social identity of women as entrepreneurs.

Research limitations/implications: The research has a small qualitative sample size and is regional, which limits generalization. Nonetheless, it provides valuable suggestions to policy makers, development agencies, and support institutions to develop inclusive interventions that increase the entrepreneurial involvement and social empowerment of women in such settings.

Originality/value: The research contributes to the literature by connecting entrepreneurial achievement with social identity of women entrepreneurs in the Northern and Eastern Provinces in Sri Lanka. It adds context-dependent data of post-conflict and underserved areas, where the entrepreneurial activity of women is not thoroughly studied in the literature.

Keywords: Entrepreneurial Success; Northern and Eastern Provinces; SME Sector; Social Identity; Women Entrepreneurs

1. Introduction

1.1. Background

Entrepreneurship by women has been identified as an important factor in economic growth, creation of jobs and social development in developed as well as the developing economies. Women owned businesses in the Sri Lanka make a big impact in poverty alleviation, generation of household income and development of society. Although the country has rather high rate of female literacy, women are still being deprived of the opportunity to contribute to the economy. According to recent statistics, only 29.6% to 33.2% of women are in the labor force, only 25 percent own or run small and medium enterprises (SMEs), and this shows that the women entrepreneurial potential is significantly underutilized (Department of Census & Statistics, Sri Lanka, 2021). According to the earlier research on women entrepreneurship, the involvement of women in the SME sector is not only associated with the national economic growth but also with the social empowerment of women and the justification of their abilities to make better decisions and their social status (Nimeshi & Rodrigo, 2024). Nevertheless, it is always noted in literature that women entrepreneurs in developing nations have more problems compared to their counterparts in terms of structural, cultural and institutional management (Amarasooriya et al., 2024). Social identity in this regard is what the families, the communities and the professional networks give to women as businesspeople and thus determine their confidence and motivation levels in business and sustainability. Through entrepreneurship women can become financially independent and gain bargaining power in their households in addition to gender equality. However, women entrepreneurs in developing nations have fewer opportunities compared to men because they have more challenges with structural, cultural, and institutional barriers, and it is a unique factor that affects their social identity and entrepreneurial success.

Limited access to Finance, education, business training, technology and professional networks also limit managerial skills and innovation ability (UNDP, 2025). Such difficulties are especially acute in the Northern and Eastern Provinces, where the long-term consequences of civil war, inadequate infrastructure, inaccessible markets, and limited institutional assistance still limit the opportunities of businesspeople. The household roles as dictated by the socio-cultural norms and gender role restrict the women in time, space, and concentration to business. Moreover, women become insecure, invisible, and lacking a sense of identity due to social expectations and institutional gender biases in financial institutions and business networks, which consequently influences their entrepreneurial performance and business success in the long-term.

1.2. Research Problem

Despite the growing interest in women entrepreneurship, women in Sri Lanka continue to experience significant challenges in business start-ups, continuity, and growth. Women still lack social and economic opportunities as compared to men especially in entrepreneurship and business development (Fatema Khatun, 2014). Entrepreneurship is a multidimensional phenomenon; this means that more context-specific analysis is required to determine factors contributing to success and failure (Vanessa Ratten, 2023; Ratten, 2014). The entrepreneurship of women must be considered a more comprehensive process, in other words, women are trying to gain economic space, professional legitimacy and social identity in a shifting environment (Melissa Stewart, 2023).

According to previous research, the entrepreneurship among women has been researched to a relatively small extent and significant obstacles continued to impede women entrepreneurial achievement and social acceptance (Abeysekara, 2002; Kodithuwakku and Perera, 2003). These obstacles are particularly harsh in the Northern and Eastern Provinces where women in business face worse conditions due to post-conflict realities, bad infrastructure, low market accessibility, low financing, lack of mentoring, genderized expectations, limited networks, technological dilemmas, and weak institutional support (Silva and Jayawardena, 2021; Perera and Fernando, 2022). Consequently, most women entrepreneurs are faced with the challenge of not only establishing a sustainable and successful business but also developing a decent social identity in their communities and the entrepreneurial world at large. Despite existing studies, there remains limited context-specific understanding of how these barriers interact in post-conflict SMEs and affect women's long-term business sustainability and social recognition (Amarasooriya et al., 2024; Nimeshi and Rodrigo, 2024; Yogendrarajah, 2019). Thus, the main research issue of the given study was to investigate the most important economic, social, technological, institutional and personal obstacles that impact women entrepreneurs in Northern and Eastern Provinces in Sri Lanka and how these obstacles can affect the success and social identity of women.

1.3. Objectives

- To identify the barriers faced by women entrepreneurs in the SME sector in Northern and Eastern Province, Sri Lanka.
- To examine how these factors influence women entrepreneurs in achieving entrepreneurial success and establishing their social identity in the SME sector in Northern and Eastern Province, Sri Lanka.

2. Literature review

2.1. Critical Discussion

2.1.1 Women Entrepreneurship in Sri Lanka

The role of women in SMEs has an economic growth, household income as well as social empowerment in Sri Lanka. The government campaigns, such as the Empowering Business Environment to Women Entrepreneurs programs by the EDB, aim at eliminating gender inequality. Previous articles focus on the part women play in sustainable development and reinvestment to the community (Chakraborty, 2020; Fernando and Perera, 2023). Institutional Theory, Social Identity Theory, and Social Feminist Theory have also been used in recent literature to explain how gendered norms, institutional logics, and social recognition influence women and their experiences and results in entrepreneurship. Nevertheless, advantages are still disproportionate to the geographical areas, particularly in post-conflict areas.

2.1.2 Abridgements to Women Entrepreneurs

The most reliable challenge is financial limitations, and women-owned businesses have a greater loan rejection rate and restricted access to micro-financing (Perera and Fernando, 2022). Growth is also limited by technological barriers whereby most women are not digitally skilled and online market (Seneviratne, 2020; Kumar and Silva, 2023). These complications are compounded by social and family obligations that reduce time and resources to work on the business, thereby increasing burnout and worse entrepreneurship performance (Gunasekara, 2020). These socio-cultural and structural barriers as well affect the social identity of the women, which can be defined as the recognition and rightfulness of persons belonging to social groups that defines confidence, motivation, and involvement in entrepreneurial practices. Although most other studies have continually found these obstacles, others also reported that these obstacles could be alleviated through the support of families and communities, which contradict the other findings on the relationship between personal networks and structural constraints and the construction of women entrepreneurs' identity.

Post conflict situations in the Northern and Eastern Provinces influence entrepreneurship and typically lead to necessity-based enterprises with restricted market and mentorship opportunities (Silva & Jayawardena, 2021). The cultural expectations of care giving make mobility and time more limited to women (Jayasundara, 2023; Gunawardena and Weerasinghe, 2023). The presence of family and social support enhances the results, and social identity and acceptance in the community are the focus of success, but few studies investigate the impact of recognition and legitimacy on motivation, confidence, and performance. The ability to be competitive depends on digital access and literacy, whereas rural/post-conflict women experience restricted tools, training, and access to the internet (Fernando, 2022; Seneviratne & Wijesinghe, 2021). Male networks restrict the access to social capital and knowledge (Wijesinghe and Rathnayake, 2023). Gender specific networks and mentorship boost confidence, resources, and outcomes but are not exploited by these regions.

Although there are policies for SME development in Sri Lanka, very few policies directly address the gendered barriers in post-conflict areas (Karunaratne & De Silva, 2024). Integrated support - integrating financial inclusion, entrepreneurship training, digital literacy and mentorship - is proven to help businesses perform better, as well as enhance the social identity of women, allowing them to participate more fully in the economic ecosystem (Jayawardena & Perera, 2022).

2.1.3 Social Identity and Entrepreneurial Success

In women entrepreneurship, social identity is directly related to entrepreneurship success. The Social Identity Theory is one of the theories that have been instrumental in explaining the role played by recognition, legitimacy, confidence, motivation and involvement of women in business. The recent literature has also been keen on the application of the Institutional Theory, legitimacy perspectives and the Social Feminist Theory in explaining how gendered norms, institutional structures and the social expectations affect the experiences and performance of women in entrepreneurship. The lack of legitimacy among women in Sri Lanka unfolds due to the gendered expectations, inadequate mobility, and ineffective access to markets and networks, especially post-conflict areas (Silva and Jayawardena, 2021; Jayasundara, 2023; Gunawardena and Weerasinghe, 2023). According to previous research, finance and technology are only some of the factors, and entrepreneurial success relies on mentoring, social acceptance, and community support (Perera and Fernando, 2022; Fernando, 2022; Seneviratne and Wijesinghe, 2021). Social identity is therefore both a psychological and structural determinant influencing the visibility of women in entrepreneurship, legitimacy and long-term sustainability.

2.2. Research Gap

Despite the increasing academic interest in the topic of women entrepreneurship in Sri Lanka, several gaps are still observed regarding the influence of various obstacles on the success of women in entrepreneurship and social identity, especially in post-conflict areas (Amarasooriya et al., 2024; Yogendrarajah, 2019). Although body of literature on women entrepreneurship in Sri Lanka is on the increase, there is still a clear empirical gap in comprehending how various and interconnected barriers influence the entrepreneurial achievements of women and their social identity in post-conflict areas. The existing literature has analyzed general limitations, i.e. finance, education, and networks, and concentrated on urban and developed economic regions, with little consideration of the Northern and Eastern Provinces (Abeysekara, 2002; Kodithuwakku and Perera, 2003; Silva and Jayawardena, 2021). Thus, there is a lack of context-specific information on the ineffective infrastructure, socio-cultural expectations, and limited institutional assistance, psychological capital in affecting women as entrepreneurs and increasing their legitimacy and long-term sustainability in these areas.

3. Methodology

3.1 Research Approach

This paper embraced a qualitative Inductive approach, and it was suitable, as it allowed deepening the comprehension of the lived experiences, perceptions, and behaviors of the participants towards the complex financial, social, emotional, and structural problems (Creswell & Poth, 2018). It assisted in determining the real obstacles met by women entrepreneurs and the way in which the obstacles influenced the entrepreneurial life of women. According to Thilini De Silva (2021), the only way to create valuable insights and assist in long-term research and development is to have an open and trusting conversation with the women entrepreneurs.

The target of the research was on women who were actively running SMEs in the Northern and Eastern Provinces due to their unique post-conflict socio-economic factors, which determine entrepreneurial opportunities and social presence. Qualitative design also increased credibility and reliability of findings since it gave the participants the option of giving their experiences using their own words. According to Breg and Hansson (2000), qualitative research offers suitable and reliable understanding of intricate social phenomena, and this is critical in analyzing the phenomenon of women entrepreneurship as a multidimensional and socially constructed phenomenon. Author believes that this approach was suitable since the study involved interviewees with first-hand entrepreneurial experience and that may provide an informative account of the problems under exploration.

3.2 Research Strategies

The qualitative strategy employed to carry out the study was interview-based, based on face-to-face in-depth semi-structured interviews. The approach allowed the researcher to get accounts of the participants about their entrepreneurial experiences in detail and still be consistent with the research objectives. The interviews were held in a non-formal and relaxed environment, at workplaces or in the homes of the participants. The choice of semi-structured interviews was driven by the fact that they provide flexibility and cover important thematic areas of concern in the study (Kvale and Brinkmann, 2009). The competencies of entrepreneurship, financing, socio-cultural forces, gender roles, experience of networking, work-life balance, management within an organization, and perceived impacts of these on entrepreneur success and social identity were discussed in the interviews.

All the interviews were audio-taped with informed consent, and the field notes were kept recording non-verbal data and contextual data (Creswell and Poth, 2018). The research questions were transformed into an interview guide which contained open-ended questions and semi-structured questions. Where needed, emergent questions were also applied to understand better and more detailed descriptions of the experiences of the participants. Secondly, contextual interpretation was supported by secondary information based on academic literature, policy documents, and past empirical research. Such an adaptable and still narrowed design reinforced the methodological framework of the study that matters in the research of entrepreneurial capability and support mechanisms (Ambepitiya, 2019).

3.3 Research Site

The study location was the Northern and Eastern Provinces of Sri Lanka. The choice of these locations enables the research to be able to embrace the various realities of women entrepreneurs in the locations that are influenced by various degrees of development, infrastructure, social expectations and market accessibility. The study intends to produce a more in-depth insight by scrutinizing the experiences, challenges and contributions of women entrepreneurs by covering a wide geographical region in the Northern and Eastern Provinces. This localized approach is significant in that entrepreneurship is localized and the local conditions define the entrepreneurship experience of women, and this could be different in different environments. The site selection thus helps the purpose of the study to learn more about how women entrepreneurs operate under different socio-economic and cultural settings and the impacts that these settings have on their entrepreneurial performance and social identity.

3.4 Sample

The sample was 15 women entrepreneurs who're already in operation in the SME sector and have at least one to three years of entrepreneurial experience. The experience requirement was taken to make sure that the participants would have enough experience of their entrepreneurship realities and would be capable of discussing the challenges that they had to face and what methods they employed to address them. Purposive sampling was used to identify the participants, as it should include people who have direct entrepreneurial experience that is relevant to the research goals (Patton, 2015). This requirement guaranteed that the participants were exposed to enough entrepreneurial challenges and at the same time remained in the formative development stages. The study was not limited to a particular industry and hence participants of the study were attracted across numerous industries. The sample were the women between 25 and 50 years of age having varied personal and business backgrounds. The choice was not limited on the religious, ethnic, level of education and income, if the individuals chosen were women entrepreneurs, and they were in the current business environment. To maintain their anonymity and confidentiality, the participants were assigned the designation of P1, P2, P3 etc.

Table 1: Participants' Details

Participants	Status	Entrepreneurship	Years of Experience	Province
P1	Unmarried	Herbal Products	2	Eastern
P2	Married	Natural Plants, Fertilizers, Seed cards and stationary items	2.3	Northern
P3	Unmarried	Art gallery	1.6	Northern

P4	Married	Tailoring and Aari work	3	Eastern
P5	Married	Aari work	1.8	Eastern
P6	Married	Designing and tailoring	2	Northern
P7	Married	Cake Production	1.8	Northern
P8	Unmarried	Tailoring	2	Northern
P9	Unmarried	Hand craft products	1.5	Eastern
P10	Married	Beauty Parlor	2	Northern
P11	Married	Artisanal food powder packaging	2.8	Northern
P12	Married	Tailoring	1	Northern
P13	Married	Natural Food packing	1.2	Eastern
P14	Married	Fiber production industry	2.5	Northern
P15	Married	Bag manufacturing industry	3	Eastern

3.5 Measures

The research employed in-depth structured interviews as the primary method of data collection. The interviews were dedicated to various key areas: the competencies of entrepreneurs, the ways to finance it, the family problems, the effect of the environment, gender stereotypes, planning, the management of organizations, networking, human resources, their commitment to success and their reputation, and work-life balance. All these areas were selected as they are directly connected to the barriers and conditions that make female entrepreneurship experiences take their specific shape.

The interviews, which took a duration of about one hour and were conducted in the form of a face-to-face interview at the workplace or homes of the participants when they were convenient. During the research, ethical values were upheld. Before the interviews were carried out, the participants were informed about the objective of the study, and informed consent was received. Respondents were given confidentiality and anonymity by assuring them that their participation was voluntary. The data and transcripts were recorded and stored safely and only utilized for academic purposes as per qualitative research ethics. Anonymity and

confidentiality were guaranteed during the study. The undertakings were used to support genuine and valid responses. Accuracy of data retrieval and transcription was also enhanced by using recorded interviews. This combined data collection process thereby adopted flexibility on top of its structured nature in a bid to acquire similar information and accounts that are rich.

3.6 Analysis Tools

The thematic analysis was performed on the data according to the model suggested by Braun and Clarke (2006). The recordings of the interviews were transcribed word-to-word and re-heard several times so that familiarity with the information could be attained. The first level of coding was determining meaningful segments associated with financial, technological, socio-cultural and institutional obstacles. Descriptive codes (e.g., access to finance, mobility constraints, networking constraints, etc.) and interpretive co-codes (e.g., confidence, legitimacy, recognition, and entrepreneurial identity) were produced. The codes were later sorted into general themes that represented patterns within the experiences of the participants. Themes were discussed, narrowed and made consistent with the research purpose to have analytical consistency and credibility; which aligns with established qualitative thematic analysis procedures (Braun & Clarke, 2006; Nowell et al., 2017). The relationships between the structural barriers, social identity formation and the entrepreneurial results were identified because of this analytical process. Thematic analysis brings out between-repeating themes of challenges, adaptability and gendered entrepreneurship.

The thematic analysis also allowed the researcher to make an interpretation of both the explicit and implicit meaning behind the answers of the participants. Because the research involved the issue of personal experience, social context, and the realities of entrepreneurship, the tool of analysis was an appropriate instrument to ensure that the qualitative data could be used to make meaningful conclusions.

4. Results and discussion

4.1 Data Description

The results indicate that there are several interrelated barriers among women entrepreneurs, both in terms of entrepreneurial success and social identity. The primary themes were found to be the lack of access to resources, poor networking prospects, customer and operational problems, psychological and emotional stress, and conventional social stigmatization. Some results are aligned with previous research laying financial, social, and cultural barriers as the key limitations to women entrepreneurship in Sri Lanka (Silva and Jayawardena, 2021; Perera and Fernando, 2022).

One of the most common challenges in the report was financial limitations. Participants, including P1, P2, P4, P13, P14, and P15, indicated that lack of capital inhibited business start-up, growth, acquisition of equipment, and use of technology. One of the interviewees reported that her company was still home-based as she could not afford her own office. This confirms Silva and Jayawardena (2021), who list access to finance as one of the most significant barriers to entry and development of women in the SME sector.

The statistics also indicate that women business activities are highly influenced by domestic obligations, lack of space and time constraint. This data confirms Jayasundara (2023) and Gunawardena and Weerasinghe (2023), who also focus on the role of gendered expectations and social-cultural standards to reduce the involvement and representation of women in entrepreneurship. Below are some responses stated by entrepreneurs.

P1- "I had previously worked as an Ayurvedic doctor but due to my interest in this herbal production field I started doing this business alone. But many government regulations are there in Sri Lanka that stop the women entrepreneurs from exporting these herbal products outside the region and as well as the country. I am facing some challenges in managing these kinds of political influence in transporting my products to the customers"

P3- "I had many political issues when I was starting the business. Still, I am facing those. I do free classes for the children as a service in several places. But some political party people influence that even I got some threatening messages to support their party instead of the other party. As a women entrepreneur I consider this as my passion to succeed but not to be partial for any political parties or politicians"

Other forms of bias included gender bias, poor credibility and non-representation to sectors dominated by men. The discrimination experiences and social opposition, as well as absence of opportunities, show that the problems faced by women in entrepreneurship are not merely economic, but have a strong social and cultural foundation.

P3 - "I usually face a lot of challenges from boys and men. As I am still a youngster I do face these issues. I usually get unwanted messages from men, and I had some issues directly with some people who intentionally wanted to make trouble. So later, I shifted my whole business to my home"

P12- "Many men tailors in my area consider themselves as competitors for me and recently I heard that they are copying my works in their business. And I usually face challenges by men tailors that they try to get my customer base"

4.2 Data Analysis

The results indicate that the obstacles that women entrepreneurs encounter do not exist in a vacuum; on the contrary, they support each other. One of them was limited access to resources, such as capital, raw materials, equipment, and sufficient workspace. Lack of finance decreased the capacity of the women in formalizing their operations, production and connecting to broader markets. In the less developed regions, institutional support and a poor credit system made these constraints more severe. This aids Silva and Jayawardena (2021) who cite finance as one of the most significant obstacles that confront female entrepreneurs in Sri Lanka.

The second theme of concern was poor networking and market penetration. The participants observed that family, cultural limitations and geographical seclusion diminished their chances of establishing professional networks, finding mentors or establishing partnerships. The reason is that even in cases where women have the skills of doing business, the absence of social and professional networks hinders the growth of the business as indicated by one respondent. What this confirms is Perera and Fernando (2022) who believe that the advancement of women in

entrepreneurship is not only restricted to finance but also to lack of strategic advice and mentoring. The visibility of the business and its credibility before the population is also made weaker by reduced networking (Gunawardena and Weerasinghe, 2023).

The research also discovered some customer-related and operational challenges such as late payments, order cancellations, changing customer demands, quality complaints and staff shortages. But even though such problems seem to be operational, they relate to more general structural weaknesses, such as training deficiencies, resource shortages, and insufficient system support. It implies that operational instability is not only a managerial problem but also a by-product of more general institutional and developmental limitations (Karunaratne and De Silva, 2024).

A second theme that was significant was the existence of psychological and emotional obstacles, such as self-doubt, fear of failure, stress, and burnout. Some of the participants stated that they were overwhelmed with the pressure of business management combined with domestic expectations. One of the participants indicated that she lacked confidence in the ability to make decisions regarding business due to constant family and social pressure.

P10 - "As a woman in the beauty industry, I often face societal pressure to conform to certain stereotypes, with expectations placed heavily on me. Breaking through these norms has been a struggle, and despite my progress, this pressure continues to act as a barrier". These results imply that emotional stress undermines resilience, risk-taking, and long-term planning. Fernando (2022) also reports that women in underserved regions do not have the required support and social capital to gain confidence and continue to grow the business. As some industries are uncommon women still face lot of challenges. *"P14- "The fiber industry is uncommon in these regions, yet I ventured into it as a woman entrepreneur to create a positive impact. However, I frequently encounter societal pressure and limited support from my family, which consistently affects my confidence and resilience"*

The motif of conventional social stereotypes was also very prominent. According to the women entrepreneurs, the society tends to relate ambition, running of business, and taking of risks to men. These assumptions make women less legitimate as businesspeople and make them less visible in the market. Social expectations in this research restrained the entrepreneurial identity of women, since they were expected to be homemakers rather than careerists. Therefore, entrepreneurship did not just require business capacity, but it also required the degree to which women should have been socially accepted as empowered economic players.

Additionally, study indicates that women operate in "restricted agency" which are restricted by cultural, economic and social parameters (Anderson & Ojediran, 2022; Journal of Business Venturing, 2021). However, women entrepreneurs are resilient, and the unending evidence of socio-economic and structural barriers demonstrates the importance of targeted policies and support systems to help foster inclusive and sustainable entrepreneurship.

4.1. Inferences

The results of the findings suggest that female entrepreneurs in the Northern and Eastern Provinces are subjected to financial, social, technological, operational, and psychological

challenges that are interrelated and cause significant restraint to business sustainability and social acceptance. These obstacles do not challenge each other as individuals but instead they are combined to form an inhibitory entrepreneurial environment. This confirms the opinion that entrepreneurship activities of women in Sri Lanka are influenced by structural and context-specific factors, but not by individual efforts only (Vanessa Ratten, 2023; Karunaratne and De Silva, 2024). The research also indicates that there is a good connection between the social identity and performance of the entrepreneur. Women who had no money, connections, fame, and social recognition were unable not only to keep their businesses going but also to become the recognizable entrepreneurs. It was particularly salient in the post-conflict and culturally conservative environment, whereby poor infrastructure and insufficient institutional support exacerbated such limitations (Amarasooriya et al., 2024; Nimeshi and Rodrigo, 2024; Yogendrarajah, 2019). Comprehensively, the results suggest that enhancing women entrepreneurship is a matter of interventions, which are gender sensitive and integrated such as provision of access to finance, support of digital literacy, mentoring programs, family support policies and stereotypical awareness programs. These intercessions are necessary to empower women, increase their visibility, and role in inclusive development of the region in Sri Lanka.

5. Conclusion

5.1 Summary

This research analyzed the challenges encountered by women in the Northern and Eastern Provinces of Sri Lanka when conducting an entrepreneurial business and discovered that their entrepreneurial experiences are determined by intertwined socio-cultural, financial, technological, institutional and psychological factors. The results indicate that women entrepreneurship success is restricted not only by absence of capital, digital connectivity, as well as professional networks, but also by household duties, gender expectations, and poor institutionalization. All these impediments present a state of constrained agency where women must bargain on business expansion under socially and structurally limited conditions. The study has also revealed despite these restrictions women entrepreneurs have resilience, adaptability and commitment to their business as they exploit informal support systems, local knowledge and small-scale innovation to keep up their businesses.

5.2 Recommendations

The results indicate that the recommendations should be in direct connection with the identified barriers of the study. First, gender-sensitive microfinance services, low-interest loans, flexible arrangements in terms of repayment and lessening the collateral requirements of women-owned businesses should be provided. Second, affordable digital literacy education, and support mechanisms on practical adoption of e-commerce, particularly by rural and home-based businesses, must be enhanced to promote digital inclusion. One of the strong ones is mobile-first business support. A lot of rural or post-conflict rural women have more access to smartphones than to formal business services and therefore support programs could take the form of WhatsApp based bookkeeping, order tracking, customer management and short-form digital training in their preferred languages. This could include curated online storefronts,

district-level e-commerce onboarding, and logistics partnerships that help women sell beyond local markets. Third, peer support sites, women business associations, and mentorship structured networks should be created to enhance visibility, confidence, access to the market and professional legitimacy. Fourth, the complexities of support in community and family level such as subsidized childcare, awareness program on shared domestic responsibility are needed to alleviate the double burden of women entrepreneurs. Lastly, the introduction of psychological support, resilience-building programs, and local entrepreneurial support hubs is recommended to empower women, increase their confidence level, coping capacity, and sustainability of a business in the long-term. These suggestions are also evidence-based since they are a direct response to the financial, social, technological, and emotional obstacles that were found in the results.

5.3 Implications

The research has significant theoretical and practical implications. The results point to the fact that capable women or women who work hard are not entirely the ones who make it in business, but the way the society constructs and perceives the role of women as entrepreneurs. In practice, the research has practical implications to policy makers, financial institutions, non-governmental organizations and business development agencies. It notes the necessity of gender responsive policies and specific institutional assistance to tackle the experienced realities of women entrepreneurs in post-conflict and culturally conservative areas. The developmental impact of supporting women entrepreneurs more broadly is that it has the potential to foster job creation, economic resilience in local economies, innovation, and regional development inclusivity as women-led businesses have been associated with these aspects.

5.4 Limitations

First, the research is geographically confined to the Northern and Eastern Provinces and thus may not be generalizable to women entrepreneurs in other regions of Sri Lanka especially the urban regions like Colombo. Second, the study is based on qualitative design with a limited sample size of 15 people, which is very deep, but restricts the generalization. Finally, the study was cross-sectional; it considers the experiences at a single time and does not address their changes with time.

5.5 Future Research

The geographical area in future studies needs to be extended to cover other provinces and urban settings to compare the regional variation in the experiences of women in entrepreneurship. Larger mixed-method studies would have depth and greater external generalizability. A longitudinal study would also prove useful in investigating the way entrepreneurial obstacles, coping mechanisms and success of women businesses change through time. Moreover, it is advisable that in the future, more focus on the topics of mental health, resilience, and identity formation is paid because these aspects seem to be the key to the sustainability of women in entrepreneurship. Future studies can also compare how gender-sensitive policy interventions,

mentorship program and digital inclusion initiatives can be effective in enhancing the entrepreneurial strength of women in Sri Lanka.

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BOARD GENDER DIVERSITY AND SUSTAINABLE BANK PERFORMANCE:
EVIDENCE ON PROFITABILITY AND RESILIENCE FROM SOUTH ASIA

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Abstract

Purpose: This study aims to analyze the impact of boardroom gender diversity on sustainable bank performance in South Asia, measured through profitability and financial resilience of listed commercial banks. Although gender diversity has been considered a key factor in corporate governance, there is limited and mixed empirical evidence on its implications for the performance and financial resilience in emerging markets.

Design/methodology/approach: The present study used an unbalanced panel dataset of 82 listed commercial banks from India, Sri Lanka, Pakistan, Bangladesh, and Nepal covering the period 2010 to 2024. This study initially applied traditional panel estimation techniques, including pooled Ordinary Least Squares, Fixed Effects, and Random Effects, to establish baseline results. Subsequently, a two-step System GMM was applied to address endogeneity concerns and unobserved heterogeneity of bank performance with the diagnostic tests.

Findings: The results indicate that only 10.3% of the board positions are occupied by female directors, highlighting the lower female representation across South Asian banks. Under the System GMM, board gender diversity shows a negative but statistically insignificant relationship with both return on assets and the capital adequacy ratio. However, both profitability and financial stability exhibit strong persistence in South Asian banks, suggesting that current profitability and financial stability could largely be explained by past performance over time. These results suggest that inclusive governance structures do not generate immediate improvements in sustainable bank performance.

Research limitations/implications: This study primarily focused on gender diversity and did not address qualitative characteristics of the board members. The focus on listed commercial banks in South Asia may limit the generalizability of the results to non-listed financial institutions or other developing regions.

Originality/value: This study contributes by a multi-country analysis of BGD and bank performance across South Asian countries, by examining two performance dimensions. Moreover, the study addressed the dynamic nature of bank performance and the potential endogeneity issues using system GMM.

Keywords: Bank Performance; Board Gender Diversity; Capital Adequacy Ratio; Return on Assets; South Asia

1. Introduction

Recently, boardroom gender diversity (BGD) has become a widely discussed topic on the global stage. Achieving gender equality is the 5th goal of the Sustainable Development Goals (SDGs) 2023 agenda, where gender equality is a basic human right to build a sustainable world (United Nations, 2026). Although gender equality remains a key goal, women's participation remains underrepresented in the professional world. However, corporate governance research has consistently highlighted broader global efforts to promote inclusion, equality, and sustainable development in organizational leadership (Elsheikh et al., 2024). Increasing female board representation on corporate boards is widely viewed as important for enhancing decision-making, particularly in risk management (Askarany et al., 2025). Overall, BGD is not only a best practice for governance but also contributes to corporate decision-making and strong financial performance for a long period of time in an organization (Kaluarachchi, 2025).

Furthermore, the importance of BGD is particularly evident in the banking sector, where corporate governance is critical for financial performance (Niturescu et al., 2025). Banks play a critical role in a country's economic stability, operating in a complex, highly regulated environment, facing credit risk and the challenge of expanding financial profitability. Despite these challenges, effective board decisions are critical in the banking industry to ensure performance (Nguyen & Dang, 2022).

Empirical evidence on the impact of BGD in the banking sector remains mixed. Furthermore, empirical research on the South Asian banking sector remains limited, particularly studies that examine the South Asian economies collectively (Rahman & Abbas, 2025). Most existing studies focus on a single country. In response to these gaps, the primary objective of this study is to investigate BGD and bank performance in South Asia, measured through return on assets (ROA) and capital adequacy ratio (CAR), while controlling for non-interest income, inflation, board size, bank age, and gross domestic product (GDP). By adopting a multi-country framework, this study provides new evidence on how BGD impacts the performance of the banks. The results will be valuable to policymakers, regulators, and shareholders for making decisions regarding regulatory frameworks, gender inclusion policies, and performance enhancements.

2. Literature review

2.1 Theoretical Framework

This study is theoretically grounded in agency theory and resource dependence theory, which together explain how governance mechanisms enhance organizational resilience and stability within the banking industry.

The agency theory, which was established by Jensen and Meckling (1976), mainly emphasizes that agency theory can be interpreted as the interaction between the principal and the agents (Khandelwal et al., 2023). From the gender diversity perspective, agency theory offers a framework for evaluating the extent to which female representation on corporate boards contributes to strengthening managerial oversight (Wang et al., 2024). Accordingly, agency theory highlights the role of inclusion governance in limiting managerial opportunism and strengthening banks' capacity to withstand economic and financial shocks.

In contrast, resource dependence theory states that organizational performance is linked to the attributes of board members to access the critical external resources and strategic opportunities (Omenihu et al., 2025). From a resilience standpoint, governance structures informed by resource dependence theory enhance access to external resources to reduce vulnerability and economic shocks to stabilize the economy.

Together, agency theory and resource dependence theory provide the conceptual foundation for understanding resilience and stability in the South Asian banking sector. These perspectives suggest that gender-diverse boards may enhance performance by both mitigating agency conflicts and accessing strategic external resources (Pfeffer & Salancik, 1978).

2.1.Boardroom Gender Diversity and Bank Sustainable Profitability

Profitability represents the accounting perspective of evaluating bank performance. In the process of a bank's performance evaluation, several key financial ratios are commonly used, including ROA and CAR (Nakka et al., 2025). ROA is a commonly used measure to assess the performance from an accounting perspective (Ali & Azmi, 2016; Rafinda et al., 2018; Shettima & Dzolkarnaini, 2018). As noted by Baby Maria and Hussain (2024) in prior studies, ROA is frequently used to evaluate a bank's performance because it reflects earnings on assets. ROA is calculated by dividing net income by the bank's total assets (Issa et al., 2021).

The empirical literature about BGD and ROA is mixed and even contradictory. This is more pronounced in emerging and underrepresented markets such as South Asia, where a smaller number of boardroom positions are occupied by women. Moreover, studies have frequently found that BGD and ROA are negatively associated, particularly when female board membership falls short of the critical threshold to influence board decision-making (Owen & Temesvary, 2018; Ramly et al., 2015). In addition to these negative effects, a considerable number of empirical studies report an insignificant relationship between BGD and ROA (Dey et al., 2023; Farhana, 2020). However, some empirical studies pointed out that both banking (Abu Khalaf, 2022; Baby Maria & Hussain, 2024) and non-banking sectors (Brahma et al., 2021; Dwaikat et al., 2021; Gupta et al., 2021; Safiullah et al., 2022) demonstrate that greater female representation on boards can enhance decision-making quality, governance effectiveness, and organizational performance.

Based on the agency theory and resource dependence theory, the BGD can enhance monitoring, introduce a variety of different views, and result in superior strategic decisions and thus better bank profitability. In line with these theoretical arguments and supporting empirical evidence using ROA, this study formulated the following hypothesis.

H₁: BGD has a significant positive effect on bank profitability (ROA)

2.2.Boardroom Gender Diversity & Financial Resilience

CAR is a key indicator used to assess a bank's stability to withstand potential losses and maintain solvency, and to ensure financial resilience (Abou-El-Sood, 2021; Adams & Ferreira, 2009). CAR is calculated as the ratio of the sum of Tier 1 and Tier 2 capital to the bank's total risk-weighted assets (Nakka et al., 2025). A higher CAR indicates financial strength and the ability to sustain adverse economic conditions (Alnajjar & Othman, 2021; Ozili, 2018).

Although the relationship between such BGD and CAR has not been a major objective of the majority of the studies conducted in the past, there are still numerous empirical findings that highlight a meaningful association. According to Gangi et al. (2025), banks with higher BGD tend to have higher CAR. Similarly, Menicucci and Paolucci (2021) highlighted that a greater proportion of women directors on banks' boards has positive effects on the capital adequacy of Italian banks.

In contrast, some studies have emphasized an insignificant connection between BGD and CAR. Indicatively, in a study on the relationship between BGD and CAR (Farhana, 2020). Overall, empirical evidence directly examining the relationship between BGD and CAR remains limited and mixed, especially in the South Asian banking context, where such studies are notably scarce. According to the resource dependence theory, the different boards may offer broader expertise and external connections that benefit successful risk management and capital management (Gangi et al., 2025). As a result, higher female representation on bank boards may strengthen financial resilience and improve the capacity of banks to survive an economic shock (Nader & M, 2025). Therefore, the present study uses CAR as an institutional resilience indicator and formulated the following hypothesis.

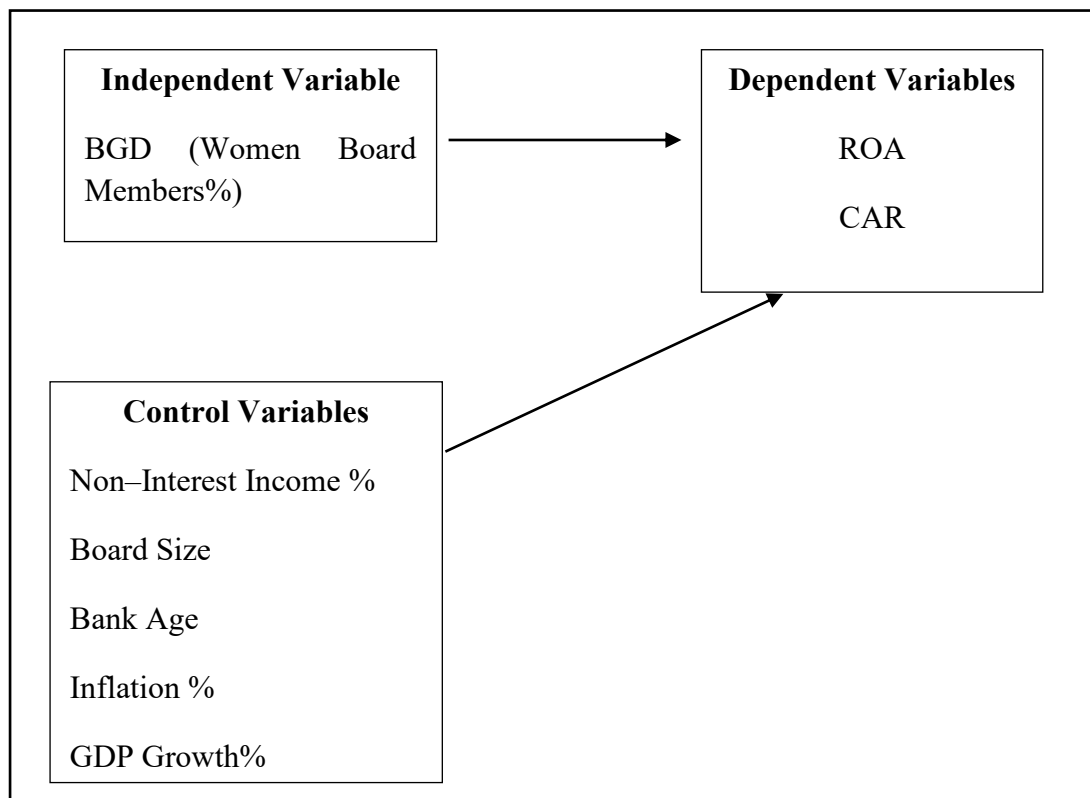
H₂: BGD has a significant positive impact on bank financial resilience (CAR).

Beyond BGD, prior banking literature emphasizes that bank performance is influenced by both institution-specific characteristics and broader macroeconomic conditions. Consequently, some control variables are included to isolate the influence of BGD on the performance of the bank. Non-interest income is incorporated to account for revenue diversification effects on profitability and risk (Abu Khalaf et al., 2024; Antao & Karnik, 2022; Zhao et al., 2025). Board size captures governance structure and monitoring capacity (Adeabah et al., 2018; Berhe, 2023; Bezawada & Adavelli, 2020), while bank age reflects institutional maturity and experience. Older banks tend to have the benefits of operational structures, stronger market reputation, and better risk management practices, which all have a positive impact on performance indicators (Abdelsalam et al., 2022; Elnahass et al., 2022). At the macroeconomic level, GDP growth controls for economic expansion, which typically increases credit demand, investment opportunities, and banking sector profitability (Hakimi et al., 2025; Omenihu et al., 2025). Previous studies have reported that inflation affects firm valuation and profitability as a result of pricing pressure, rising input costs, and financial planning uncertainty (Al-Shaer et al., 2024; Gharios et al., 2024). Including these control variables ensures that the relationship between BGD and bank performance is examined while controlling for structural and economic influences.

In general, prior empirical findings indicate positive, negative, and insignificant correlations between BGD and bank performance. To the best of the authors' knowledge, only a limited number of studies have simultaneously integrated these two variables within a single empirical framework. Apart from that, the study outlines several gaps, including limited regional coverage on South Asian banks and insufficient consideration of control variables, such as institutional and regulatory factors, which consequently engenders omitted variable bias (Adams & Ferreira, 2009; García-Meca et al., 2015). Furthermore, there is a lack of clear

distinction between profitability and resilience as separate dimensions of bank performance, and potential endogeneity concerns between board structure and bank performance (Arnaboldi & Capizzi, 2020; Pathan & Faff, 2013).

2.3. Conceptual Framework



Source: Author's illustration

Figure 1: Conceptual Framework

3. Methodology

Research Design

This study examined the effect of BGD and bank performance using a quantitative panel data analysis. The analysis begins with traditional panel estimation techniques, using pooled Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE). Then, a two-step System GMM was applied by incorporating lagged dependent variables to address the dynamic nature of bank performance and potential endogeneity concerns (Ullah et al., 2018; Varouchas et al., 2023).

Population and Sample

The population of the study consists of 108 banks across five South Asian Countries. During the data collection process, the annual reports of all the banks within the population were reviewed. To ensure data completeness and maintain the model validity, banks with incomplete financial statements were excluded (Roodman, 2009; Wooldridge, 2010).

Consequently, the dataset used in this study consists of an unbalanced panel of 82 listed commercial banks operating across the five South Asian countries over the period 2010–2024.

Data was collected from audited annual reports. Inflation and GDP data were taken from the IMF databases.

Table 1: Population and Banks Included in the Study

Country	Population	No of observation	
India		31	27
Pakistan		11	11
Sri Lanka		12	12
Bangladesh		37	22
Nepal		17	10
Total		108	82

Source: Author's Composition

Variables

Table 2: Variables of study

Variable	Acronym	Definition
Dependent variables		
Return on Assets	ROA	Ratio of net profit to total assets
Capital Adequacy Ratio	CAR	Ratio of a bank's regulatory capital to its risk-weighted assets
Independent Variable		
Boardroom Gender Diversity	BGD	Percentage of female board members, calculated as the number of female directors divided by the total number of board members.
Control Variable		
Board Size	BSIZE	The total number of board members
Non-Interest Income (%)	NII	Share of non-interest income (fee-based income) in total income.
Bank Age	LNBAGE	The number of years since incorporation is used as the natural logarithm of bank age.
Inflation Rate	LNINF	Natural logarithmic change in the annual inflation rate, capturing macroeconomic effects.

Gross Domestic Product Growth (%)	GDP	Annual real GDP growth rate

Source: Author's Composition

Data Treatment and Stationarity Tests

Prior to model estimation, preliminary diagnostic tests were employed to ensure the reliability and validity of the dataset. Since the banking data often contain extreme values due to heterogeneity across banks, variables are winsorized at the 1st and 99th percentiles, following the previous studies (Choi & Furceri, 2018; Uddin et al., 2021). Winsorization was applied to ROA, CAR, and NII, which exhibited mild skewness in their raw distributions.

To avoid spurious regression results, the Levin–Lin–Chu (LLC) test and the Fisher-type test have been conducted to assess the stationarity of the variables. During the preliminary testing stage, the bank age and inflation variables exhibited non-stationarity. Therefore, these variables were transformed into natural logarithmic form. The reported test statistics in Table 0 confirm that all variables are stationary after transformation.

Table 0: Panel Unit Root Test Results

Variable	LLC t-statistic	LLC p-value	Fisher-type Statistic	Fisher p-value
BGD	(2.3591)	0.0083	194.9834	0.0495
ROA	(7.6733)	0.0000	447.1935	0.0000
CAR	(12.1948)	0.0000	268.3784	0.0000
BSIZE	(9.6469)	0.0000	342.8594	0.0000
NII	(11.9843)	0.0000	592.5696	0.0000
LNBAGE	(38.7943)	0.0000	5839.3350	0.0000
LNINF	(3.7821)	0.0001	4224.3644	0.0000
GDP	(16.5231)	0.0000	819.4927	0.0000

Source: Author's Composition

Notes: ROA, CAR, and NII variables are winsorized at the 1st and 99th percentiles.

Panel Data Regression Analysis

The analysis began with a pooled OLS, FE, and RE, which served as the baseline model (Mohamad, 2023). The FE model focused on characteristics of each bank that don't change over time. The RE model, on the other hand, assumed that any unobserved factors were unrelated to the other variables in the model. To determine the appropriate model, between FE and OLS, the F-test (Chow test) was conducted. The Breusch–Pagan LM test was applied to

select the model between RE and OLS, and the Hausman test was conducted to select the appropriate model between RE and FE (Gharios et al., 2024; Yuan et al., 2022).

The regression model was tested using Stata by estimating a series of regression equations for each dependent variable.

$$Y_{it} = \alpha + \beta_1 BGD_{it} + \beta_2 BSIZE_{it} + \beta_3 NII_{it} + \beta_4 LNBAGE_{it} + \beta_5 LNINF_{it} + \beta_6 GDP_{it} + \mu_i + \tau_t + \varepsilon_{it} \quad (0.1)$$

Where,

i = banks and t denotes year

Y_{it} represents ROA or CAR

μ_i denotes the bank-specific effects

τ_t denotes the year effects

ε_{it} represents the error term

Dynamic Panel Model (System GMM)

While panel data regression models provide baseline evidence, they do not fully address potential endogeneity and dynamic persistence in bank performance. This study employs the two-step System GMM with Windmeijer (2005) finite sample correction for two-step standard errors. To check if the instruments used in the model were valid, the study used the Hansen J-test for overidentifying restrictions. And the Arellano–Bond AR (1) and AR (2) tests have been conducted to identify serial correlation. To mitigate instrument proliferation and improve the reliability of the Hansen test, the instrument set is restricted by applying the collapse option and limiting the lag depth of GMM-style instruments (Roodman, 2009).

$$Y_{it} = \alpha + \beta_1 Y_{i,t-1} + \beta_2 BGD_{it} + \beta_3 BSIZE_{it} + \beta_4 NII_{it} + \beta_5 LNBAGE_{it} + \beta_6 LNINF_{it} + \beta_7 GDP_{it} + \mu_i + \tau_t + \varepsilon_{it} \quad (0.2)$$

Where,

i denotes bank and t denotes year

Y_{it} represents ROA or CAR

$Y_{i,t-1}$ represents the first lag of the ROA or CAR

μ_i captures unobserved bank-specific effects

τ_t captures time effects (year dummies)

ε_{it} represents the error term

3. Results and discussion

Descriptive Statistics

BGD has a mean of 0.103, indicating that, on average, female directors represent approximately 10.3% of board membership across South Asian listed commercial banks, which is relatively low, consistent with earlier regional studies (Baby Maria & Hussain, 2024; Dey et al., 2023). ROA records a mean of 1.0%, with values ranging from - 4.3% to 3.6%. CAR has a mean of 14.4%, exceeding the Basel minimum regulatory threshold in most observations. Nevertheless, the minimum value at - 6.1% implies that there is capital stress in some cases, as in line with regulatory capital buffers reported in previous South Asian studies (Yuan et al., 2022).

BSIZE averages 10.64 members, with a range from 3 to 24 directors. NII shows a 30.4% of total income on average, highlighting diversification in the income sources adopted by the banks. The log of bank age (LNBAGE) has a mean of 3.506, reflecting mature banks with substantial history. GDP growth averages 5.2%, and inflation (LNINF) shows moderate variation across the period.

Table 0: Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
BGD	1230	.103	.1	0	.5
ROA	1230	.01	.01	-.043	.036
CAR	1230	.144	.056	-.061	.43
BSIZE	1230	10.637	3.273	3	24
NII	1230	.304	.191	-.374	.849
LNBAGE	1222	3.506	.843	0	4.868
LNINF	1230	-2.7	.513	-4.423	-.794
GDP	1230	.052	.033	-.073	.097

Notes – ROA, CAR, and NII variables are winsorized at the 1st and 99th percentiles.

Source: Author's computation using STATA

Correlation Analysis

The correlation between BGD and ROA is positive and insignificant. In contrast, BGD shows a weak negative correlation with CAR. ROA and CAR are positively and significantly correlated, suggesting that more profitable banks tend to maintain stronger capital buffers. Board Size (BSIZE) is negatively associated with CAR, indicating that larger boards may be linked to slightly lower capital ratios. Non-Interest Income (NII) shows a significant negative relationship with both ROA and CAR. GDP growth is negatively correlated with CAR, while Inflation (LNINF) shows a positive correlation with ROA and CAR. Importantly, none of the pairwise correlations exceed 0.80, suggesting that multicollinearity is unlikely to bias regression estimates. However, the Variance Inflation Factor (VIF) test has been conducted, and it reflects that the multicollinearity is not a concern for the dataset.

Table 5: Pearson Correlation

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) BGD	1.000							
(2) ROA	0.020	1.000						
(3) CAR	-0.047*	0.408***	1.000					
(4) BSIZE	0.005	-0.003	-0.114***	1.000				
(5) NII	-0.020	-0.057**	-0.217***	0.311***	1.000			
(6) GDP	-0.076***	-0.004	-0.100***	0.152***	0.240***	1.000		
(7) LNBAGE	0.096***	-0.082***	0.176***	-0.039	-0.138***	0.024	1.000	
(8) LNINF	-0.039	0.072**	0.058**	-0.090***	-0.029	-0.320***	-0.126***	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Notes – ROA, CAR, and NII variables are winsorized at the 1st and 99th percentiles.

Source: Author's computation using STATA

The impact of BGD and Sustainable Bank Performance

The pooled OLS (Column 1) results indicate a positive but statistically insignificant association between BGD and ROA (Dey et al., 2023; Farhana, 2020). The Hausman test preferred the FE model (Column 2) over RE (Column 3) (Chandani et al., 2018). Board Size (BSIZE) shows a positive and significant relationship with ROA (Okoyeuzu et al., 2021). Non-Interest Income (NII) shows mixed results, while positive and significant in OLS and FE models. Bank age (LNBAGE) is insignificant in the regression model. GDP growth and inflation (LNINF) exhibit a positive and significant association with ROA across both RE and FE models. However, the within R-squared value of the FE model is relatively low, which is 6%, suggesting that BGD may not have an immediate or linear impact on profitability when unobserved heterogeneity

and dynamic impact are not fully addressed (Pathan & Faff, 2013). Therefore, it is appropriate to conduct the system GMM (Varouchas et al., 2023).

The lagged dependent variable (L.ROA) is positive and highly significant, indicating strong persistence in bank profitability ($\beta = 0.676$). This suggests that current profitability is strongly influenced by past performance. BGD shows a negative but statistically insignificant coefficient, suggesting that after controlling for dynamic effects and endogeneity, BGD fails to achieve a statistically significant impact on short-term profitability (Putri & Danarsari, 2020). Board Size (BSIZE) becomes negative and statistically significant under GMM, indicating that larger boards may reduce profitability. Inflation (LNINF) becomes negative and significant under the System GMM, contrasting with the results of regression models. GDP growth remains positive but statistically insignificant under GMM. The AR (1) and AR (2) tests confirmed that there is no second-order serial correlation. The Hansen test is statistically insignificant, indicating that the instruments used are valid for the model. The number of instruments remains less than the number of groups, suggesting that instrument proliferation is controlled.

Given that H_1 is not supported due to BGD not being statistically significant under the GMM model. This indicates that BGD does not directly increase the bank's profitability in the South Asian context.

Table 6: The influence of BGD on ROA

D. V. = ROA	(1) OLS	(2) FE	(3) RE	(4) GMM
L.ROA				0.676***
				(0.146)
BGD	0.00386	-0.00484	-0.00265	-0.0134
	(0.00289)	(0.00315)	(0.00302)	(0.0104)
BSIZE	0.0001	0.000619***	0.000346***	-0.000728**
	(0.0000)	(0.000134)	(0.000118)	(0.000365)
NII	-0.00751***	0.00655***	0.00193	-0.0200*
	(0.00166)	(0.00205)	(0.00188)	(0.0111)
LNAGE	-0.00114***	0.001	-0.000186	-0.000719
	(0.000347)	(0.000953)	(0.000617)	(0.000842)

LNINF	0.00169*** (0.000593)	0.00125*** (0.00048)	0.00130*** (0.000488)	-0.00183** (0.000753)
GDP	0.0188** (0.00949)	0.0517*** (0.00776)	0.0445*** (0.00784)	0.0261 (0.0248)
Observations	1222	1222	1222	1141
R-squared	0.0253	0.0691	0.0621	
Number of instruments				29
Breusch–Pagan LM test (p-value)		0.0000		
Hausman test (p-value)			0.0000	
AR (1) test (p-value)				0.004
AR (2) test (p-value)				0.141
Hansen test (p-value)				0.376

Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01

Source: Author's computation using STATA

The impact of BGD and Financial Resilience

The results of the pooled OLS (Column 1) show that there is a statistically significant negative relationship between BGD and CAR. This suggests that banks with higher female board members tend to hold lower capital buffers. However, BGD becomes statistically insignificant under both FE (Column 2) and RE (Column 3) models, and the Hausman test prefers the FE model (Farhana, 2020). Non-interest income (NII) shows a significant negative relationship with CAR. Bank age (LNBAGE) is highly significant and positive, suggesting that mature banks maintain stronger CAR. GDP growth shows a significantly positive impact on CAR, indicating that economic growth may lead to high capital levels among banks. Inflation (LNINF) is positive, which shows possible capital adjustments during inflationary periods.

The two-step System GMM (Column 4) was used to address the dynamic nature of the banking data and endogeneity concerns. The lagged dependent variable (L.CAR) is positive and statistically significant ($\beta = 0.561$). This suggests that prior results strongly influence current capital adequacy. Under the system GMM, BGD remains negative but statistically insignificant ($\beta = -0.0347$). Unlike baseline models, most control variables lose statistical significance under

the dynamic specification. This suggests that the influence observed in regression models becomes weaker once endogeneity is controlled. AR (1) is significant, AR (2) test is insignificant, suggesting no second-order correlation, and the Hansen test diagnostics confirm instruments used in the study are valid.

Similarly, the insignificant coefficient of BGD in the CAR model suggests that H₂ is not supported. BGD does not exhibit a direct impact on the financial resilience of the South Asian banks once dynamic persistence is controlled.

Table 7: The influence of BGD on CAR

D. V. = CAR	(1) OLS	(2) FE	(3) RE	(4) GMM
L.CAR				0.561**
				(0.252)
BGD	-0.0358**	-0.00582	-0.00364	-0.0347
	(0.0153)	(0.0119)	(0.0118)	(0.0308)
BSIZE	-0.000691	-0.0000924	-0.000368	-0.00164
	(0.0005)	(0.000506)	(0.000488)	(0.00179)
NII	-0.0625***	-0.0154**	-0.0177**	-0.00198
	(0.00875)	(0.00773)	(0.00755)	(0.0497)
LNAGE	0.0105***	0.0343***	0.0278***	0.00341
	(0.00183)	(0.0036)	(0.0031)	(0.00381)
LNINF	0.00649**	0.00437**	0.00449**	-0.00162
	(0.00313)	(0.00181)	(0.00183)	(0.00265)
GDP	-0.0521	0.112***	0.0974***	0.0459
	(0.0502)	(0.0293)	(0.0294)	(0.085)

Observations	1222	1222	1222	1141
R-squared	0.0922	0.0853	0.0842	
Number of instruments				29
Breusch–Pagan LM test (p-value)		0.0000		
Hausman test (p-value)			0.0000	
AR (1) test (p-value)				0.016
AR (2) test (p-value)				0.863
Hansen test (p-value)				0.347

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Source: Author's computation using STATA

4. Conclusion

4.1. Summary of Findings

This study aimed to investigate the potential impact of BGD on the sustainable profitability (ROA) and financial resilience (CAR) of South Asian listed commercial banks over the period 2010–2024. Using traditional panel data estimators and a dynamic two-step System GMM framework, the results reveal that while regression models produce mixed associations, BGD does not have a statistically significant direct impact on profitability or financial resilience once both dynamic persistence and endogeneity concerns have been taken into consideration.

Furthermore, both ROA and CAR show strong persistence, indicating that both bank performance and its capital structure depend on the historical performance. The findings suggest that inclusive governance does not generate immediate financial performance improvements and does not directly strengthen regulatory capital buffers in the short term. Thus, the findings demonstrate that the relationship between BGD and performance is sensitive to methodology; therefore, researchers studying banking should use dynamic panel estimation methods.

4.2. Implications of the Study

The study provides some insight into the literature on corporate governance by showing that inclusive governance mechanisms cannot necessarily be assumed to provide immediate improvement to short-term financial performance in emerging banking markets. It provides new empirical evidence from the South Asian banking sector, a region that has received relatively limited attention in studies examining the impact of BGD on bank performance. In contrast, agency theory and resource dependence theory would indicate that BGD enhances performance. Compared to immediate outcomes, such benefits may build over a longer time.

Therefore, regulatory frameworks and macroeconomic factors have a much more significant impact on sustainable banking performance than measuring board composition.

For banking regulators in South Asian economies, policies that encourage greater female representation on corporate boards can be justified not only from a financial performance perspective but also from a governance and institutional development perspective. This might include measures that promote BGD to improve governance standards and more balanced decision-making, aligning the banking sector with global best practices in corporate governance.

4.3. Limitations and Future Research

This study has several limitations. First, this study primarily focused on BGD and did not address qualitative measurements of board members, such as experience, independence, and age. Second, the focus and scope of the research on listed commercial banks in South Asia may reduce the generalizability of the results to non-listed financial institutions or other developing regions. Third, the relationship between BGD and performance can still be subject to unseen effects, regardless of the partial elimination of endogeneity given by the system GMM methodology. Future empirical research must incorporate a broader range of governance variables, such as board independence, board expertise, and ownership structure, to overcome the limitations mentioned above, and must consider its effects on risk-taking and performance during deep economic crises.

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BUDDHIST-INSPIRED MANAGEMENT FOR RESILIENCE, INCLUSION, AND SUSTAINABILITY: A SYSTEMATIC LITERATURE REVIEW

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Abstract

Purpose: Organizations and regions are increasingly operating in a setting of recurring shocks climate and disaster hazards supply chain disruptions cost of living pressures and socio-political instability as well as public pressures to lower inequality and achieve sustainability These pressures have broadened the agenda of managerial responsibility for efficiency and well-being of employees and employees' inclusion as well as to merge long-term.

Design/methodology/approach: This paper performs a systematic literature review SLR of research on Buddhist-inspired management and synthesizes the way in which Buddhist concepts are operationalized and related to the results of organizations and regions Following the guidance for management research from systematic review procedures and reporting standards of PRISMA the research is conceived to identify screen and synthesize peer-reviewed studies that relate explicitly to Buddhist ideas or practices to management leadership organizational behavior governance human resource management strategy or sustainability mindfulness and attention regulation are linked with coping emotion regulation burnout reduction and resilience at work Second compassion and caring processes are

Findings: Themes from the data by quantitative tests Thematic synthesis four recurring clusters of themes First of all mindfulness and attention regulation are linked with coping emotion regulation burnout reduction and resilience at work Second compassion and caring processes are associated with belonging psychological safety and inclusive climates Third Buddhist ethics particularly non-harm and right livelihood are relevant to issues of ethical governance integrity fair treatment and responsible strategy Fourth Buddhist economics entails moderation and true wellbeing which provides a moral reason for sustainability long-term value and less harm Taken together the paper suggests following values-practices-outcomes framework linking the Buddhist-inspired grounds.

Research limitations/implications: The study concludes with implications for leaders and policymakers and a research agenda to build clarity about construct causal evidence at a multi-level testing and that is contextual sensitivity Although up-to-date management research responds to resilience inclusion and sustainability the underlying ethical and psychological structures are scattered across different literatures

Originality/value: Buddhist thought can provide an integrated set of values and practices non-harm wise attention compassion moderation and right livelihood which can serve as a basis for humane and responsible management. Taken together the paper suggests a humane and responsible management basis

Keywords: Compassion; Inclusion; Mindfulness; Resilience; Sustainability

1. Introduction

1.1 Background

Organizations throughout the world are increasingly operating in a rapidly changing environment of climate and disaster hazards, supply chain disruption, threat to the cost-of-living and political and social stress. These pressures are not only financial in nature, but are felt on employee wellbeing, social inclusion and institutional trust. In many parts of the world and in many industries, uncertainty is now a fixed rather than a variable state, meaning that performance has a different meaning, and expectations of responsible management have increased in scope. Under such conditions, resilience can no longer be viewed as the ability to resume after a temporary stoppage. Instead it must also incorporate the capacity to uphold human dignity, to uphold relational bonds within and in organisations and to sustain development without degrading the social and natural systems on which it depends for life. When resilience is defined in narrow terms of continuity of operations, organizations risk normalizing harm - that is, expecting that individuals and communities will accept stress while altering little in the way of the goals of organizations. A more holistic conception for the future takes account of the fact that long-term viability requires quality of relationships, behavioural justice in systems and the extent to which economic activity is restorative and de-restrictive of shared wellbeing.

At the same time, the scope and visibility of sustainability and ESG agendas have grown. Yet many leaders continue to grapple with one of the most basic challenges: how to make choices that will be effective and humane. This is a difficult balancing act-this is not only practical (leaders must balance costs and benefits against stakeholder demands, competitive pressures and resource constraints), but it is also ethical and psychological. The stress linked to decision-making may accentuate short-termism and promote the instrumental treatment of people, and a focus on strategies to cope with disaster which externalize costs onto employees, communities, or ecosystems. It is with this background that there is potential value to be found in the perspectives, modeling, and traditions that Buddhists inspire because they are explicitly directed toward the intentions of reducing harm and suffering and the cultivation of wise attention and compassion in one's daily conduct (Harvey, 2000; Keown, 2005). Rather than viewing ethics as a peripheral topic, the Buddhist traditions make ethical discipline and mental training the core of human flourishing and an interconnection between inner development and outward responsibility. This orientation is relevant to management because organizations are powerful institutions shaping the manner in which people work, resources are consumed and benefits and burdens are allocated. They not only have an impact on productivity and innovation; they also affect social cohesion, equity and environmental impact.

Buddhist-inspired management does not mean religious adoption. Instead, it can be taken as an ethical psychological underpinning for life in organizations: an emphasis on non-harm, compassion, moderation and attentive awareness. Such a foundation can help leaders and institutions rethink resilience as a humane capacity: the capacity of human beings to never stop being flexible and functioning; the capacity of human institutions to continue their work and whether they are necessary and, in so doing, to preserve the levels of dignity and belongingness,

but also to invest in growth that never compromises the social and natural foundations of wellbeing. It can also make the sustainability more educational by making it more about moral responsibility than one of regulatory compliance or reputational concerns. If resilience, inclusion and sustainability are pursued as separate agendas, organizations can implement fragmented initiatives with limited coherence. A values-based approach - where ethical commitments drive practice - can help underpin more integrated approaches to simultaneously address human wellbeing, fair inclusion and long-term sustainability (Harvey, 2000; Keown, 2005).

The paper contributes to the literature by uniting four strands commonly considered independently in management studies, which are mindfulness, compassion, Buddhist ethics, and Buddhist economics, in one values-practices-outcomes framework. Instead of analyzing these strands separately, the paper demonstrates the manner in which these strands explain resilience, inclusion, and sustainability at individual, team, organizational, and regional levels. Thus, the review adds a more consistent Buddhist-based approach to management, connecting inner development, moral behavior, and sustainability of socio-ecological wellbeing in the long run.

1.2 Problem Statement

Although Buddhist concepts have become a part of academic work under such topics as mindfulness, compassion and ethical living, the appropriate knowledge is scattered across disciplines and research streams. One of the streams focuses on compassion in organizational life and discusses the role of compassionate processes in building relationships and support at work (Dutton *et al.*, 2014; Lilius *et al.*, 2008). Another stream focuses on individual mindfulness and wellbeing that often has an attention, self-regulation, and stress-related outcome focus (Brown and Ryan, 2003; Good *et al.*, 2016). A further body of work uses Buddhist ethics and Buddhist economics to criticize unlimited consumption and defend sustainability using moderation and harm reduction (Payutto, 1994; Schumacher, 1973; Zsolnai, 2011). In the absence of these streams being coordinated regularly, the bigger picture of integration and relations of Buddhist-inspired values to concrete management practices designed to simultaneously foster resilience, inclusiveness, and sustainability, from individual and organizational to regional levels, may not be observed in management and research. This fragmentation curtails the development of theory and undermines the practical advice given to leaders who are striving to make their approaches coherent and humane.

1.3 Objectives

This systematic literature review is undertaken with the view of integrating the scattered scholarship by fulfilling four interrelated goals. First, it traces the development of Buddhist-inspired ideas (including ideas of mindfulness, compassion, non-harm, moderation and right livelihood) and their uptake in management and organization research. Second, it integrates important themes and mechanisms linking these ideas to organizational and regional performance, and focuses on how values translate into doing. Third, it charts the outcomes of the different experiences reported considering three domains: resilience (including coping,

recovery and wellbeing), inclusion (including belonging, dignity and fair treatment) and sustainability (including responsible use of resources and long-term value). Fourth, it constructs an integrative framework and future research agenda that can lead to scholars in developing cumulative knowledge but also to decision-makers who are interested in finding evidence-informed, ethically grounded ways to lead, govern, and create sustainable development.

1.4 Importance of the Study

This is important research in three major ways. First, it enhances the strengthening of theory by synthesizing a fragmented and interdisciplinary body of literature into a more coherent integrative framework for the development of cumulative knowledge in accordance with the principles of systematic review (Tranfield *et al.*, 2003; Snyder, 2019). By synthesizing a variety of streams of thought (mindfulness, compassion, ethics, and Buddhist economics), the review helps to elucidate relationships between concepts, points where there is convergent divergence, and mechanisms where frequently proposed or evidenced. Second, the paper is a contribution to practice by translating the Buddhist-inspired ideas into a language that is relevant to management - without losing their ethical meaning. This is important because organizational interventions may become too instrumental when practices such as mindfulness are separated from a commitment to non-harm, compassion, and fair treatment (Harvey, 2000; Keown, 2005). Third, the review is valuable in terms of regional development and policy thinking as it emphasises the value of compassion, non-harm and moderation in strengthening social trust, inclusion and support for sustainability, all of which are foundations of resilient regions. In this way, it establishes Buddhist-inspired management as a coherent ethical-psychological basis for resolving the challenges of our times both in organizations and in society (Payutto, 1994; Schumacher, 1973; Zsolnai, 2011).

2. Literature Review

2.1 Buddhist-Inspired Management Foundations and Streams of Concept

2.1.1 Moving from Buddhist moral psychology to organizational practice

Buddhist-informed management scholarship typically approaches organizational life in terms of the interplay of attention, intention and ethical consequences. Rather than qualifying "inner" development from "outer" performance, this stream raises the question that it is managerial judgment that gets shaped by (i) how leaders pay attention to situations (ii) how they regulate desire/attachment and reactivity and (iii) what the moral limits are recognized by them when it comes to pursuing goals. Recent work develops this position with the language of "practical wisdom" arguing that Buddhist ideas can serve as a decision discipline that is context-sensitive instead of rule-bound, and is oriented towards avoiding extremes (e.g., moral rigidity vs moral laxity) while sustaining human and ecological wellbeing (Stirling, 2020).

2.1.2 Mindfulness in organizations: beyond wellbeing mechanisms

Workplace mindfulness literature has moved away from the kinds of general claims of stress reduction to mechanism-based explanations and more rigorous evidence designs. Meta-

analytic synthesis of randomised controlled trials suggests that mindfulness training in the workplace can enhance mindfulness and lead to decreases in stress, anxiety and psychological distress, and there are thinner and more variable findings of its impact on job performance (Bartlett *et al.*, 2019). A wider meta-analysis of randomised studies similarly concludes that there are beneficial effects on stress-related and well-being indicators; however, greater consistency in outcome measurement and longer follow-up intervals are also recommended (Vonderlin *et al.*, 2020). Importantly mindfulness has also been theorized as an ethical practice of attention: Largely as a consequence of increasing present moment awareness, individuals might be rendered more sensitive to moral cues as well as less susceptible to automatic self-serving rationalisations. Supporting empirical research; 3 ways in which mindfulness can influence ethical decision-making are through the increased awareness and lower impulsivity when judging (Ruedy and Schweitzer, 2010). Collectively, these studies suggest that mindfulness might be part of resilience in ways that are distinct from reduced strain. Cutting-edge thinking may actually help create resilient performance in times of crisis, by building reflective capacity in the face of uncertainty - an ingredient of resilient performance when crises interrupt routine performance.

2.1.3 Buddhist Communication ethics and managerial behaviour

A very different applied stream relates the Noble Eightfold Path to managerial routines, particularly in communications and negotiations. "Right speech" is presented as a discipline of lessening harm in interpersonal exchange simultaneous managerial productivity due to clarity, restraint from and non-manipulative dialogue (Bamford, 2014). This line of argument is relevant to inclusion because exclusion at work will often happen through everyday interaction - the way we dismiss someone's voice, damage their reputation or fail to give them voice opportunities. When held as a practice set (as opposed to being abstract values), right speech acts as a bridge in behavior between an ethical intention and a climate of inclusiveness.

2.1.4 Buddhist ethics in CSR and governance

Corporate responsibility scholarship has paid growing attention to the influence of religious logics and moral traditions on CSR, particularly in situations where formal institutions may be weak, or where trust is strained. "Skillful means" (upaya) has been suggested as one CSR approach developed from Buddhist insights on increasing the use of contextual intelligence, non-attachment to fixed templates and taking practical actions to alleviate the suffering of stakeholders, whilst remaining aware of unintended consequences (Vu, 2018). Building on this, there is qualitative evidence from Vietnam on how Buddhist glory leaders develop context-sensitive ethical responses to deficits in trust and institutional dilemma using impermanence, non-attachment, and the middle way (Vu and Gill, 2021). This is important for resilience and inclusion at the regional level, where distrust and informal payments underpin untrustworthy institutions, and an ethics of repair is not just to follow the rules but also to wash up relations.

2.1.5 Buddhist economics and sustainability: moving from growth to wellbeing

A growing sustainability-oriented body redefines success not in terms of growth driven by consumption but in terms of "sufficiency", social welfare and less harm. In the corporate

context, there has been a need to describe Buddhist-inspired business sustainability as an avenue for innovation that prioritizes social sustainability and long-term value creation over short-term extraction (Sharma, 2023). Parallel work links the concept of Buddhist principles to the concept of sustainability in the corporate sector based on ethics and spirituality, which can make clear the possibility to integrate the values derived from Buddhism to serve as a guide in the way of taking care of stakeholders, restrict the organization's morals, and take goals to the long-term horizons of corporate sustainability (Suriyankietkaew and Kantamara, 2019). At the governance/ Forss/valifierinterface, the Buddhist principle of the middle way has been deployed in the critique of narrow rationalities of accounting and in the support of wellbeing-centered systems of accountability (Gross National Happiness of Bhutan being one such example) [Wangchuk *et al* (2024)]. This strand expands the reach of "sustainability" beyond environmental measures of the type we are familiar with, to also encompass moral assessment of what is considered progress.

2.2 Links between Buddhist-Inspired Practices and Resiliency, Inclusion and Sustainability

2.2.1 Measures of resilience outcomes: stress recovery, self-regulation and adaptive functioning

Across occupational environments controlled evidence suggests that mindfulness-based workplace interventions can help lower perceived stress and enhance wellbeing measures (Bartlett *et al.*, 2019; Vonderlin *et al.*, 2020). Further to intervention research with managers, it has been suggested that mindfulness practice can enhance control over work-nonwork boundaries and psychological detachment, which are resources that are highly linked to recovery and resilience in demanding jobs (Mellner *et al.*, 2022). Yet, the literature also refers to the empirical imbalance in that outcomes of resilience are often operationalised narrowly in terms of e.g., reduced distress or burnout proxies, whereas the number of studies focusing on organizational resilience capacities in terms of e.g., adaptive coordination, learning after disruption or ethical steadiness under pressure, is lower. Accordingly, more empirical work is required in the future to test multi-level indicators of resilience (individual recovery plus team/organizational adaptive capacity) based on longitudinal and field designs.

2.2.2 Inclusion outcomes Dignity in interaction Fairness perceptions Voice

Inclusion-oriented evidence is more indirect - conceptually strong. Right speech scholarship proposes a pragmatic path of behavior that can be used to build better psychologically safer interactions in the form of avoiding harmful speech acts and promoting mindful dialogue (Bamford, 2014). Meanwhile, "skillful means" in CSR expands inclusion beyond the firm boundary and sees the communities and stakeholders not as passive recipients of programs by the companies but rather as contexts that need to be engaged in a tailored and respectful way (Vu, 2018). In low-trust environments, engaged Buddhism has been shown to undergird managerial modes with an emphasis on fairness, non-extremism, and relational repair - conditions which can support dignity and participation where the ground of exclusions is supported by corruption (or one-upmanship/one-downmanship through corrupting and

corrupting power), or arbitrary power (Vu and Gill, 2021). Overall, inclusion emerges as a relational and institutional outcome - as an outcome of the communicative practices on a day-to-day basis inside organizations, as well as the ethical credibility in the external stakeholder relationships.

2.2.3 Sustainability outcomes: moderation, being able to measure it, long-term value

Sustainability research based on Buddhist principles tends to suggest that environmental responsibility needs moral restraint as well as systems-level thinking in addition to technical efficiency. Empirical case-based sustainability scholarship that is grounded in Buddhist ethics/spirituality signify the importance of how organizations can embed compassion, moral conduct and stakeholder responsibility to sustain performance in the long term (Suriyankietkaew and Kantamara, 2019). Complementary conceptual synthesis proposes "Buddhism-based business models" in which social sustainability is considered to be inseparable from innovation - that is, long-run competitiveness does not have to be sought through normalizing harm (Sharma, 2023). In accounting, however, an alternative to this taken-for-granted assumption is to have wellbeing-centered accountability and measurement architectures (Wangchuk *et al.*, 2024), or as Elena Bebbby, a Middle Path lens, proposes: Taken together, this literature helps to make a coherent claim that the Buddhist-inspired management can provide normative criteria (what should be pursued), behavioral disciplines (how the leaders act) and evaluative frameworks (how is performance measured) which can position sustainability in conflict with dignity and resilience rather than having the two as trade-offs.

2.2.4 Synthesis and lacunae

Despite some promising developments, however, there are four salient gaps. First, multi-level integration is still limited: often still limited to the individual level, mindfulness and resilience have been studied along with CSR/sustainability with a focus on institutional or strategic levels which means that mechanisms across levels remain to be tested. Second, construct clarity differs across studies, particularly in Buddhism, where Buddhist terms have been translated into management language without consistent operational definitions. Third, the causal inference tends to be in an uneven manner outside of mindfulness intervention; governance and CSR streams are often qualitative or conceptual, thus indicating the need for triangulation of mixed methods and robust comparative designs. Fourth, the importance of context sensitivity is important: Buddhist-influenced managerial logics occur in places for which social trust and formal enforcement by institutions are troubled (Vu and Gill, 2021) but more comparative cross-country work is needed to discourage overgeneralization. Addressing these gaps would allow a better integrative framework to be made linking Buddhist-inspired values and practices with measurable resilience, inclusion and sustainability outcomes.

3. Methodology

This paper employs the systematic literature review (SLR) method, which should be more transparent, repeatable, and less biased than ad hoc reading. The SLR techniques can be used in management research to assist researchers in developing evidence-based knowledge through the clear documentation of search, screening, and synthesis processes (Tranfield *et al.*, 2003).

In general, the methodology advice on review focuses on transparency regarding the type of review, the extent of search, and the manner of findings support (Snyder, 2019).

3.1 Design and approach of review

The review assumes the systematic literature review methodology based on the management review practice. It employs a system of searching, screening and synthesizing pertinent studies on Buddhist-inspired management. To address transparency, relevance, and analytical coherence, the conceptual scope of the review is defined to provide links to organizations, leadership, governance, human resource management, strategy, and sustainability.

3.2 Search strategy

The search is planned to include large academic databases (e.g., Scopus and Web of Science) and Google Scholar will be used as an additional source to minimize the possibility of overlooking any appropriate work in an interdisciplinary scope. Searches are a combination of Buddhist terms, managerial terms, and terms of outcome. A typical search string is:

(Buddhist economics" OR mindfulness OR compassion OR non-harm OR metta OR karuna) and (Buddhism" OR "right livelihood" OR Buddhist economics OR mindfulness) and (management OR leadership OR organization OR HRM OR governance OR strategy) and (resilience OR inclusion OR equity OR sustainability OR ESG OR wellbeing).

3.3 Criteria of inclusion and exclusion

Studies are included if they: are peer-reviewed journal articles (and some scholarly books of great relevance), explicitly relate Buddhist ideas or practices with management/organizational-based experiences, and meet the outcomes regarding resilience, inclusion, sustainability, ethics, governance or wellbeing.

Studies are excluded if they: are purely doctrinaire or devotional without a managerial connection, contain an inadequate methodological description to examine assertions (in empirical papers), or are not fully available in printed form.

3.4 Screening and synthesis

The screening is done in two steps: (1) title/abstract screening, followed by (2) full-text screening. Information is captured in data extraction namely: definitions of Buddhist constructs, setting (country/industry), approach (conceptual, qualitative, quantitative), prominent mechanisms (how/why effects happen) and consequences (resilience/inclusion/sustainability). Thematic analysis, which is employed in synthesis, is used to cluster them together into themes and construct a map of values - practices - outcomes. This framework proves helpful as the Buddhist concepts are usually introduced as moral principles and personal practices and subsequently affect the visible behaviors and company performance.

3.5 Respectability and reliability

To guard against overclaiming in the review, the synthesis makes the difference between better evidence (e.g., empirical studies that are peer-reviewed, meta-analyses) and conceptual or normative claims (valuable and distinct in the strength of evidence).

4. Results and Discussion

Four fundamental themes keep recurring throughout the Buddhist-inspired management literature. These themes are introduced in simple and applied terms in order to be utilized by managers and researchers.

Theme 1: Mindfulness promotes resilience by way of attentional and emotional management

One of the central research directions considers mindfulness as current attention in an open and non-judging position (Brown and Ryan, 2003; Kabat-Zinn, 2003). The concept of mindfulness in the workplace has been positively correlated with improved emotion regulation and reduced emotional exhaustion, which constitute elements of workplace resilience (Hulsheger *et al.*, 2013). Integrative reviews claim that mindfulness has the potential to enhance self-regulation and decrease automatic responses, which favor job performance and well-being in stressful working conditions (Dane, 2011; Good *et al.*, 2016). Simply, mindful attention can assist individuals in becoming aware of the pressure at an early stage, react to the pressure in a more balanced way, and recover more quickly after challenging experiences.

Although the evidence of stress reduction and emotional regulation is rather strong, the empirical studies continue to pay much attention to the level of individual wellbeing. Further longitudinal and multi-level research is required to answer the question of whether mindfulness can lead to team adaptability, ethical stability in a high-pressure situation, and organizational resilience in a crisis.

Theme 2: Compassion enhances inclusion by upholding dignity and belonging

A second stream is the one that deals with compassion in organizations. The process of compassion is often defined as follows: suffering has been noticed, a person is concerned about it, and the meaning of what is going on has been created and an action to assist one has been taken (Dutton *et al.*, 2014). According to the empirical research, positive emotion and affective commitment may be boosted by the compassionate experience in the workplace, and supportive relationships may be framed (Lilius *et al.*, 2008). This is necessary to be included since, besides demographic representation, inclusion also requires daily experiences that convey a sense of respect and acceptance. Compassion practices can lessen social distance and assist individuals in challenging times, as well as promote a culture where it is safe to speak and ask.

Relative to mindfulness studies, the empirical research on compassion and inclusion is not as standardized and mostly indirect. Future studies are needed on whether compassion-based practices have a causal effect on the psychological safety, sense of belonging, voice and inclusion in various organizational environments.

Theme 3: Buddhist ethics guide the governance via non harm and right livelihood

Buddhist ethics focuses on minimizing harm and suffering and developing wise action (Harvey, 2000; Keown, 2005). This helps in reinforcing the level of ethical reasoning and better governance practice when it is incorporated into the management, particularly in cases where short-termism, corruption, or exploitation is likely to compromise trust. The notion of right livelihood might be discussed as the one that does not harm and the one that promotes social well-being. This theme is related to responsible strategy, ethical supply chains, fair treatment of workers, and transparency of decision-making in organizational terms. Although numerous research works articulate these concepts at a theoretical level, they provide clear guidance to further empirical research on governance, integrity system and the role of ethical leadership.

A large part of the Buddhist ethics literature and right livelihood is concept rich and underdeveloped empirically. The research should be tested in future by examining the effect of non-harm, integrity, and right livelihood on the quality of governance, corruption resistance, fair treatment, and stakeholder trust.

Theme 4: Buddhist economics promotes moderation and real wellbeing to achieve sustainability

A fourth stream relates the Buddhist thought to sustainability with the concept called Buddhist economics. In traditional debates, well-being is not seen as equal to the constant rise of consumption and economic life is not supposed to generate damage and promote meaningful lives (Schumacher, 1973). Further, the Buddhist moral concepts also emerge as the basis for modifying economic priorities towards happiness, peace and long-term stability (Zsolnai, 2011). This is the same theme that contributes directly to the topic of sustainability since it challenges the growth that causes environmental harm and social injustice. It also conforms to the ESG discussions since it provides a moral reasoning as to why organizations should honor restrictions, invest in communal wellbeing, and shun business models pegged on addiction, deceit, and environmental annihilation.

Buddhist economics studies provide a solid normative foundation of sustainability but there is not much empirical data. The future work should come up with more efficient signs of moderation, actual wellbeing, and less harm and seek to run them against ESG performance, stakeholder value, and long-term resilience.

Table 1. Summary table of the themes

Theme	Buddhist-inspired idea	Typical management focus	Main outcomes linked
Mindfulness and resilience	mindful attention; non-reactivity	wellbeing; coping; performance	resilience; lower burnout
Compassion and inclusion	compassion (karuṇā); care	supportive climate; helping	inclusion; belonging; trust

Ethics and governance	non-harm; right livelihood	ethical leadership; integrity	responsible governance
Sustainability and moderation	moderation; true wellbeing	ESG; long-term value	sustainability; reduced harm

The review justifies a combination of values, practices, and outcomes integrative framework. The values of Buddhism (non-harm, compassion, moderation, wise attention) are reflected in practices (mindfulness practices, responding compassionately, rules of making ethical decisions, being a responsible strategy) and consequently, practices are reflected in the outcomes of resilience, inclusion, and sustainability. This framework is also useful since it does not take mindfulness as a wellness tool that is not connected to ethics, and it does not take ethics as abstract ideals that are not connected to everyday work.

The themes are not separate. Compassion may be facilitated by mindfulness since by observing sufferings closely, people tend to respond and not overlook this issue (Good *et al.*, 2016). Empathy can enhance resiliency since individuals heal more quickly when they are encouraged and treasured (Dutton *et al.*, 2014; Lilius ., 2008). Ethical governance promotes inclusion since equity and transparency minimize the fear of arbitrary treatment. Sustainability facilitates resilience since those areas that safeguard the ecosystem and social trust can endure shocks.

To the leaders of organizations, Buddhism-based management may be reduced to easy steps:

Strength: establish mindful professional habits (short breaks, reflective check-ins, attention training) and de-pressurize oneself as an always-on worker, which contributes to exhaustion (Hulsheger *et al.*, 2013).

Inclusion: build caring interaction principles (what to do in case of an error or loss, conflict, or stress), and educate managers to observe and minimize daily injuries (Dutton *et al.*, 2014).

Sustainability: moderate and non-harm are decision filters to use in gauging product, market, and supply chain. This can sustain ESG objectives in a manner that is substantive rather than symbolic (Schumacher, 1973; Zsolnai, 2011).

To the policy-makers and planners in the region, the framework implies that resilience is not just a matter of infrastructure and money, it is also a matter of social trust, inclusion and ethical economic life. Social cohesion can be enhanced by compassionate institutions and ecological risk and reliance on harmful industries can be mitigated by moderation-oriented development.

The gaps in the review, which should be filled in future research are also discovered:

Construct clarity. Sometimes, studies confuse mindfulness as a temporary state, a trait, and a training program. It is the future work that would determine what is being measured and its relation to Buddhist ethics (Brown and Ryan, 2003; Kabat-Zinn, 2003).

Causal evidence: Several studies are cross-sectional. Further longitudinal designs and field tests are required to experiment with the ways Buddhist-inspired practices over time transform the outcome (Good *et al.*, 2016).

Multi-level results: Studies commonly reduce to the level of personal well-being. Additional research needs to be done on team, organizational and regional performance(s) (e.g., trust, climate of inclusion, ethical culture, sustainable innovation).

Context and culture: Buddhist-based management might appear differently in South Asian contexts to the Western corporate environments. The advantage of context-sensitive studies is that they can avoid shallow or superficial copy-paste interventions and promote practice that is based on the culture (Harvey, 2000; Keown, 2005).

Ethical risks: It may be abused when mindfulness programs become a way to avoid responsibility on the part of individuals (be mindful) and neglect inequitable systems. Future studies would suggest testing the time when mindfulness assists justice and when it is a distractor to the organizational change that is required.

5. Conclusion

This is a systematic literature review which explains the contribution of Buddhist-inspired management to resilience, inclusion, and sustainability based on four interrelated themes which are mindfulness, compassion, ethics, and Buddhist economics. The principal contribution of it is the combination of these strands in one values-practices-outcomes system, which is novel to connect inner awareness, ethical behavior, caring relationships, and sustainable value creation in one coherent system. The analysis demonstrates that the Buddhist-inspired management provides a humanistic approach that minimises the harm and enhances feeling of belonging and long-term wellbeing. Meanwhile, there are still loopholes in the causal evidence, construct clarity, and multi-level empirical test. These gaps should be filled in the future research to make Buddhist-inspired management a more solid and evidence-driven solution to the organization and regional development.

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DETECTING FINANCIAL STATEMENT FRAUD THROUGH THE NEW FRAUD DIAMOND MODEL: AN EMPIRICAL STUDY OF NON-FINANCIAL LISTED COMPANIES IN SRI LANKA

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Abstract

Purpose: The purpose of this study is to detect financial statement fraud among non-financial listed companies in Sri Lanka by applying the New Fraud Diamond Model (NFD) which examines how four key elements of the model, pressure, opportunity, rationalization, and capability, which are operationalized through ten indicators influence the possibility for fraudulent financial reporting of the companies listed in the Colombo Stock Exchange (CSE).

Design/methodology/approach: The study supports with the quantitative approach focusing on measurable relationship between the variables of NFD and the likelihood of financial statement frauds. Causal and explanatory research design was adopted using secondary data taken from the annual reports and audited financial statements of selected non-financial companies listed on the CSE over a five-year period from 2020 to 2024. Purposive sampling method was adopted in consistent with previous studies. Financial statement fraud was measured using the Beneish M-score model. Data were analyzed using EViews software, employing descriptive statistics, correlation and logistic regression technique to test the hypothesis.

Findings: The study reveals that 4.4% of firms taken in to the sample were identified as fraudulent which indicates that financial statement fraud is exists but not pervasive. Logistic regression results found Return on Assets (ROA) and the Debt to Equity Ratio (DER) as statistically significant predictors. ROA had a positive relationship with fraud, suggesting that profit pressure boosts the manipulation risk, while DER shows a negative relationship, indicating that higher leverage brings higher creditor inspects and reduces likelihood for fraudulent reporting. Change of Directors (DCHANGE) exhibited a slight negative effect. The overall model achieved a classification accuracy of approximately 95.9%.

Research limitations/implications: Although this study appears encompassing, it is limited by the exclusive usage of secondary data, which prevents the analysis of qualitative aspects and limits the sample to non-financial companies. The findings of the study highlight the need for companies and regulatory bodies or strengthen financial monitoring through risk-based audits and strong internal controls as warning indicators.

Originality/value: The NFD is employed to explain fraud through four main factors using ten financial and governance indicators and thereby providing a structured approach to examine how the indicators influence the possibility of financial statement fraud among the companies listed in the CSE.

Keywords: Financial Statement Fraud; Fraud Detection; New Fraud Diamond Model; Sri Lanka

1. Introduction

1.1. Background of the Study

Financial statement fraud (FSF) is a critical form of corporate fraud that undermines the reliability of financial reporting and erodes public confidence in the capital market. Global cases, including Enron, WorldCom, and Parmalat, have shown their severe impact on the economy and society. In developing economies, including Sri Lanka, this issue is further exacerbated by relatively weak regulatory environments, concentrated ownership structures, and limited oversight resources. The increasing complexity of financial transactions and regulatory requirements has made detecting financial statement fraud a significant research challenge.

The Fraud Triangle Model (FTM), developed by Donald Cressey in 1953, has been widely used to explain why people commit fraud. However, in 2004, Wolfe and Hermanson improved this model by introducing the Fraud Diamond Model (FDM). They added a fourth element of capability, suggesting that fraud occurs not just because of pressure, opportunity, and rationalisation, but also because someone has the skills and position to commit and conceal fraudulent activities. This expanded model provides a more robust basis for identifying and understanding financial statement fraud. The study by Khamainy et al. (2022) introduced the New Fraud Diamond Model as an effective tool for detecting FSF using measurable financial and non-financial indicators, demonstrating that the model can serve not only as a theoretical framework but also as a practical detection mechanism.

Financial Statement Fraud has emerged as a critical issue in Sri Lanka following several cases of corporate mismanagement and fraudulent reporting, raising questions about the effectiveness and adequacy of current fraud-detection practices. Listed companies in the Colombo Stock Exchange (CSE) operate in an environment where family ownership, board independence, and weak internal control systems are common. Despite these vulnerabilities, empirical academic studies examining fraud detection models in the Sri Lankan context are limited. Therefore, this study applies the New Fraud Diamond Model to detect financial statement fraud in Sri Lanka, not only extending the findings of Khamainy et al. (2022) into a new country but also contributing to regulators, auditors, and investors by offering insights into early warning signals of fraudulent financial reporting. This study adds to the understanding of forensic accounting and corporate fraud detection in the Sri Lankan context.

Although the Fraud Triangle and the traditional Fraud Diamond Model have been widely used to explain the causes of fraud, their roles in detecting financial statement fraud (FSF) have been less emphasized. However, there is a lack of empirical evidence on the application of the New Fraud Diamond Model in the Sri Lankan context.

Existing Sri Lankan studies (Rathnasiri and Bandara, 2017; Gunathilake and Ajward, 2017) have focused on perceptions and educational needs rather than empirical fraud detection. Therefore, this study fills a significant gap by applying the quantitative NFDM framework to detect financial statement fraud using secondary data from CSE-listed companies achieving two objectives: to examine the factors of the New Fraud Diamond Model that help detect fraud financial statement in CSE-listed companies and to analyse the impact of each factor of the

New Fraud Diamond Model, pressure, opportunity, rationalisation, and capability, on financial statement fraud detection. To support this progress, it will be important to focus on transparency, strengthen forensic capabilities, protect whistleblowers, and build a strong culture of ethics and accountability.

2. Literature review

Financial statement fraud has become one of the most serious challenges faced by organisations' stakeholders. As major corporate scandals have drawn global attention to the need for effective fraud detection mechanisms, researchers have been encouraged to explore models capable of identifying fraudulent behaviour in financial statements. Further sections of this chapter review previous empirical studies on NFDM and its components, discuss findings from both global and Sri Lankan contexts, and identify existing research gaps.

Agency theory

Agency theory, introduced by Jensen and Meckling in 1976, provides a foundational understanding of why FSF occurs, linking it to misaligned incentives and weak monitoring mechanisms. It explains the relationship between principals (shareholders) and agents (managers), in which agents are expected to act in the best interests of their principals. Empirical evidence from rapidly changing economies shows that agency conflicts significantly increase the probability of fraudulent financial reporting when managerial compensation, career advancement, and reputation are tied to short-term performance targets (Manurung and Hardika, 2015; Yarana, 2023). Cases such as the Toshiba accounting scandal further demonstrate how weak oversight, a lack of transparency, and concentrated managerial power allow senior executives to manipulate earnings over time, harming investors and market confidence (Demetriades and Owusu-Agyei, 2022). These studies suggest that FSF is not solely an individual ethical issue but a structural governance problem within the organization.

Financial statement fraud

According to the Association of Certified Fraud Examiners (ACFE, 2022), the intentional misstatement or omission of financial information that misleads users of financial statements is considered the most costly and damaging type of occupational fraud, as it undermines investor confidence, distorts market efficiency, and may result in severe financial losses. Research shows that internal and external pressures often cause FSF. In the study by Syahria et al. (2019), Indonesian bank managers may alter financial reports to meet regulatory requirements or investor expectations. This kind of pressure becomes even stronger in competitive environments, where company performance is monitored closely by regulators and the market. Sudaryono et al. (2020) state that this is achieved by examining the broader organisational environment that facilitates FSF. Their research indicates that the likelihood of fraud increases significantly in companies with weak or improperly enforced internal control mechanisms. They argue that the mere existence of policies and procedures is insufficient if a strong organizational culture of integrity and ethical leadership does not support them. These insights are particularly relevant to emerging economies, such as Sri Lanka, where corporate governance practices are still developing, and enforcement can be inconsistent.

Empirical studies further demonstrate that FSF often goes undetected for extended periods due to the sophisticated methods used and the involvement of top management. Demetriades et al., (2022) in their analysis of the Toshiba accounting scandal, show how executives systematically overstated profits to meet strategic targets. This case illustrates that FSF is not merely a failure of individual ethics but often the result of organizational systems that enable and even encourage unethical behaviour. Prior Research also shows that it is hard to detect FSF using traditional auditing methods (Rengganis et al., 2019). Standard audits often fail because they depend too much on what managers say and financial numbers, which can be easily manipulated. Instead, they suggest an investigative approach that combines financial checks with behavioral indicators and a closer look at the organization's overall risks. Khamainy et al. (2022) support the use of fraud detection frameworks, such as the Fraud Diamond Model, to enhance understanding of FSF. Their study in Indonesia found that all four elements of the model of pressure, opportunity, rationalization, and capability were significantly correlated with the occurrence of FSF. They emphasize that including capability, which refers to the fraudster's skill and authority to exploit system weaknesses, is critical in explaining how fraud is successfully executed and concealed. Also, Manurung et al. (2015) focus on the role of capability in their empirical study of banking firms, arguing that FSF is more prevalent in organisations where individuals have unchecked decision-making power and access to financial systems. Their findings suggest that effective governance structures, such as independent audit committees and board oversight, are essential for mitigating fraud risk. The literature review suggests that detecting FSF requires a combination of strong internal controls, ethical leadership, external monitoring, and robust fraud-detection models. The FDM, in particular, offers a comprehensive framework that captures the multi-dimensional nature of FSF. Its application in similar contexts across Southeast Asia supports its relevance in Sri Lanka, where similar structural and cultural challenges exist.

Theoretical framework: The fraud diamond model

The FDM, proposed by Wolfe and Hermanson in 2004, builds upon the traditional Fraud Triangle by introducing a fourth critical element: capability. While the Fraud Triangle identifies the presence of pressure, opportunity, and rationalization as necessary conditions for fraud, the Fraud Diamond asserts that these three factors alone are insufficient unless the individual can commit and sustain fraudulent behavior. The addition of capability makes the model particularly relevant in contemporary fraud detection, especially in organizational settings where authority, access, and technical skill can enable complex and concealed fraud.

Capability is the fourth part of the FDM. It includes a person's position, intelligence, confidence, and knowledge, giving them the power to take advantage of opportunities and bypass controls. Unlike the other three parts (pressure, opportunity, and rationalization), capability is usually found in people with high positions or special access to systems. Khamainy et al. (2022) highlights this importance. Their study of Indonesian companies shows that even when the other three factors are present, fraud is most likely to happen when someone can control or manipulate financial systems.

The FDM looks at four key elements of pressure, opportunity, rationalization, and capability and how they interact to create a holistic view of fraud risk. Pressure can come from personal financial needs, debt, or professional expectations. Opportunities arise when governance is weak, internal controls are ineffective, or supervision is insufficient. Rationalization lets people justify their unethical actions, often by thinking fraud is harmless or temporary. Capability sets this model apart by showing whether a person has the skills, access, and power to commit the fraud and avoid getting caught.

Yarana, (2023) studied companies in Thailand and found that capability is one of the biggest reasons for financial statement fraud. She showed that senior managers, especially those with technical skills and system access, are more likely to commit fraud when the other conditions (pressure, opportunity, and rationalization) are also present. This is similar to what Demetriades et al. (2022) found in their study of Toshiba's accounting scandal. In that case, top-level executives committed fraud for several years. They felt pressure, justified their actions, and had the power and knowledge to control others and hide the fraud.

Manurung et al. (2015) used the FDM to study the banking sector and found that capability is a significant factor in fraud. This is especially true where executives have much control and minimal supervision. Their study shows that even if a company has strong internal rules, fraud can still happen if influential individuals know how to get around them. This highlights the importance of independent monitoring and limits on executive power to prevent fraud.

Rengganis et al. (2019) contribute to fraud theory by arguing that all four parts of the Fraud Diamond should be examined together, not separately. Focusing solely on financial red flags might cause important warning signs to go unnoticed. Their study suggests using a more comprehensive risk assessment that includes financial checks, behavioral indicators, and the organisation's operating model. Umar et al. (2020) showed that FDM works well in real-world settings. They studied various industries in Indonesia and found that the model helps auditors and regulators by providing a comprehensive view of fraud risk. It shows when fraud might happen and who in the organization is most likely to do it. They suggest using the model in audit planning and when reviewing internal controls to improve fraud detection.

In Sri Lanka, the FDM is useful for understanding fraud. Many companies in Sri Lanka have close-knit management teams, weak internal audit systems, and centralized decision-making. In these settings, the idea of capability is fundamental. Top executives often have the power and access to change financial information without being noticed. Because of this, it is important to examine both the system's weaknesses and the roles and influence of key people in the company.

Sujeewa et al. (2018) suggest that fraud models, such as the Fraud Diamond, should include ethical values and cultural factors. The model should be adjusted for Sri Lanka to fit the local context. They point out that capability is not just about skills and access; cultural views on authority, responsibility, and rules also shape it. Their study shows that to improve fraud detection in Sri Lanka, we must consider local ethics and behaviour, as well as the usual fraud risk factors.

In summary, the FDM improves on older theories by offering a well-rounded understanding of fraud. It looks at both problems in the organization and the actions of individuals. The model has been tested in Thailand, Indonesia, and with large international companies, demonstrating its usefulness in many settings, including Sri Lanka. Adding capability to the three original factors (pressure, opportunity, and rationalization) gives a stronger method for identifying and preventing financial statement fraud.

The new fraud diamond model (NFDM)

Building upon the traditional model, (Khamainy & Setiawan, 2022) developed the New Fraud Diamond Model (NFDM) to provide a measurable and predictive framework for detecting financial statement fraud. Unlike previous theories that focus mainly on behavioural explanations, the NFDM integrates ten quantitative indicators under the four elements of the fraud diamond. The NFDM enables researchers to statistically test how each factor contributes to fraudulent reporting. It transforms conceptual ideas such as “pressure” and “opportunity” into observable variables that can be derived from financial statements and governance reports. This model demonstrated strong empirical validity in detecting financial statement fraud in Indonesian listed companies, showing that these indicators significantly predict the likelihood of fraudulent reporting. The current study applies this framework to Sri Lankan listed companies to examine its applicability in a different national and regulatory context.

Empirical Evidence on Financial Statement Fraud Detection

The growing number of studies on financial statement fraud shows the usefulness of models like the FDM. Researchers in different industries and countries have used the model to explore how pressure, opportunity, rationalization, and capability relate to fraud. These studies support the model’s accuracy and provide detailed insights into how fraud occurs across specific sectors and regions.

In Southeast Asia, Indonesia has become a key country for research on financial statement fraud, mainly because its market dynamics and regulations are similar to those of Sri Lanka. According to Khamainy et al. (2022), using the Fraud Diamond Model, they created ways to measure each part of the model. They found that all four elements of pressure, opportunity, rationalization, and capability are linked to fraud. The most important factor was capability, measured by factors such as managerial power, job experience, and influence. This shows that fraud is more likely when a person not only feels pressure and has a chance but also has the power and skill to carry it out.

Sudaryono et al. (2020) also studied how the FDM works to spot financial statement fraud in Indonesian public companies. They found that capability is a key factor in identifying who is most likely to commit fraud. Their research showed that top executives, because they have access to financial systems and power over staff, are in a strong position to exploit weak internal controls. This is especially important for countries like Sri Lanka, where governance may be weak and internal audits may not be sufficiently independent to detect fraud.

Syahria et al. (2019) studied the banking sector in Indonesia and gave valuable insights. The study found that financial statement fraud was more likely in banks facing high financial pressure and working under strict regulations. It showed that fraud can look different across industries and their rules. In banking, for example, managers may need to adjust numbers to meet targets such as capital ratios. Even though Sri Lanka's banking sector is smaller, similar pressures exist, so these findings are relevant and can be applied here.

Conceptual framework of the study

The conceptual framework of this study is based on the NFDM developed by (Khamainy, Ali, & Setiawan, 2022), which emphasizes how financial statement fraud can be detected through measurable financial and governance indicators. The NFDM identifies four major elements of Pressure, Opportunity, Rationalization, and Capability and defines each through observable proxies that can be analyzed using financial data. This framework assumes that when these elements are present and strong within an organization, the likelihood of financial statement fraud increases. Thus, by measuring and analyzing these indicators, it becomes possible to predict or detect potential fraudulent reporting. The dependent variable, Financial Statement Fraud (FSF), is detected using quantitative indicators such as the Beneish M-score or similar accounting-based measures, as adopted from (Khamainy, Ali, & Setiawan, 2022).

Conceptual framework

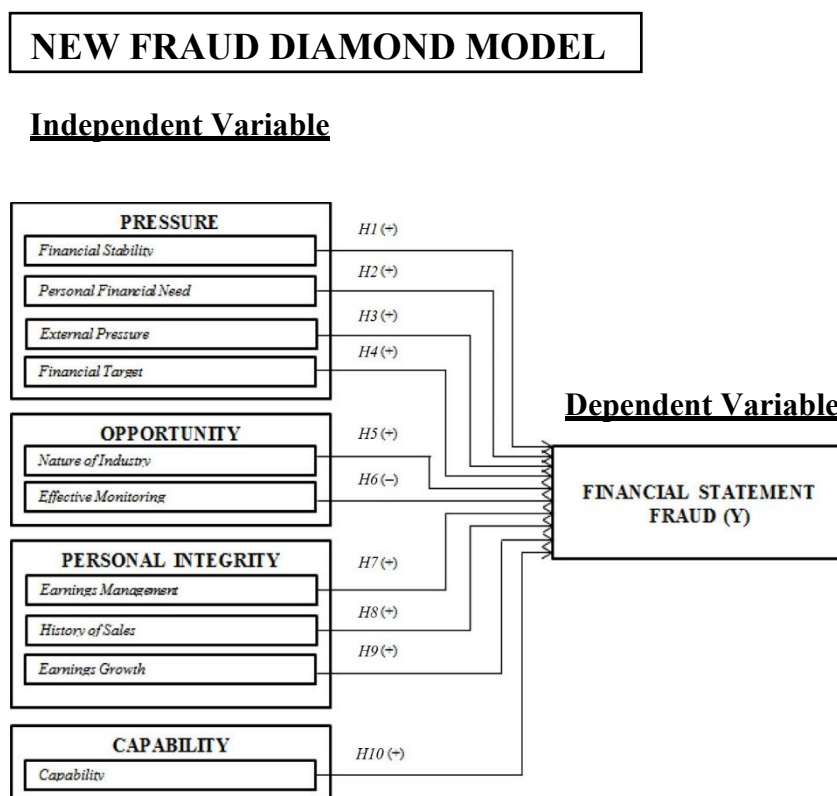


Figure 5: Conceptual Framework

3. Research method

This study adopts a quantitative research design, focusing on measurable relationships between the variables of the New Fraud Diamond Model and the likelihood of financial statement fraud. The research is causal and explanatory, aiming to identify how specific financial and governance factors influence fraudulent reporting practices. The study used secondary data collected from annual reports and audited financial statements of listed companies over a period of five (05) years from 2020-2024. The population of this study consists of all companies listed on the CSE in Sri Lanka. The sample of 50-70 companies is selected using a purposive sampling technique, consistent with the approach used by Khamainy and Setiawan, (2022). Listed companies are selected as the population because they are required to follow Sri Lanka Accounting Standards (SLFRS/LKAS) and corporate governance regulations issued by the Securities and Exchange Commission (SEC) of Sri Lanka. This ensures that their financial statements and governance disclosures are standardized, comparable, and publicly available.

Table 1: Operationalization of independent variables

Fraud Element	Variable (Proxy)	Measurement / Formula
Pressure	Financial Stability	Change in Total Assets (ACHANGE) = $(\text{Total Assets}_t - \text{Total Assets}_{t-1}) / \text{Total Assets}_{t-1}$
	Personal Financial Need	Ratio of shares owned by directors to total shares outstanding (OSHIP)
	External Pressure	Ratio of debt to shareholder Equity (DER) = $\text{Total Debt} / \text{Shareholder Equity}$
	Financial Target	Return on Assets (ROA) = $\text{Net Income} / \text{Total Assets}$
Opportunity	Nature of Industry	Receivable turnover ratio (RECEIVABLE) = $\text{Receivables} / \text{Sales}$
	Effective Monitoring	Ratio of independent commissioners (IND) = $\text{Independent Directors} / \text{Total Directors}$
Rationalization Personal Integrity	Earnings Management	Discretionary Accruals (DACC) = $(\text{TACC}_{it} / \text{A}_{i(t-1)} - \text{NADACC}_{it})$
	History of Sales	Change in sales (SG) = $((\text{Sales}_t - \text{Sales}_{t-1}) / \text{Sales}_{t-1})$
	Earnings Growth	Operating Profit Growth (EG) = $(\text{Operating Profit}_t - \text{Operating Profit}_{t-1}) / \text{Operating Profit}_{t-1}$
Capability	Change of Directors	(DCHANGE) Dummy variable: 1 = Director change during year, 0 = No change

Dependent variable of Financial Statement Fraud (FRAUD) is measured using the Beneish M-score or other red-flag indicators.

FRAUD = 1 if the M-score exceeds the threshold (likely fraudulent),

FRAUD = 0 otherwise (non-fraudulent).

Covariance analysis and the Normality test was carried out to understand how variables move together and to check whether the data set is normally distributed.

4. Results and discussion

This section presents the study's results, focusing on identifying the factors that can be used to detect financial statement fraud using the new fraud diamond model in Sri Lanka. The variable called FRAUD has two values: 1 for companies with fraud and 0 for companies without fraud. A logistic regression analysis was conducted in EViews to determine which factors affect the likelihood of fraud.

Table 2 Descriptive Statistics

	FRAUD	ACHA NGE	OSHIP	DER	ROA	RECEIV ABLE	IND	DACC	SG	EG	DCHAN GE
Mean	0.0438	0.0760	0.0747	1.0960	0.0310	1.5066	0.8186	0.0035	0.3987	2.7653	0.5000
Median	0.0000	0.0522	0.0026	0.6602	0.0292	0.9497	0.7500	-0.0045	0.1380	-0.0347	0.5000
Maximum	1.0000	0.8234	0.7420	44.4093	0.3602	30.7330	1.0000	0.4164	45.2588	391.6514	1.0000
Minimum	0.0000	-0.4923	0.0000	-8.2762	-0.6292	0.0155	0.5000	-3.5909	-0.9277	-31.0919	0.0000
Std. Dev.	0.2049	0.1381	0.1717	2.8592	0.1046	2.4922	0.1665	0.2335	2.6153	26.8874	0.5008
Skewness	4.4613	0.6643	2.5569	11.1755	-0.5899	6.9899	0.1022	-11.3390	15.8857	12.0578	0.0000
Kurtosis	20.9029	6.6448	8.2435	167.2680	8.2662	68.1331	1.1523	176.9058	272.3009	160.7550	1.0000
Jarque-Bera	5335.003	200.661	715.262	366447.000	388.325	59170.040	46.078	410100.100	980432.100	339576.200	53.333
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	14.0000	24.3067	23.8898	350.7275	9.9151	482.1038	261.9500	1.1184	127.5721	884.8924	160.0000
Sum Dev.	Sq. 13.3875	6.0871	9.4049	2607.7510	3.4910	1981.3800	8.8435	17.3899	2181.8710	230614.7000	80.0000
Observations	320.000	320.000	320.000	320.000	320.000	320.000	320.000	320.000	320.000	320.000	320.000

Source: Data processing results

Descriptive analysis explains the basic details of the data used in the study and helps understand how the data appears before conducting any tests. The variable FRAUD is relatively rare in the sample, with an average value of 4.438% indicating fraud. The variable ACHANGE, which measures financial stability by the change in total assets, has a mean of 7.6%, indicating the firm experienced a moderate change in total assets. Insider ownership (OSHIP) is generally

low, at 7.5%, indicating dispersed ownership structures, while DER provides an average of 1.096, indicating that most companies have about the same amount of debt as equity. The audit committee independence shows a higher mean value of 81.9%, suggesting a strong formal governance mechanism among listed firms. Measures related to earnings quality indicate a low average discretionary accrual (DACC) of 0.35%, suggesting that earnings manipulation is generally low. Sales and earnings show wide variation, highlighting differences in performance dynamics across the firm and the industry. Nearly 50% of the firms experienced changes in directors (DCHANGE), suggesting moderate managerial turnover. Overall, descriptive results reveal a heterogeneous sample in terms of financial performance, growth, leverage, and governance characteristics, providing a suitable examination of financial statement fraud within the NDMF.

Table 3: Correlation analysis

	ACHANGE	OSHIP	DER	ROA	RECEIVABLE	IND	DACC	SG	EG	DCHANGE
ACHANGE	1.000000	0.000461	0.062884	0.118688	0.035641	-0.02264	-0.11753	0.050214	0.007013	-0.06645
OSHIP	0.000461	1.000000	-0.020489	-0.02725	-0.05585	0.054028	0.00724	-0.024023	-0.02414	-0.05492
DER	0.062884	-0.020489	1.000000	-0.16992	0.072714	0.098338	-0.06923	0.007378	-0.03216	0.016298
ROA	0.118688	-0.027252	-0.169921	1.00000	-0.05648	-0.02506	0.23904	0.044936	0.017723	-0.2594
RECEIVABLE	0.035641	-0.055852	0.072714	-0.05648	1.00000	0.007267	0.005524	-0.039676	-0.0044	0.040932
IND	-0.02264	0.054028	0.098338	-0.02506	0.007267	1.000000	0.035383	-0.065887	0.069901	-0.06172
DACC	-0.11753	0.00724	-0.069228	0.23904	0.005524	0.035383	1.000000	-0.011885	-0.0565	-0.09875
SG	0.050214	-0.024023	0.007378	0.044936	-0.03968	-0.06589	-0.01189	1.000000	-0.00831	0.054838
EG	0.007013	-0.024139	-0.032157	0.017723	-0.0044	0.069901	-0.0565	-0.008307	1.00000	-0.07712
DCHANGE	-0.06645	-0.054918	0.016298	-0.2594	0.040932	-0.06172	-0.09875	0.054838	-0.07712	1.00000

Source: Data processing results

It was observed that Return on Assets (ROA) and Debt-to-Equity Ratio (DER) have a small negative correlation which means that when companies have more debt, their profitability usually decreases. Sales Growth (SG) and Earnings Growth (EG) show a weak positive correlation, which means that when sales increase, earnings also tend to increase. A small positive correlation was also found between Discretionary Accruals (DACC) and ROA, suggesting that companies with higher profits may use more accounting adjustments to manage earnings. Other variables, such as Insider Ownership (OSHIP) and Audit Committee Independence (IND), show very low correlation with the other variables. This means that these

factors are not strongly related to the other financial indicators in the study. Overall, the correlation results show that there are no very strong relationships among the independent variables. This confirms that each variable provides different information and can be included in the logistic regression analysis to detect financial statement fraud among Sri Lankan companies.

This section presents the results of the logistic regression model used to find out which factors can detect financial statement fraud among Sri Lankan companies. Logistic regression is used when the dependent variable has only two values. In this study, FRAUD = 1 if a company has financial statement fraud and FRAUD = 0 if it does not.

Table 4: Logistic Regression

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.655647	1.922075	-0.341114	0.7330
ACHANGE	-2.353830	2.606214	-0.903161	0.3664
OSHIP	-27.16134	46.33518	-0.586193	0.5577
DER	-1.096752	0.302412	-3.626675	0.0003
ROA	8.041998	3.338680	2.408736	0.0160
RECEIVABLE	-0.601279	0.512074	-1.174203	0.2403
IND	-1.601930	2.177781	-0.735579	0.4620
DACC	3.872560	2.954030	1.310941	0.1899
SG	0.013217	0.079265	0.166741	0.8676
EG	0.000681	0.010919	0.062399	0.9502
DCHANGE	-1.885388	1.045616	-1.803136	0.0714
McFadden R-squared	0.369809	Mean dependent var		0.043750
S.D. dependent var	0.204859	S.E. of regression		0.180508
Prob (LR statistic)	0.000006			
Obs with Dep=0	306	Total obs		320
Obs with Dep=1	14			

Source: Data processing results

The EViews results show that two variables are statistically significant in explaining the likelihood of financial statement fraud. The Debt-to-Equity Ratio (DER) and Return on Assets

(ROA). The variable DER has a negative coefficient and is highly significant. This means that companies with higher debt levels are less likely to commit fraud. This may happen because companies with more debt are closely monitored by lenders and financial institutions, reducing the opportunity for managers to manipulate financial statements. The ROA variable has a positive coefficient and is statistically significant. This means that companies showing higher profits are more likely to engage in financial statement fraud. A possible reason is that some companies may try to report higher profits to attract investors or maintain a good public image, even if the figures are not accurate. Another variable, Change in Directors (DCHANGE), shows a small negative effect and is slightly significant. This means that companies that change their directors may be less likely to commit fraud. This could be because new management often brings stronger internal controls and transparency. The other variables, such as Asset Change (ACHANGE), Insider Ownership (OSHIP), Receivables (RECEIVABLE), Audit Committee Independence (IND), Discretionary Accruals (DACC), Sales Growth (SG), and Earnings Growth (EG), do not show a significant effect on financial statement fraud in this study. This means these factors do not strongly predict whether a company is likely to commit fraud.

The overall model performs well. The Likelihood Ratio (LR) statistic is significant ($p < 0.001$), indicating that the variables together explain fraud. The McFadden R^2 value of 0.37 shows a reasonable level of explanatory power for the logistic model. The model's classification accuracy is about 95.94%, indicating it correctly identifies most fraud and non-fraud cases.

In summary, the logistic regression results show that DER and ROA are the most important predictors of financial statement fraud in Sri Lanka. Companies with higher profits (ROA) and lower debt levels (DER) are more likely to manipulate financial reports. These findings support the idea that both financial performance and pressure can influence fraudulent behaviour, which agrees with the main concepts of the new fraud diamond model.

Overall, the results show that financial performance and company monitoring are key factors in detecting financial statement fraud. The findings are consistent with the fraud diamond model, which states that factors like pressure, opportunity, capability, and rationalization can lead to fraud.

5. Conclusion

This research focused on detecting financial statement fraud in Sri Lankan listed companies using the NFDM developed by (Khamainy, Ali, & Setiawan, 2022). The study was carried out to understand how the four main elements of the model of pressure, opportunity, rationalization, and capability affect the chances of financial statement fraud in companies listed on the CSE. The study used secondary data from the annual reports of selected non-financial companies listed on the CSE over a five-year period and applied descriptive statistics, correlation, and logistic regression using E views software.

The descriptive results showed that 4.4% of companies were classified as fraudulent, meaning that financial statement fraud exists but is not widespread among listed companies. The correlation analysis confirmed that the variables were independent and suitable for regression

testing. The logistic regression results showed that Return on Assets (ROA) and Debt-to-Equity Ratio (DER) had significant effects on financial statement fraud, while Change of Directors (DCHANGE) was slightly significant. ROA had a positive relationship with fraud, meaning that companies with higher profitability were more likely to manipulate their financial results. DER showed a negative relationship, indicating that companies with higher debt were less likely to commit fraud, possibly because they are more closely monitored by creditors. DCHANGE had a weak negative effect, suggesting that when directors change, there may be improvements in control and transparency.

Other factors, such as asset changes, ownership, earnings management, and sales or earnings growth, were not statistically significant in the Sri Lankan context, which may be due to differences in business culture, weak rule enforcement, or limited forensic auditing. Overall, the model achieved an accuracy of 95.9%, showing that the NFDM can be a useful tool for detecting financial statement fraud in Sri Lanka, particularly by highlighting the roles of profit pressure and external monitoring.

5.1.Limitations and Recommendations for Future studies

As with other empirical studies, this study also has certain limitations. The analysis relies on secondary data from published annual reports, which may be affected by prior financial statement manipulations. Also, the study is limited to non-financial companies listed on the CSE, which may limit the generalizability of the results across industries. The attention on quantitative indicators derived from NFDM excludes the qualitative factors which may play a significant role in enabling financial statement fraud. In addition, although the NFDM used measurable proxies, certain variables may not have been fully captured.

Despite these limitations, the findings of this study offer a valuable contribution to practice by advocating stronger regulatory oversight and the adoption of fraud detection tools based on MFDM indicators. Auditors' training can be strengthened in forensic accounting, promoting ethical leadership and establishing whistleblowing mechanisms to reduce rationalisation and the opportunity for fraud. Building on these foundations, future research could expand to qualitative methods, increase sample size and period, conduct country comparisons, and further apply advanced analytical techniques, such as machine learning, to improve the accuracy and applicability of NFDM across multiple institutional settings.

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DETERMINANTS OF NET MIGRATION IN SRI LANKA: A TIME-SERIES ANALYSIS (2000–2024)

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Abstract

Purpose: This study examines the short-term political, institutional, and economic determinants of net migration in Sri Lanka over the period 2000–2024. While prior literature predominantly focuses on long-term structural factors such as labour markets and economic development, the immediate dynamics of migration decisions remain underexplored. This paper investigates the impact of conflict intensity, human rights conditions, inflation, and per capita GDP on migration flows.

Design/methodology/approach: Annual time-series data covering 2000–2024 were sourced from the World Bank, Our World in Data, and the United Nations databases. The study employs Newey-West Ordinary Least Squares (OLS) regression within a time-series econometric framework to estimate the short-run effects of four explanatory variables: conflict intensity (death rates in armed conflict), Human Rights Index (HRI), Consumer Price Index (CPI), and Per Capita Gross Domestic Product (PGDP) on net migration. First-differenced variables were applied to isolate short-run dynamics from long-term structural trends, with diagnostic tests conducted to address heteroskedasticity and autocorrelation.

Findings: Conflict intensity exhibits a statistically significant negative effect on net migration, confirming that political violence and insecurity are primary drivers of emigration in Sri Lanka. Inflation is a statistically significant positive determinant, reinforcing the role of short-term economic instability in shaping migration behavior. Conversely, short-term changes in the human rights index and per capita GDP are not statistically significant, suggesting that institutional improvements and economic progress exert limited immediate influence on migration. These findings indicate that short-term migration in Sri Lanka is predominantly driven by political and security conditions rather than economic incentives or institutional changes.

Research limitations/implications: the study is constrained by its focus on short-run dynamics and annual aggregate data, limiting individual-level inference. Policy implications suggest that immediate interventions should prioritize conflict mitigation and political stability, while sustained long-term economic development and institutional reforms are essential to address deeper structural migration pressures.

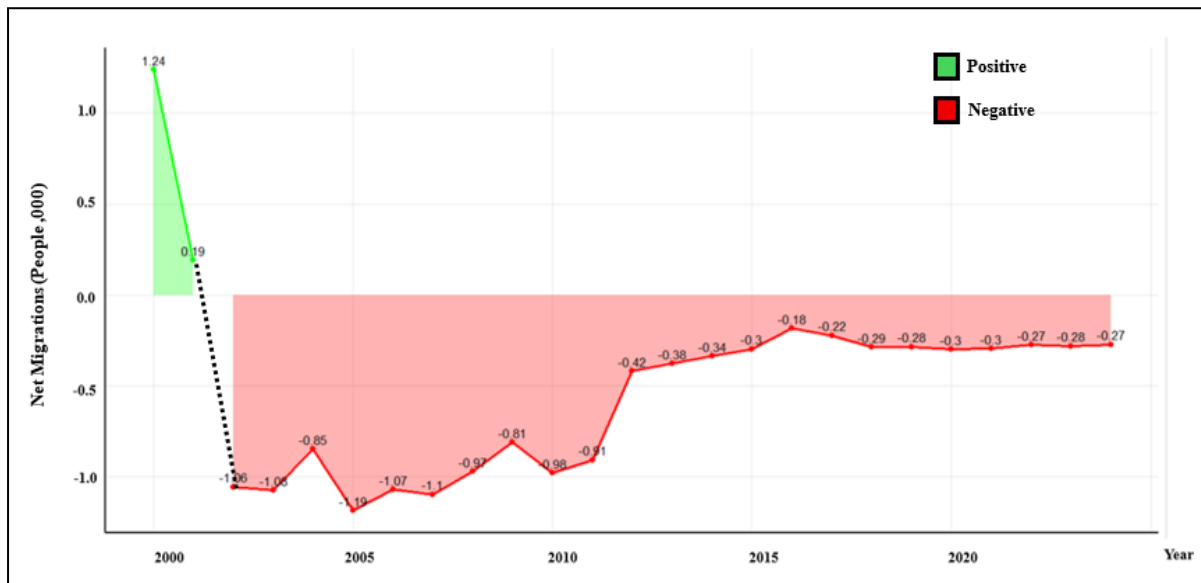
Originality/value: This study offers novel short-run empirical evidence on the interplay between political, institutional, and economic factors driving net migration in Sri Lanka, advancing understanding of migration behavior in post-conflict, open-economy contexts and highlighting the importance of distinguishing short-term shocks from long-term structural change.

Keywords: Conflict; Human Rights; Net Migration; Sri Lanka; Time-Series Analysis

1 Introduction

The evolving conditions of international migration significantly affect developing countries within the context of today's globalizing economy, and Sri Lanka serves as an excellent example of this trend ([Hein de Haas, 2020](#)). Migration is a complex set of decisions influenced by multiple variables, including, but not limited to, economic opportunity, politics and the presence or absence of supportive institutions, not only through income disparity as originally conceptualized by [Michael P. Todaro \(2021\)](#). In Sri Lanka, international migration has helped shape the labour market dynamics of the country; has helped generate inflows of foreign remittances; and has contributed positively towards the long-term development of the country ([World Bank Group, 2023](#)).

The Sri Lankan migration is linked to the civil war, economic restructuring, and the recent economic crises and the net migration of the country has been negative over the last 20 years although there have been some economic and social developments that have occurred after the civil war ([World Bank Group, 2023](#)). The brief episode of positive net migration in 2000 reflected a temporary return of displaced persons and diaspora members following the relative stability of the late 1990s, as well as policy incentives that encouraged skilled migrants to re-engage with the domestic economy ([Jayawardena P, 2020](#)). Figure 1.1 shows the continuing decline in net migration between 2000 and 2024.



Source: Authors' illustration based on World Bank Database, conducted using RStudio

Figure 1.1: Net migration Trend in Sri Lanka 2000-2024

The increased level of emigration highlights factors driving people to leave Sri Lanka, while immigration, the act of moving into another country, emphasizes the pull factors such as better opportunities and stability. ([Braz. J, 2006](#)). However, there has been an increasing amount of literature, which focuses on political unrest, wars and the lack of strong, reliable institutions, among the many reasons influencing a person to decide on living abroad ([Hoffmann & Zens, 2024](#); [Raleigh, 2011](#); [Song & Bloemraad, 2022](#)). While this has provided a better understanding

of how migration will work on a global basis, the actual, empirical evidence of this phenomenon that relates to Sri Lanka is still very limited.

Previous studies of Sri Lanka have focused heavily on labour export and remittances to the domestic economy ([Matt Withers, 2024](#)). Nevertheless, few studies have looked at how the interaction of political and institutional factors and macroeconomic conditions impact net migration over time. Also, few studies have conducted empirical investigations into the migration experience during both the civil conflict and following the civil war using one analytical framework.

This paper analyzes the short-term determinants of net migration in Sri Lanka over the period 2000–2024, focusing on political, institutional, and macroeconomic factors. It investigates causal relationships and compares the relative influence of these factors across conflict and post-conflict periods using a time-series econometric approach. The study contributes new short-run empirical evidence on migration in an open-economy context, exploring the links between migration patterns and political stability, institutional capacity, and economic conditions. The paper is organized as follows: Section 2 presents the literature review; Section 3 describes the data and methodology; Section 4 reports the results and discussion; Section 5 outlines policy implications and recommendations.

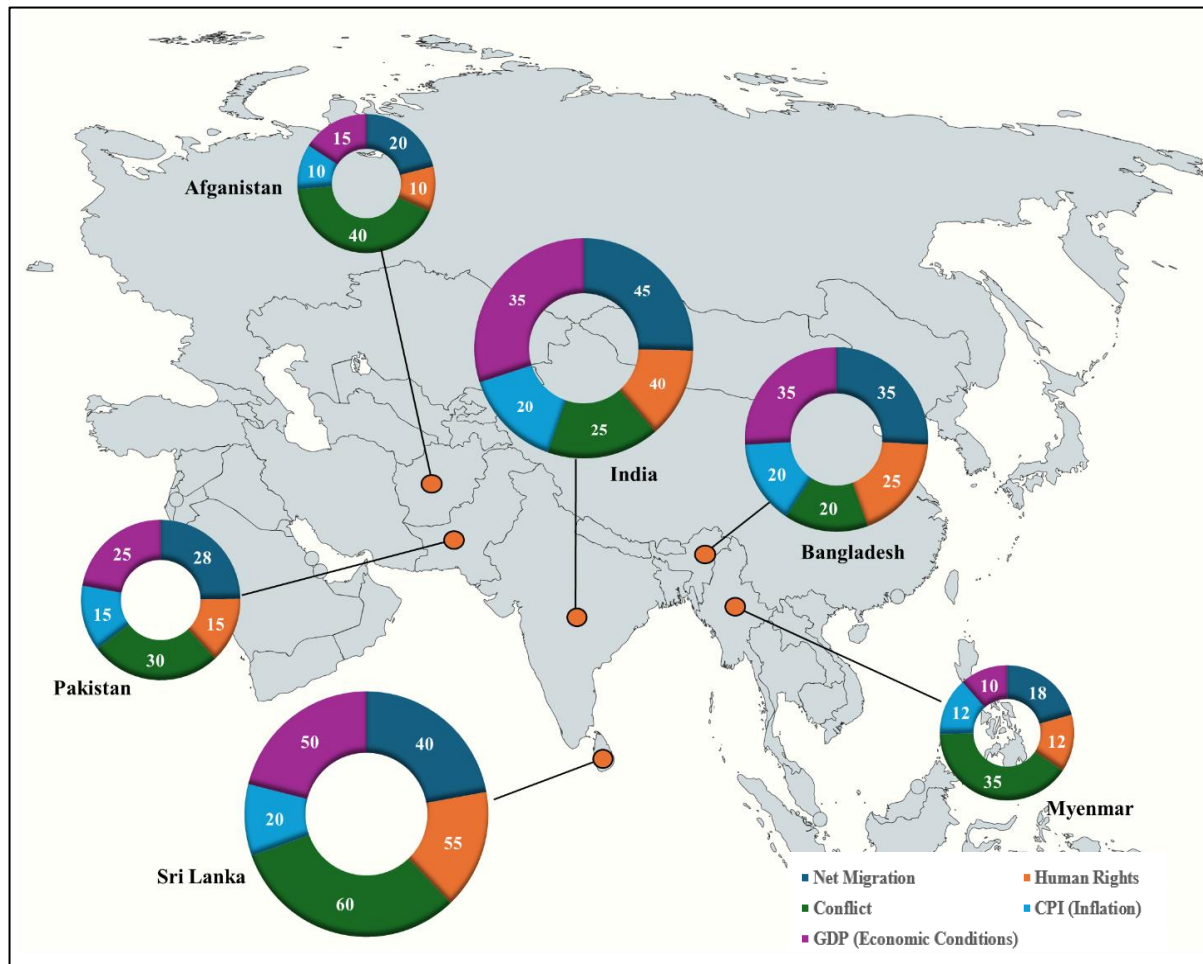
2. Literature Review

Various influences exist on migration, including economic, political, and social, with complex interactions between these factors. Labour market constraints and political instability can cause migrants from developing countries such as Sri Lanka to use migration as both a survival strategy and crisis response ([Vinayagathan, 2020](#)). A migrant's response to changes in economic, political, or social conditions will, over time, alter the pattern of migration itself ([Matt Withers, 2024](#)).

Net migration out of Sri Lanka has not been able to be adequately understood due to the limited amount of research examining how economic and non-economic factors work together to determine net migration. Most existing research has only focused on one variable like economic growth, inflation, employment opportunities, and does not consider how the other variables like political instability, human rights issues and macroeconomic shocks, interact with that variable ([Jayawardena P, 2020](#); [Wasana Handapangoda & Matt Withers, 2024](#)). In addition, most of the studies that exist utilize a cross-sectional approach to study migration patterns, limiting the findings to be reflective of the immediate response to subsequent events like economic crises, conflict events, or changes in human rights instead of assessing the time period necessary to understand migration behaviour ([Jayawardena P, 2020](#)).

Migration research around the world tends to focus on areas of political instability rather than equally across the globally based upon geographical location. The South Asian migration body of literature has largely been characterized by an emphasis on determinants of migration such as net migration, conflict, human rights violations, inflation (CPI), and economic conditions ([Hugo, 1996](#)). To formulate appropriate and effective short and long-term migration policies ([World Bank Group, 2023](#)). It is necessary that researchers comprehend migration determinants

and their interaction to implement effective policies. Figure 2.1 presents variable and country of origin publications, selecting a few Asian countries, such as Sri Lanka, to compare the regions with the publications due to the large quantity of migration studies.



Source: Authors' compilations from the literature survey.

Figure 2.1: Number of publications produced in each variable by country of origin

2.1 Neoclassical Economic Theory of Migration

Neoclassical economic theory (NET) is considered to be one of the primary ways of explaining migration; it suggests that migration is the result of a person's decision, which is based mainly on the income variations between different geographical locations ([Brueckner & Zenou, 1999](#); [Todaro, 1969](#)). The theory assumes that people will migrate to regions with more significant potential lifetime earnings than they would have stayed in their previous location. The flow of migration is determined by regional wage rates, availability of employment opportunities, and the surplus of unemployed individuals for a given region.

The NET focuses on income but misses political, social, and institutional factors. In Sri Lanka, migration is driven more by conflict, economic instability, career goals, labour markets, and governance ([Amarathunga et al., 2025](#)). The NET provides an approach to understanding how labour moves from areas that have lower wages to those areas that offer higher wages; however, the theory does not adequately explain migration from regions impacted by violent conflict. The neoclassical model mainly accounts for economic motivations in the decision-making process and presumes that migrants make purely rational, income-driven decisions regarding where to move ([De Haas, 2010](#); [Massey et al., 1993](#)). In Sri Lanka, for example, where civil unrest and political instability has caused major disruption to communities, migrants frequently consider safety, personal networks, and local institutions beyond monetary rewards when making their migration choices ([Castles, 2010](#); [Hugo, 1996](#)).

2.2 Push–Pull Framework and Non-Economic Determinants

The NET overlooks migration driven by political instability, whereas the push–pull framework [Lee \(1966\)](#) accounts for non-economic factors like safety, rights violations, and weak governance, which often drive migration in conflict-affected areas ([Hein de Haas, 2020](#)). Civil conflict, political instability, and human rights violations have traditionally been the drivers of people from Sri Lanka to leave the country, instead of economic opportunity ([Wasana Handapangoda & Matt Withers, 2024](#)). These political and institutional dimensions incorporated in the analysis allow us to have a more multidimensional picture of the determinants of migration out of conflict-affected contexts, rather than focusing on limited explanations based on income as a determinant of migration, as it is found in the traditional neoclassical approaches ([Castles, 2010](#); [Massey et al., 1993](#)).

2.3 Conflict, Political Instability, and Migration

Political conflicts and civil wars drive migration through security threats, institutional instability, and economic destabilization. In the short term, violence and persecution lead to sudden and largely unplanned migration ([Berman et al., 2011](#); [Paul Collier & Anke Hoelcher, 2000](#)).

Breakdown of institutions is the weakening or failure of government systems that undermine security and provide uncertainty over the availability of justice and protection and the delivery of key services. Security threat also tends to amplify institutional failure and leave people without any effective protective systems ([Kriesi et al., 2024](#)). Long-term economic damage from conflict like destroyed infrastructure, job loss, and reduced income limits sustainable livelihoods, often forcing migration to protect economic wellbeing. While short-term migration responds to immediate security and governance challenges, long-term migration is mainly driven by economic factors ([Martin, 2012](#); [Paul Collier & Anke Hoelcher, 2000](#)). Therefore, long-term economic instability is a key motivation of migration, and the macro-economic impacts of war can be directly connected to long-term migration choices. Short-term migration is mainly driven by security and institutional factors, while long-term migration stems from economic stress and governance issues; however, factors like conflict duration, support

networks, and policies in origin and destination countries can cause variations ([Kriesi et al., 2024](#)).

In the case of Sri Lanka, violence, institutional frailty, and economic destabilization were some of the factors that contributed towards migration during the civil conflict. People were forced to flee because of insecurity and livelihood loss in search of safety and stability ([Ito et al., 2024](#); [Siriwardhana & Wickramage, 2014](#)).

2.4 Human Rights, Institutional Quality, and Migration Decisions

In the past, there has been a great deal of variability regarding how migration decisions are affected by institutional quality and human rights over time. While the short-term effects of a change in governance or in the level of civil liberties may be very small because individuals may not perceive the improvements in institutions quickly enough or because the trust that individuals have in public institutions takes time to be developed ([De Haas, 2010](#); [Mathias Czaika & Krisztina Kis-Katos, 2007](#)). Changes in government policy do not usually have an immediate impact on migration due to the need for time to alter levels of perceived safety and opportunity. Improvements to institutions over a longer period of time accompanied by improved civil rights typically result in decreased emigration through greater confidence in the government ([De Haas, 2010](#)).

The issue of time regarding empirical studies is especially relevant to the migration study since a short-term shock and a long-term structural change can have very different consequences on migration outcomes. First-differenced time-series models assist in separating the short-term reactions and the long-term structural patterns in institutional performance and nonpolitical circumstances ([De Haas, 2021](#); [Hathaway, 2018](#)). In civil conflict, governance problems, and long-term socio-economic derailment, the historical context of migration choices in Sri Lanka has been evolving over time and has altered the characteristics of outward movement ([Ekanayake, 2024](#); [Knipe et al., 2019](#)).

2.5 Economic Conditions and Migration Dynamics

Many studies include GDP per capita and inflation as economic factors when determining migration patterns, but results have been inconclusive. This is partly because migration behaviour can only be influenced by economic variables if there are conditions conducive to their impact. If there is political stability in a country, migration motivations can be influenced by changes to the average income of the population, the prices of goods and services in a country and the availability of jobs. However, if there is political instability or conflict disorder in a country, the primary considerations that motivate an individual to migrate are security and uncertainty rather than any other cause of economic change ([Lanati & Thiele, 2024](#); [McHale, 2007](#)).

Economic factors can be inconsistent since they are conditioned by the politics and security situation. Fear and uncertainty will prevail during a time of conflict or instability and thus income or price changes will become less significant. Migration is caused by persistent violence or low trust in institutions in spite of economic progress. A number of studies

demonstrate that political instability and conflict diminish the ability for economic incentives to affect migration behaviour; because of this, the effect of economic variables on migration behaviour is weak or non-existent in the empirical literature ([Arnon et al., 2023](#); [Davenport et al., 2003](#)).

Distinguishing short- and long-term periods helps explain why some economic factors matter only over time. Migration responds to expectations about future economic opportunities, which require consistent, long-term signals to influence behaviour. Short-term economic fluctuations often fail to trigger migration when political instability persists. In contrast, prolonged economic decline, especially alongside weak institutions, gradually pushes people to consider leaving ([De Haas, 2010](#); [Storesletten, 2003](#)).

2.6 Evidence from Sri Lanka

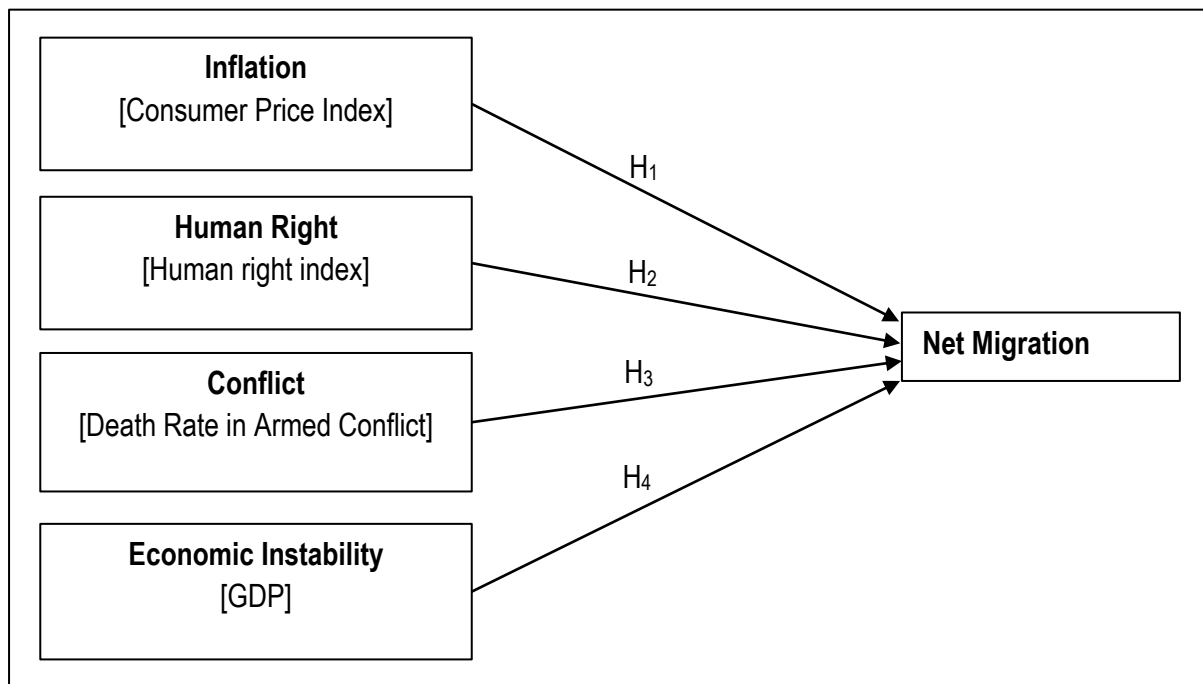
According to the current research on migration from Sri Lanka, there are significant differences between the drivers of emigration before and after a conflict, with few existing empirical studies addressing these differences. The majority of the studies indicate that a combination of political and institutional factors as well as economic motivations drive migration. However, the relative importance of these factors appears to change over time.

During the 1983–2009 Civil War, migration was mainly driven by political violence, insecurity, and ethnic tensions, leading to forced and protective emigration rather than job-related moves ([Jayawardena P, 2020](#); [Wasana Handapangoda & Matt Withers, 2024](#)). The post-civil war period saw the increase of emigration level due to the lack of high-grade jobs, the poor work of institutions, and the economic instability ([Athukorala & Jayasuriya, 2013](#); [World Bank Group, 2023](#)). This is particularly true for young and skilled workers, as long-term GDP growth has not reduced emigration, and short-term economic changes have little effect in politically unstable contexts with low institutional trust ([International Crisis Group, 2025](#); [World Bank Group, 2023](#)). Nevertheless, the trend in post-conflict migration reveals that governance and institutional trust is more important than short-term economic performance.

The majority of empirical studies on Sri Lankan migrants are based either on the cross-sectional or one-off research approach instead of using longitudinal methods ([Jayawardena P, 2020](#); [Wasana Handapangoda & Matt Withers, 2024](#)). Most empirical research on the Sri Lankan migrants has largely concentrated on remittance as opposed to migration, and hence the existing approaches and methods of analysis do not provide the breadth and depth to comprehend the dynamic, transient and immediate links between political and institutional instability and macroeconomic volatility ([Athukorala & Jayasuriya, 2013](#); [International Crisis Group, 2025](#)). There is very little longitudinal research to explore the joint impact of political environment, quality of the institutions, and economic factors on ([World Bank Group, 2023](#)). This void constrained the possibility of an in-depth review of the interplay of structural factors and short-term shocks in determining the patterns of migration after some time, and this necessitated time-sensitive empirical modelling.

2.7 Research Framework and Hypotheses

The conceptual framework of the study fills the gaps in the migration research in Sri Lanka through the incorporation of political, institutional and economic forces in the long run. The dependent variable is the net migration (NM), whereas the explanatory variables are conflict intensity (CON), human rights index (HRI), GDP per capita (PGDP) and inflation (CPI). According to the push-pull theory, it understands that temporary migration reactions are not similar to long-term patterns. (De Haas, 2010; Mathias Czaika & Krisztina Kis-Katos, 2007). Therefore, migration responses may differ between short-term fluctuations and long-term structural changes.



Source: Authors' compilation using the literature.

Figure 2.2: Conceptual framework of the study

Based on this framework, the study formulates the following hypotheses:

Inflation/Consumer Price Index (CPI)

- H₁: Inflation has a short-term effect on net migration in Sri Lanka.

Human Rights Index (HRI)

- H₂: Human rights conditions have a short-term effect on net migration in Sri Lanka.

Conflict Intensity (CON)

- H₃: Conflict intensity has a short-term effect on net migration in Sri Lanka.

GDP per capita (GDP)

- H₄: GDP per capita has a short-term effect on net migration in Sri Lanka.

3. Data and Methodology

3.1 Data

This paper works with annual time-series data of Sri Lanka between 2000-2024. The dependent variable is Net Migration, and the explanatory variables are Human Rights Index (HRI), Conflict Intensity (CON), Consumer Price Index (CPI) and GDP per capita. Information is collected using the World Bank (WDI), Our World in Data, and UN databases to guarantee the consistency, comparability, and reliability of the data and with the clear variables definitions in below Table.

Table 3.1: Data Source, Description and Units of Measurement

Variable	Description	Measurement	Data Source
Net Migration (NM)	The balance of people entering and leaving a country per 1,000 population	Net migration rate (per 1,000 population)	UN Data
Human Rights (HRI)	Indicator capturing human rights conditions and civil liberties	Index (higher values indicate better conditions)	Our World in Data
Conflicts (CON)	Measure of internal conflict and political violence	Index / proxy variable	Our World in Data
Consumer Price Index (CPI)	Proxy for inflation and cost of living	Index (2010 = 100)	World Bank
Per Capita Gross Domestic Products (PGDP)	Level of economic development and average income	Current US Dollars	World Bank

Source: Authors' compilation using data from [World Bank](#) , [Our World in Data](#) & [UN Data](#)

3.2 Methodology

3.2.1 Econometric Methodology

This study uses a time-series approach to examine the short-run determinants of net migration from Sri Lanka by analyzing annual changes in political, institutional, and economic conditions. Given the single-country data structure, Ordinary Least Squares (OLS) regression is used for estimation.

The model is specified as:

$$NM_t = \beta_0 + \beta_1 \Delta HRI_t + \beta_2 \Delta CPI_t + \beta_3 CON_t + \beta_4 \Delta GDP_t + \epsilon_t \quad (1)$$

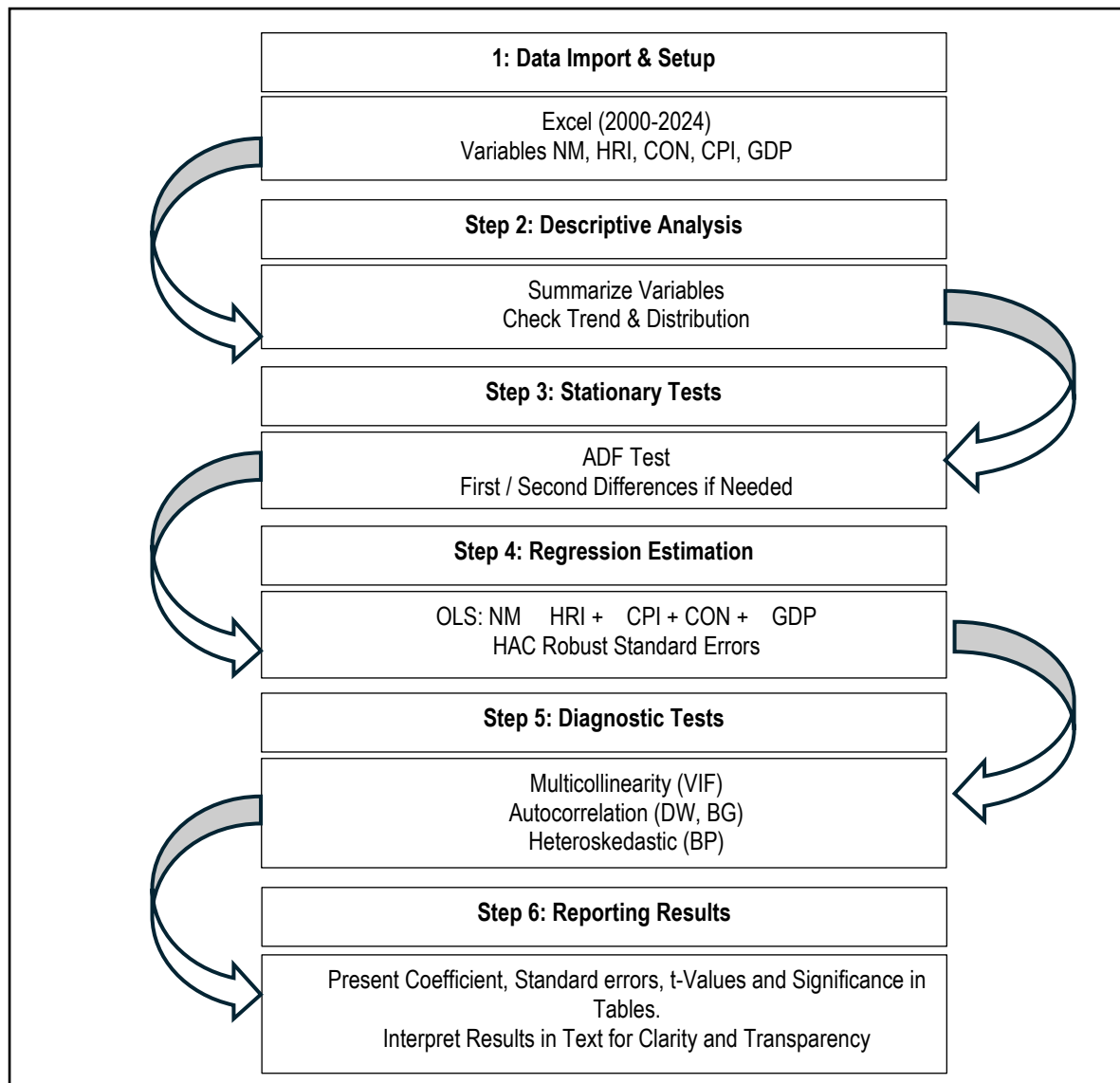
Where:

- NM_t = net migration in year t
- ΔHRI_t = short-term changes in human rights
- ΔCPI_t = short-term inflation changes
- CON_t = conflict intensity
- ΔGDP_t = short-term GDP per capita changes
- ϵ_t = error term

Theory suggests that higher conflict intensity increases emigration, short-term human rights improvements may gradually reduce migration, and economic changes have weaker effects under political instability.

3.3 Methodological Workflow

The data of Sri Lanka (2000-2024) were gathered and purified yearly. Net migration and the determinants of net migration were analyzed descriptively to identify the trends and the volatility of net migration. The unit root tests indicated that second differencing of some of the variables was necessary to achieve stationarity. HAC robust standard error OLS regressions were estimated, and diagnostics verified the reliability of the model. Coefficients were explained according to the migration theory and the context of Sri Lanka to make a policy. Figure 3.1 presents a comprehensive view of the overall methodological workflow.



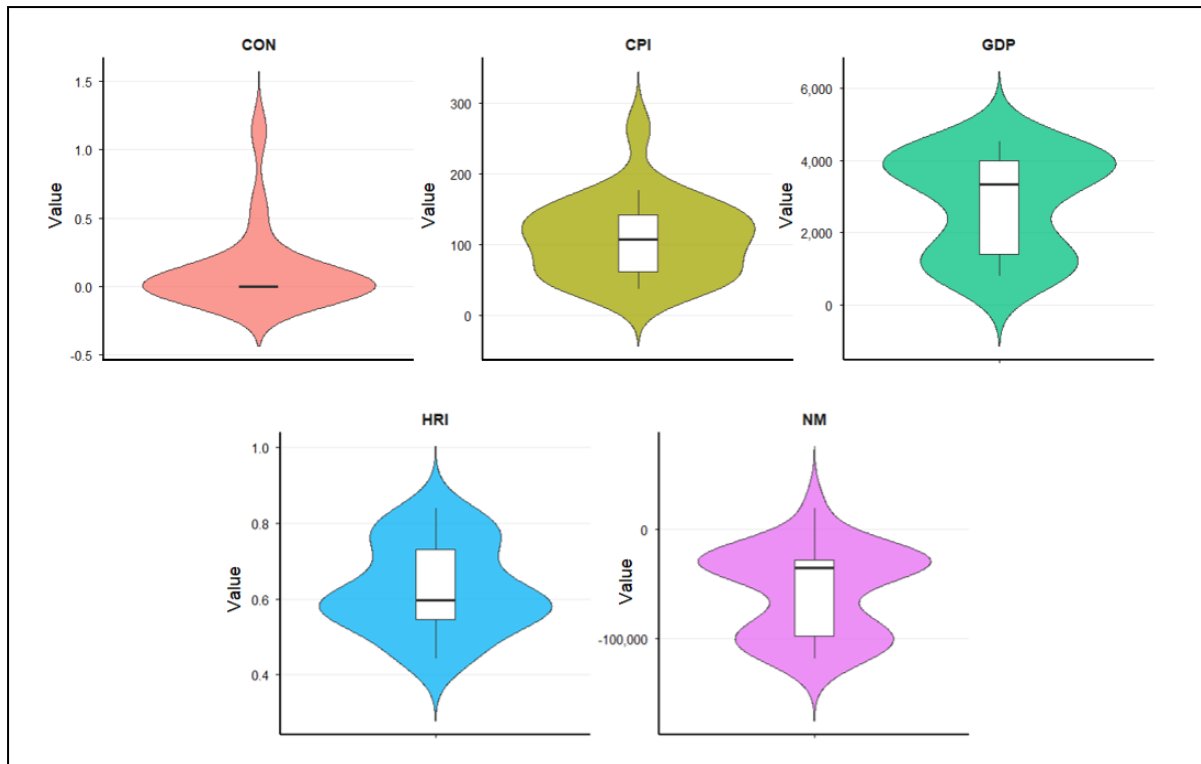
Source: Authors' compilation based on literature and methodology.

Figure 3.1: Methodology Workflow

4. Results and Discussion

4.1 Descriptive Statistics

The visual representation of the different types of distributions, as well as their differences in terms of both variance and skewness, can be observed in Figure 4.1. Additionally, the combination of descriptive statistics and distributional characteristics supports the use of time series short-term estimates and clarifies the reasoning behind the methodological choices made in the econometric analysis. It also provides insight into how variance affects the econometric results.



Source: Authors' illustration based on data analysis conducted using RStudio

Figure 4.1: Descriptive Statistics and Variable Distribution

As shown in the graph 4.1, the modelling approach used from the years 2000 to 2024 is constructed on the following five data points: Net Migration, Human Rights Index, Consumer Price Index, Construction Activity and Population Growth - Defined as PGDP. Net Migration has shown very high rates of variability between positive and negative net migration as a result of sudden political phenomena rather than steady patterns in the economy. Furthermore, the frequency of conflict intensity has been demonstrated to have episodic peaks; therein, short-term political instability is a significant factor leading to migratory purposes.

4.3 Regression Results

Table 2 reports the Newey-West (HAC) OLS estimates for the short-run determinants of net migration in Sri Lanka from 2000 to 2024. Diagnostic tests confirmed the presence of serial correlation (Breusch-Godfrey $p = 0.0031$; Durbin-Watson = 0.83), therefore Newey-West standard errors were applied to ensure robust inference. The results indicate that conflict intensity has a negative and statistically significant effect on net migration ($\beta = -0.0259$, $p = 0.048$). This suggests that increases in political violence are associated with higher net emigration, supporting the argument that insecurity acts as a strong short-term push factor (Hatton & Williamson, 2009; Nathan, 2008). In addition, inflation (CPI) shows a positive and highly significant effect ($\beta = 0.0184$, $p = 0.001$). Rising consumer prices appear to intensify migration pressures, likely because inflation directly reduces household purchasing power and economic stability (Harris & Todaro, 1970).

In comparison, the changes in the Human Rights Index (dd_hri) are not of statistical significance ($p = 0.806$) implying that the temporary institutional gains do not quickly cut down migration flows. On the same note, GDP per capita (dd_gdp) changes are not significant ($p = 0.145$) which means that fluctuations in the short-run growth do not affect the migration decisions substantially. These results are consistent with the migration-development literature that focuses on the importance of institutional reform and income growth in long-term perspective migration (De Haas, 2010; Mathias Czaika & Krisztina Kis-Katos, 2007).

The model accounts 61.8 % of the change in net migration ($R^2 = 0.618$), which is quite high considering a small-sample time-series model. There is no problem of multicollinearity (mean VIF = 1.06). On the whole, the data indicates that in Sri Lanka political instability and inflationary shocks are the main factors contributing to short-term migration as opposed to the change in the economic and institutional factors that are incremental.

Table 4.1: OLS Regression Results

Variable	Coefficient	Robust Std. Error	t-Statistic	p-Value
dd_hri	-0.9379	3.7649	-0.25	0.806
conflicts_w	-0.0259	0.0122	-2.12	0.048**
cpi_w	0.0184	0.0047	3.92	0.001***
dd_gdp	-0.0010	0.0006	-1.52	0.145
Constant	-5.1475	0.7199	-7.15	0.000***

$R^2 = 0.618$, Observations = 23, Newey-West standard errors (lag = 1) ** $p < 0.05$, * $p < 0.01$

Source: Author's calculations using Stata 15

The findings support H1 and H3: inflation (CPI) and conflict intensity (CON) are both statistically significant determinants of net migration, with increased conflict and inflation associated with higher emigration. However, H2 and H4 are not supported, as short-term changes in human rights and GDP per capita are not statistically significant.

5. Conclusion

This study examined the short-term determinants of net migration in Sri Lanka over the period 2000–2024. The findings indicate that conflict intensity exerts the most significant short-term effect on net out-migration, consistent with the push-pull framework of Lee (1966) and conflict-migration literature (Raleigh, 2011). In contrast, macroeconomic variables and improvements in human rights show no statistically significant immediate effect, suggesting that they operate as long-term structural influences on migration behaviour (De Haas, 2010; Mathias Czaika & Krisztina Kis-Katos, 2007). The situation in Sri Lanka is highly sensitive to temporary political instability, underscoring the strong short-term influence of security conditions. This study contributes to the empirical literature by confirming that conflict is a more immediate trigger of migration than economic and institutional factors, consistent with the aspirations-capabilities framework (De Haas, 2021) and the social transformation

perspective (Castles, 2010). The results further highlight that alleviating conflict and political instability can reduce distress-induced emigration in the short term, while economic and institutional reforms remain essential for addressing migration pressures over the long term (Vinayagathan, 2020; World Bank Group, 2023). The primary limitation of this study is the single-country, short time-series design, which restricts generalizability and limits long-term structural inference. Future studies should employ cross-country panel data and models that differentiate between short- and long-run responses to migration.

6 Policy Implications and Recommendations

The short-run regression results show that conflict intensity is the only significant driver of net migration in Sri Lanka, while changes in the Human Rights Index and macroeconomic variables have no immediate effect. Therefore, policy should prioritize managing political instability and conflict in the short term, while institutional and economic reforms serve as complementary long-term strategies. Table 3 links these recommendations to the empirical findings, distinguishing between short-term actions and long-term interventions informed by theory and literature.

Table 5.1: Policy Implications

Finding	Interpretation	Policy Implication	Time Horizon
Conflict intensity (CON) negative, significant	Political violence triggers emigration	Prioritize conflict prevention and rapid crisis management	Short run
Human Rights Index (dd_HRI) not significant	Short-term institutional changes do not affect migration	Implement human rights reforms as long-term strategies	Long run
Inflation (CPI) positive and significant	Inflation slightly increases emigration	Maintain price stability during instability	Short run
GDP change (dd_GDP) not significant	Short-term growth does not affect migration	Focus on long-term economic development	Long run
Moderate R² (0.618)	Migration influenced by other factors	Combine security actions with structural reforms	Mixed

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**DIGITAL PAYMENTS, OPEN API ADOPTION, AND SME
PERFORMANCE EVIDENCE FROM WOMEN-LED ONLINE BUSINESSES IN SRI
LANKA**

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Abstract

Purpose: This study examines the impact of how adoption of digital payment will affect the performance of SMEs led by women in Sri Lanka, with the mediating factor being the adoption of Open API. It seeks to know the role digital financial technologies have and how they improve the efficiency and performance of businesses in the new digital ecosystems.

Design/methodology/approach: A quantitative, cross-sectional research design, which gathered 200 women entrepreneurs with the help of a standardized questionnaire. Simple random sampling was used to select the respondents on the database of NEDA. The measures of all variables were done on a five-point Likert scale. Analysis was performed with the help of Partial Least Squares Structural Equation Modeling (PLS-SEM) and smartPLS4 which encompassed reliability, validity, and mediation analysis performed through bootstrapping data.

Findings: The results indicate that the impact of digital payments on Open API adoption is significant ($\beta = 0.833$, $p < 0.001$), and Open API adoption affects SME performance significantly ($\beta = 0.856$, $p < 0.001$). The model has a high level of explanatory power as it explains 69.3% variance in Open API adoption and 73.2% in performance of the SME. The adoption of open API partially mediates the correlation between digital payments and the performance of SMEs, pointing to the significance of integrating the system.

Research limitations/implications: Open API integrated systems give SMEs opportunities to get the most out of digital payments. Women entrepreneurs should be assisted by policymakers and financial agencies in terms of technical support in order to enhance inclusive API ecosystems.

Originality/value: This paper presents empirical evidence of the mediating role of the Open API adoption that contributes to the fintech and SME literature by demonstrating the significance of digital ecosystem integration in enhancing the performance of a business.

Keywords: Digital Transformation in SMEs; Female Entrepreneurs; SME Business Performance; Technology Adoption in SMEs; Women-led Small and Medium Enterprises (SMEs)

1. Introduction

Small and Medium Enterprises (SMEs) are essential to economic development, the creation of employment, and innovation, especially in developing economies. SMEs play a significant role in the national income and reduction of poverty in Sri Lanka, and women entrepreneurs are

increasingly engaging in online and home-based businesses. The growth of the digital infrastructure, such as the ubiquitous smartphones, low-cost internet access, and social media platforms, has allowed women-owned SMEs to join and function in the digital economy without many barriers to entry. Consequently, digital transformation has been critical to the improvement of business sustainability, competitiveness, and long-term development.

Simultaneously with this change, financial technologies (FinTech) have transformed the manner in which SMEs undertake their operations. Digital payment systems like mobile wallets, internet banking, and QR-based transactions have become important tools that support more efficient, faster, and transparent transactions. These technologies are used to minimize transaction costs by increasing financial transparency and making the company's business performance more convenient for customers. In the case of women-led SMEs in Sri Lanka, where one can usually observe structural issues such as restricted access to financial services, technological drawbacks, and inefficient operations, adopting digital payments can be a good way to improve performance.

That said, though digital payment systems enhance the efficiency of transactions at the transaction level, their full potential is unlikely to be achieved unless they are incorporated in larger digital ecosystems. Open APIs have become one of the enablers of digital financial integration in this regard. Open APIs ensure safe information exchange among financial institutions, service providers, and third-party platforms, which lets a business make connections between payment systems and other online applications and services. This integration contributes to interoperability, innovation, and creation of interconnected digital business models, which lie at the core of the developing API economy (Ali & Salih, 2025).

The capability to relate digital payment systems with other online platforms, such as accounting systems, e-commerce platforms, and customer management tools, could go a long way to improve the efficiency of operations, the reach of customers, and the ability to make decisions on the part of women-led online SMEs. Despite the findings in the previous literature that show that digital payment has a positive impact on the performance of SMEs by enhancing their sales, customer interaction, and financial management (Rizvi et al., 2025), little empirical data exists on the mediation of open API use in relation to the relationship between digital payment and SME performance, especially concerning developing economies such as Sri Lanka.

Moreover, the degree of digital adoption by women entrepreneurs is also not evenly distributed, as it is unevenly distributed in terms of digital literacy, access to resources, and institutional support. Sri Lanka is still evolving into a digitally inclusive economy, so the role of digital payment systems, as well as the adoption of Open API, is more important in determining the performance of the SMEs.

This research tries to explore how the introduction of digital payment systems can affect the performance of women-led SMEs in Sri Lanka, including focusing on the mediating effect of Open API adoption. This study offers a valuable addition to the current body of knowledge on digital finance and SME performance and provides practical implications to policymakers, financial institutions, and development agencies in developing effective digital financial

inclusion policies by bringing empirical evidence in an emerging economy setting (Ozili, 2018).

1.1 Research Problem

Although previous studies prove the personal advantages of digital payments and API implementation on the efficiency of operations and financial results, the processes that connect these constructs are not fully explored, especially in the context of emerging markets and underrepresented groups, such as women entrepreneurs. The literature available is mainly on the adoption of mobile payment (Rizvi et al., 2025) or the adoption of e-payment services in supply chains (Kilay et al., 2022), but hardly any studies investigate the mediating role of API adoption in converting digital payments into improved SME performance outcomes.

In addition, the bulk of the literature on API adoption is descriptive or theoretical, and involves major companies, online stores, or national digital ecosystems. Although the API economy is known to be one of the motivators of digital economy performance (Ali & Salih, 2025), the empirical research does not incorporate the use of digital payments and Open API adoption and the performance of SMEs into a single analytical framework. This has been especially notable in the situations where SMEs are resource-constrained, have gender specific difficult situations, and are highly digital-based in access to the market. As a result, the direct impact of digital payments on the performance of SMEs requires investigation, as well as the indirect routes through which these indirect impacts are implemented. In particular, the questions to be answered are how the use of digital payments impacts the Open API integration and whether the adoption of Open API moderates the effect that digital payments have on the performance of SMEs.

1.2 Research Objectives

- To examine the impact of digital payment adoption on Open API adoption among women-led online SMEs.
- To examine the impact of Open API adoption on SME performance among women-led online SMEs.

1.3 Significance of the Study

The paper is highly both theoretical and practical as it incorporates digital payments and the adoption of Open API into a mediating framework to describe the performance of SMEs, which has been backed by Technology Acceptance Model and the digital ecosystem approaches. It adds to the literature in FinTech and API economy by establishing the adoption of APIs as a strategic digital resource that can convert transactional data into business value, specifically to online SMEs led by women, which are underrepresented in the digital transformation literature. The results are useful to the researchers as they expand theoretical insights and policy makers and regulators can utilize the results to formulate inclusive digital finance policies. FinTech providers and financial institutions can enhance interoperability, cybersecurity and service

design. SMEs, particularly women entrepreneurs, have the ability of improving the efficiency of operations, competitiveness and long-term sustainability.

2. Literature Review

For this investigation, studies related to published between 2015 to 2025 were referred to. The search strategy led to the identification of a full-text publication available online. The process of selection involved searching both titles and abstracts to choose articles suitable for the study. While excluding irrelevant articles, 30 articles were screened for the current study. The flow diagram for the literature review is shown in Figure 6.

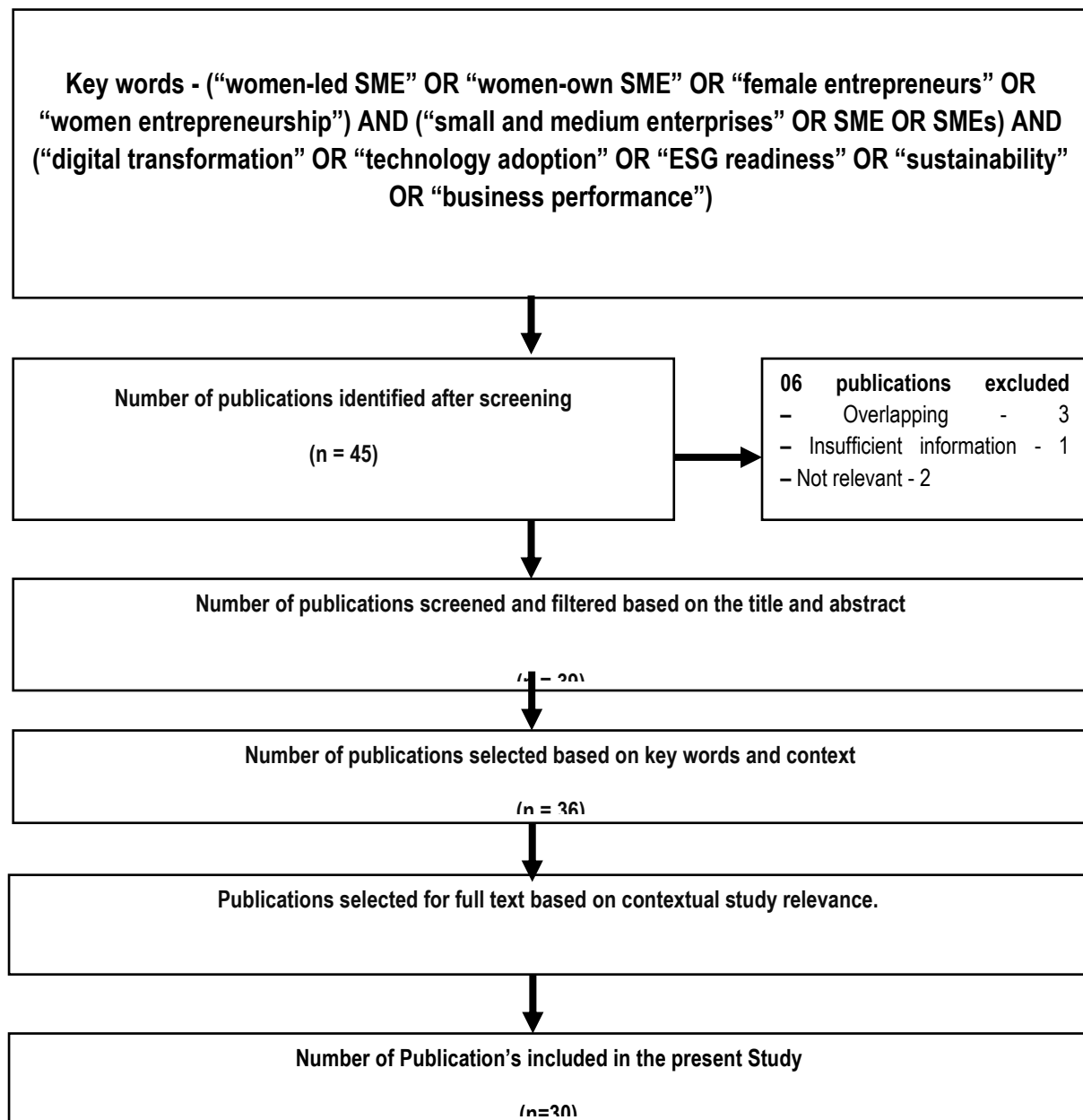


Figure 6: PRISMA search flow diagram

Source: Authors' illustration

2.1 Critical Discussion

Financial service digitization has largely changed the way small and medium enterprises (SMEs) conduct their activities especially in developing countries. Digital payment systems are significant in this change as they enhance efficiency in transaction, operational costs, and financial transparency. Researchers like (Frimpong et al., 2022) emphasize the fact that digital payments allow conducting transactions more quickly and keeping financial records in a better state, which is vital to SMEs working in an online setting. Such advances aid business expansion through making accessibility to customers more convenient and facilitating financial operations.

There is, however, existing literature which indicates that the effects of digital payments on the performance of SME are not necessarily direct. Although the usage of digital payment can offer operational advantages, its success hinges on what the firm can do to incorporate and adopt digital technologies. As an example, (Affandi et al., 2024) say that the adoption of digital can only result in better business results when it is backed by good digital capabilities. Likewise, state that it is not enough to provide digital financial services but provide SMEs with adequate managerial and operational systems to help them fully achieve the stated benefits. This suggests that more technological processes are required to convert the use of digital payments into quantifiable performance outputs.

Here, recent research on API economy places a lot of emphasis on the integration and interoperability of the systems. APIs facilitate a smooth integration of financial institutions, business platforms and third-party service providers, thus facilitating efficient and automated business processes. According to (Ali & Salih, 2025), the APIs serve as a source of digital economic development by ensuring data interchange between platforms. Similarly, (Wang, 2023) concludes that the Open API integration enhances the service delivery and customer satisfaction due to the ability to share data in real-time and securely. These results indicate that Open APIs are very important in developing the functional value of digital payment systems.

One major difference in the literature is that digital payments are largely concerned with efficiency on the transaction level, whereas Open APIs are run on a larger system level through integration, automation, and interoperability. According to (Bianchi et al., 2023), digital payments produce structured financial information and contribute to early digitalization, but higher levels of performance can be achieved when such systems are cross-platform. This emphasizes the fact that digital financial technologies are not only significant in their adoption but also in the successful integration into a broader digital ecosystem.

In spite of these revelations, the interaction of digital financial technologies with SME performance is determined by situational problems especially in the developing world. The use and adoption of such technologies can be limited due to factors like low digital literacy, regulatory constraints and limited infrastructure (Sheikh et al., 2017). Furthermore, female-led SMEs experience other structural obstacles such as inaccessibility to resources and digital opportunities, which can further influence the possibility to take advantage of the digital

transformation ([Alam et al., 2022](#)). This further complicates the importance of integrated digital solutions in enhancing business scalability and sustainability in such situations.

The existing research rarely discusses the impact of such aspects as system integration, automation, and interoperability in transforming the digital payment adoption into real business outcomes. Also, there is a paucity of empirical data on women headed online SMEs in third world economies like Sri Lanka.

2.2 Lacunae

Although numerous studies have been done on digital finance and SME performance, the processes by which the adoption of digital has an impact on business performance are under-researched. The majority of studies consider the adoption of digital payments as a direct predictor of the performance of SMEs, but the mediating impact of Open API adoption has received little consideration. Consequently, the off-the-record ways in which APIs can be used to boost performance remain poorly comprehended ([Bayuo et al., 2020](#)). In addition, the studies that are conducted are mainly on the developed economies, so there is minimal evidence on the developing countries. The most common challenges include those context-specific, like infrastructure constraints, regulatory obstacles, and lack of digital literacy, which makes the findings less relevant in new market environments ([Sheikh et al., 2017](#)).

The literature focuses a lot on individual user acceptance without considering the greater organizational and environmental determinants of digital adoption. The interaction between technological readiness, organizational capabilities, and environmental conditions are not thoroughly investigated, which restricts the knowledge related to the effect of the interaction of these factors on the performance of SMEs ([Lokuge et al., 2019](#)). Moreover, online SMEs run by women are still underrepresented in the digital adoption literature. Specific aspects of gender, such as financial availability and barriers to technologies, are not well covered, and it is advisable to conduct a study involving both organizational and social facets ([Alam et al., 2022](#)).

All these gaps are a sign that a thorough study of the correlations between digital payments, the adoption of open APIs, and the performance of the SMEs, particularly in the context of the developing countries and online businesses owned by women, should be carried out.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a model that helps people and organizations adopt new technologies depending on the perceived usefulness and the perceived ease of use. This model will dictate that within the perceived usefulness and ease of use of a technology, users will embrace it and record better performance results.

As in the case of SMEs, the implementation of digital payment systems occurs when the owners of the company view these systems as useful in increasing the efficiency of transactions, decreasing costs, and increasing the convenience of the customers. Previous literature confirms that the adoption of digital payments makes the financial transactions faster and better and,

hence, the financial management. According to TAM, the adoption of digital payment systems will increase the performance of SMEs (Ly & Ly, 2024) .

H1: Digital payments positively impact on Open API adoption.

Digital Ecosystem Theory

The Digital ecosystem theory defines the interaction of the interrelated digital platforms, technologies, and stakeholders to generate value in a networked environment. The creation of value in a digital ecosystem is not achieved through the separate technologies, but rather through the process of integration, data sharing, and interoperability between systems.

In this context, Open API technologies are essential as they make it possible to communicate the needs of all financial institutions, digital, and third-party services (Iheanachor et al., 2023). The use of APIs enables the business to connect the digital payment system with other tools of operation, which are helpful in automating operations, real-time data communication, and decision making.

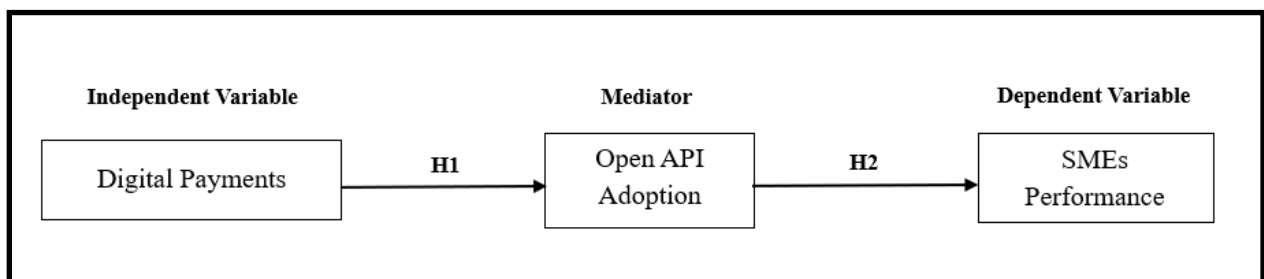
This implies that digital payments are a stepping stone to digitalization and Open API will allow more integration into the digital ecosystem. According to the digital ecosystem theory, digital payment systems create structured data that can be used with integration technologies, like Open API.

H2: Open API Adoption mediates the relationship between Digital Payments and SMEs Performance.

2.3 Conceptual Framework & Hypotheses

Figure 7 illustrates the conceptual framework. The proposed model will be amenable to testing with cross-sectional survey data, with due consideration given to designs beyond simple causality testing. Specifically, within the full-scale research, the conceptual framework will be explored, employing mediation analyses with bootstrapping confidence intervals (MacKinnon, 2008) and potentially structural equation modeling, depending on the integrity of measurement models and sample size constraints (Kline, 2016).

Figure 7: Conceptual Framework



Source: Authors' illustration

3. Methods

3.1 Research Approach

The study adopted a quantitative, cross-sectional research design to examine the relationships between Digital payment systems, Open API adoption, and SME performance. It was based on a positivist research philosophy and a deductive approach, testing hypotheses derived from existing literature ([Rasaputhra et al., 2024](#)).

3.2 Research Strategy

The research was a quantitative survey ([Saunders et al., 2023](#)), so it used primary data in the form of an online survey among women entrepreneurs in Sri Lanka. It was in the form of a structured questionnaire with a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

3.3 Research Site

This research was done at the locality of Sri Lanka, in the nine provinces of the country.

3.4 Sample

The target population of this study consists of women led SMEs in Sri Lanka. According to ([Department of Census and Statistics, 2025](#)) there are approximately 250,000 women entrepreneurs in the country. However, the accessible population for this study was limited to 420 women-owned businesses registered in the National Enterprise Development Authority (NEDA) ([Authority, 2025](#)) database.

Simple random sampling method was used to sample the respondents in the NEDA database. A random number was allocated to each business in the sampling frame and the respondents were selected by use of random number generation technique whereby every unit was given an equal probability of being selected by the sample. The survey process was conducted via online questionnaire which was sent to the sampled participants via emailing and other digital communication systems. The approach was also chosen because it is cost effective, time saving and the fact that it was able to access geographically scattered respondents within Sri Lanka.

The ([Krejcie, 1970](#)) sampling table calculated the required sample size, which showed that 217 respondents will be enough to represent a population of 420. It was on this basis that 217 questionnaires were distributed, and 200 valid responses were collected, thus, achieving a response rate of about 92%, which is greater than the widely accepted response rate of 85% in previous study ([Wijewardena et al., 2023](#)).

Although random sampling has been used, the study also has some limitations. The use of an online survey could have excluded the respondents who do not have access to the internet or are not digitally literate. Also, since the involvement was voluntary, there is a risk of the self-selection bias that could impact the extrapolation of the results.

3.5 Measures

All constructs were measured using multi-item indicators adapted from prior studies (Thathsarani & Jianguo, 2022). Responses were recorded on a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The constructs included Digital Payments (DP), Open-API Adoption (OAA), and SME Performance (SP). The scale values for each construct were calculated by averaging the responses to the respective items. The Table 14 used for building the questionnaire represents the indicators of the variables.

Table 14: Operationalization Table

Variable	Definition of the variable	Dimensions	Item	Source
DP	Defines the electronically transferring of financial transactions without the use of cash, i.e., mobile wallet, online banking, and cards.	- Effectiveness - Response time - User satisfaction	DP1	(Musyafi, 2024)
			DP2	
			DP3	
			DP4	
			DP5	
SP	Refers to the effectiveness of SMEs in meeting their business goals normally indicated by way of profitability, sales growth, market share, productivity, efficiency, and general sustainability.	- Profitability - Growth - Customer Satisfaction	SP1	(Otache & Usang, 2021)
			SP2	
			SP3	
			SP4	
			SP5	
OAA	OAA refers to the situation that a business begins to use open APIs to get its systems connected to other platforms or services. It assists companies to exchange information, make electronic payments, and provide new services easier.	- Number of APIs - Bank Size - Scalability	OAA1	(Lin et al., 2025)
			OAA2	
			OAA3	
			OAA4	
			OAA5	

Source: Authors' illustration

3.6 Data Analysis

The measurement and structural models were evaluated by means of data analysis with the use of PLS-SEM and SmartPLS4 (Saunders et al., 2023). Cronbach Alpha and Composite

Reliability were used to test the reliability whereas AVE, Fornell-Larcker and HTMT were used to test convergent and discriminant validity. The model was tested by bootstrapping with 5,000 resamples, and the hypotheses were accepted.

4. Results and Discussion

4.1 Data description



Figure 8: Data Description

Source: Authors' illustration

Figure 8 illustrates the data description. The demographics of the 200 women-owned businesses are a varied distribution of SMEs.

These findings show that the majority of those interviewed are well educated, and most of them have undergraduate, diploma or certificate education. Only a minor percentage had primary level education and an insignificant number had postgraduate degrees. In general, the sample is composed of an educated sector of female entrepreneurs. When it comes to family size, the respondents will be of all household structures such as single, couple, small, large, and joint families. The sample as a whole represents women entrepreneurs in various business fields as well as family backgrounds.

4.2 Measurement Model Assessment

Validity and reliability of the latent variable and their outer loadings were evaluated through measurement model assessment. This model assessment includes Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) to ensure the measurement model's adequacy, validity, and reliability according to the guidelines of (Joseph F. Hair Jr., 2021).

Table 15 represents 200 responses derived from the model assessment. Figure 9 represents the measurement model of conceptualization using the bootstrapping method on SmartPLS4 software.

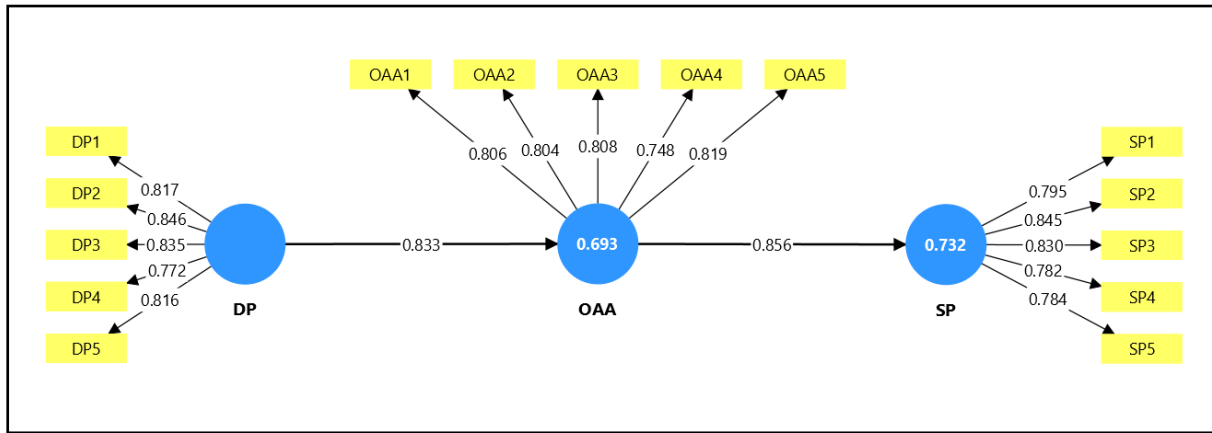


Figure 9: Measurement Model Analysis

Source: Authors' illustration

Table 15: Measurement Model Assessment

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average Variance Extracted (AVE)
DP	0.876	0.877	0.910	0.668
OAA	0.857	0.860	0.897	0.636
SP	0.866	0.868	0.903	0.652

Source: Authors' illustration

Reliability

Outer loading and composite reliability were used to determine the reliability. Loadings of all constructs were above 0.70 (DP: 0.876, OAA: 0.857, SP: 0.866) and composite reliability was found to be between 0.860 and 0.910. These findings are indicative of acceptable internal consistency reliability of the measurement model.

Convergent Validity

The measure of convergent validity as determined by AVE was good because all constructs, DP (0.668), OAA (0.636), and SP (0.652) had scores above 0.50, which is regarded as the strong relationship between the indicators and their latent constructs.

Discriminant Validity

The level of discriminant validity estimated by Fornell-Larcker (Fornell & Larcker, 1981) and HTMT ratio were sufficient because the square root of the AVE of each construct was greater than the correlations Table 16 and the value of HTMT was below 0.90, which indicated that the constructs are empirically different.

Table 16: *Fornell-Larcker Criterion — Discriminant Validity*

Variable	DP	OAA	SP
DP	0.818		
OAA	0.833	0.798	
SP	0.841	0.856	0.807

Source: Authors' illustration

4.3 Structural Model Assessment

Structural model assessment mainly focused on evaluating statistical values to test the hypothesized relationship among the constructs. Figure 10 represents the visualization of the structural model assessment.

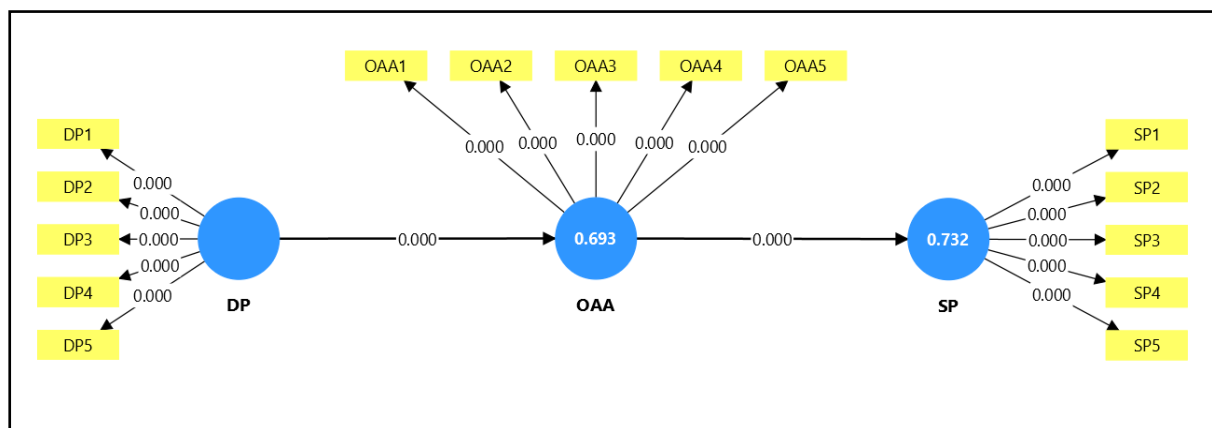


Figure 10: Structural Model Analysis

Source: Authors' illustration

Hypothesis Testing

Table 17: Path Coefficients

Hypothesis	Path Coefficient	SD	t-value	p-value	f ² -value	Results
H1: DP→OAA	0.833	0.035	23.606	0.000	2.260	Supported
H2: OAA→SP	0.856	0.029	29.580	0.000	2.732	Supported

Source: Authors' illustration

Table 17 indicates that both of the hypothesized relationships are significant at the level of 0.05. DP has a positive effect on OAA ($\beta = 0.833$, $t = 23.606$, $p = 0.000$, $f^2 = 2.260$), and OAA has a beneficial effect on SME performance ($\beta = 0.856$, $t = 29.580$, $p = 0.000$, $f^2 = 2.732$). Bootstrapping affirms that there is an impact of DP on OAA, which subsequently boosts SME performance.

Mediation Analysis

The findings reveal that the indirect impact of DP on SP via OAA is significant. Simultaneously, as the direct and the indirect pathway matter, the results prove a partial effect.

Collinearity Values (VIF)

A variance inflation factor (VIF) was used to identify collinearity among the measurement items to analyze the existence of multicollinearity problems in the measurement model. As per the standard instructions, a VIF of less than 3.3 shows that the issue of serious collinearity should not be a concern and a VIF of greater than 5.0 (Joseph F. Hair Jr., 2021) implies that there might be a problem of multicollinearity.

The values of all the indicator VIFs were within the 1.682 to 2.381 range. Precisely, the VIF of DP indicators was 1.708 to 2.381, OAA indicators 1.682 to 1.957 and SP indicators 1.796 to 2.329. The values of reported VIF are all low and below the recommended value of 3.3. This suggests that the indicators are not worried about multicollinearity and every measurement item measures its own construct, albeit not too much overlap with other indicators.

Coefficient of Determination (R²)

Table 18 represents the coefficient of determination (R²) values evaluating the explanatory power of the structural model. variables, with higher values indicating better prediction accuracy, was explained by the proportion of variance in endogenous constructs through R² values. DP explains 69.3% of the variance in mediating variable OAA, while OAA accounts for 73.2% of the variance in SP. The adjusted R² values are almost identical to the original R² values, confirming that the model is stable with minimal overfitting. The results indicate that the structural model is very effective in forecasting the effects of the adoption of digital payments on the performance of SMEs in Sri Lanka.

Table 18: R² and adjusted R²

	R-square	R-square adjusted
OAA	0.693	0.692
SP	0.732	0.731

Source: Authors' illustration

Model Fit Assessment

The SRMR value of the saturated model (0.065) is below the recommended 0.08 threshold (Hu & Bentler, 1999), exploring an acceptable fit. The estimated model also produced an SRMR of 0.08, which remains within the acceptable range for PLS-SEM applications. The d_ULS (0.507) and d_G values (0.312) were relatively low, suggesting a good alignment between the empirical and model-implied correlations. Chi-square values for both saturated (343.067) and estimated (368.612) models were comparable, supporting overall consistency. NFI values (0.834 and 0.822) showed moderate fit, however below the ideal 0.90 benchmark. Considering the below model fit, the saturated model provided a better fit, and the indices confirm that the model establishes an acceptable fit for PLS-SEM research. Table 19 represents the values for model fit assessment.

Table 19: Model Fit

	Saturated model	Estimated model
SRMR	0.065	0.075
d_ULS	0.507	0.680
d_G	0.312	0.357
Chi-Square	343.067	368.612
NFI	0.834	0.822

Source: Authors' illustration

4.4 Discussion and Inferences

The results prove that online payments play a vital role in increasing the adoption of open APIs that in turn promote the performance of SMEs in online ventures owned by women in Sri Lanka. It means that digital payment systems are a preliminary stage in digital transformation, as they enhance the efficiency of transactions and create initial technological infrastructure in companies. Nevertheless, in line with recent empirical findings, the advantages of digital payments do not stand much unless reinforced by more sophisticated digital systems like integrated platforms (Affandi et al., 2024).

The association between digital payments and open API adoption is high, which implies that SMEs are slowly moving away from the simplistic financial digitalization-based approaches to more intricate system integration. Open APIs provide interoperability, automation, and connectivity of financial institutions and business platforms unhindered (Ali & Salih, 2025). This marks a change from the efficiency at the transaction level to the value creation at the ecosystem level, where the firms can use digital networks to create greater operations and scalability.

Moreover, the great influence of open API implementation on the performance of the SMEs shows the importance of integration to the realization of business results. When an API-based system is used, SMEs can enjoy enhanced service delivery, real-time access to data, and enhanced ability to make decisions. This helps us believe that system integration is a support of performance rather than the adoption of standalone technology (Wang, 2023).

The mediation findings validate the fact that the adoption of Open API enhances the relationship between digital payments and the performance of SMEs. Although there is a direct influence of digital payments, the integration and the interoperability enhance their efficiency. This underlines that the key to sustainable growth of SMEs, rather than just being in the integration of digital tools, is in their successful implementation into a larger digital ecosystem.

5. Conclusion

Summary

This paper examined the correlation between digital payments and SME performance with Open API adoption as a mediating variable based on women-led online businesses in Sri Lanka. The results affirm that the use of digital payments does not necessarily result in better performance directly; however, the effect is substantial in the case of open API integration. Open API implementation is expected to improve interoperability, smooth the interchange of data, and make operations more efficient and, thus, translate the use of digital payments into real business results.

The findings also confirm that open API implementation is a partial mediator, which supports the notion that combined digital financial ecosystems are the key to maximization of SME performance. The paper emphasizes the fact that female-headed SMEs can also make full use of the transition to more sophisticated and networked financial technologies. All in all, the study highlights the role of digital financial integration as an important factor in sustaining SMEs in emerging markets.

Recommendations

SME owners should move beyond basic digital payment acceptance and actively integrate Open API-enabled systems to optimize operational efficiency and customer experience. Policymakers should facilitate API ecosystem development through regulatory clarity and fintech–SME collaboration frameworks. Financial institutions are encouraged to design

inclusive API-based solutions tailored to women-led online enterprises, ensuring accessibility, affordability, and technical support.

Implication

Theoretical Implications - This research contributes positively to the literature on digital entrepreneurship, fintech adoption and SME performance by extrapolating the already existing theoretical frameworks like the Technology Acceptance Model (TAM) and digital ecosystem theory. In particular, it proposes open API adoption as a significant mediating variable that clarifies how digital payment systems become the key to better firm performance.

In comparison to the previous research which emphasizes the direct relations, the current study demonstrates the significance of interoperability, integration of systems, and platform-based capabilities in business. It contributes to the body of knowledge on the digital transformation by highlighting the fact that digital transformation does not necessarily occur through adoption but through integration into a larger digital ecosystem.

In addition, the research paper brings to the small amount of literature on female-led SMEs in developing economies a gender-based lens on digital financial inclusion and technology-based performance. This enhances theoretical debate by connecting fintech adoptions and inclusiveness, a proficient development approach, and altering a framework within under-represented entrepreneurial settings.

Practical Implications - For practitioners, the findings highlight that strategic API integration enhances transaction speed, customer retention, and scalability. For ecosystem stakeholders, the results underscore the importance of developing inclusive fintech infrastructures that empower women entrepreneurs.

Limitations

This study has several limitations. The research uses self-reported questionnaire data, which creates response bias and limits its research scope to women-led online SMEs in Sri Lanka. The cross-sectional design prevents assessment of long-term effects of open API adoption because respondents lacked understanding of open API and AI technologies. The research team needed to limit their analysis scope and sample size because of time and resource limitations.

Future Research

The study suggests future extensions to include other male-led offline SMEs for broader generalization of findings. The research recommends performing longitudinal studies that investigate how open API adoption impacts SME performance over extended time periods. The research requires additional qualitative methods, which include interviews and case studies, to study adoption methods and implementation challenges. The research will benefit from a cross-country comparison, which will show how digital infrastructure, regulations, firm size, industry, and digital literacy impact adoption and performance results.

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DOES DEVELOPMENT STATUS MATTER? EXPLAINING VARIATIONS IN CHINA'S OFDI DETERMINANTS BETWEEN ADVANCED AND EMERGING ECONOMIES

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Abstract

Purpose: This analysis explores the different influences of China's Outward Foreign Direct Investment (OFDI) factors in both advanced and emerging economies. This analysis examines the impact of GDP per capita, trade openness, inflation rate, natural resources and institutional distance on China's OFDI stock across 123 host countries from 2006 to 2023.

Design/methodology/approach: The study employs a quantitative research design using a balanced panel dataset covering 18 years. The authors used the fixed-effects panel regression model together with cluster-robust standard errors to assess how host-country economic determinants and institutional factors affected China's OFDI stock. The researchers developed institutional distance measurement through the Kogut-Singh Index (KSI), which uses Worldwide Governance Indicators data. The researchers perform separate estimations for advanced economies and emerging economies to understand their distinct contextual characteristics.

Findings: Initially, the study revealed that China's OFDI exhibits a positive relationship with GDP per capita and trade openness in advanced economies. However, the presence of natural resources significantly detracts from this relationship, indicating that a majority of investors are motivated by the pursuit of market access to resources. Emerging markets demonstrate a strong positive relationship with GDP per capita because institutional distance factors show significant positive effects, while natural resources display a negative correlation and experience only minor effects from trade openness. China's OFDI strategy shows context-dependent implementation because it changes according to the development level of each host country.

Research limitations/implications: The study omits sustainability-related variables like environmental regulation, ESG indicators and BRI policy measures, which leads to restricted results because the research did not explore different sectoral aspects and specific operational features of companies across various sectors.

Originality/value: Policymakers need to develop specific strategies which address the various developmental stages that exist in different host countries according to the research findings. Advanced economies need to concentrate their efforts on developing technology and innovation, while emerging economies should work to build better governance systems and infrastructure networks that will attract sustainable investment.

Keywords: Advanced Economies; China's Outward Foreign Direct Investment; Emerging Economies; GDP per Capita; Institutional Distance

1, Introduction

China's outward foreign direct investment (OFDI) has become a defining feature of a significant shift in global capital flows over the past two decades, driven by the implementation of the "Going Out" policy and the Belt and Road Initiative (BRI) ([Chang et al., 2021](#); [Kang et al., 2018](#); [Qi & Rao, 2021](#)). China's OFDI stock has risen from a weak share of global FDI in the early 2000s to one of the most significant worldwide investments. Chinese firms have rapidly expanded their international presence by investing across both advanced and emerging economies, reshaping patterns of capital flows, production networks, and geopolitical influence ([Abdulsalam et al., 2021](#); [Fu et al., 2020](#); [Li et al., 2016](#)).

Existing research strongly investigates Chinese OFDI using traditional FDI motives such as market-seeking, resource-seeking, efficiency-seeking and strategic-asset-seeking and emphasises host country characteristics such as market size, natural resources, economic instability, trade openness and institutional distance ([Fu et al., 2020](#); [Liu et al., 2023](#); [Shan et al., 2018](#)).

Several studies identify market size and growth as primary determinants of China's OFDI ([Ma et al., 2020](#); [Shan et al., 2018](#)), while some studies emphasise institutional fragility, governance and political ties, including "intimate" relations and BRI-related policy frameworks, as crucial for explaining location choices ([Gao et al., 2022](#); [Qi & Rao, 2021](#)). The role of natural resources is mixed and debated, with studies showing conflicting results. Some analyses reveal a strong resource-seeking pattern, especially in Africa and in the energy sector ([Chang et al., 2021](#); [Chen et al., 2020](#); [Tan et al., 2021](#)). On the contrary, some studies highlight the growing importance of strategic asset-seeking and market access in advanced economies ([Chen et al., 2020](#); [Shan et al., 2018](#)). Moreover, many contributions focus on specific regions, such as African and Asian countries, sectors, or policy dimensions, and do not conduct a unified comparison between advanced and emerging host economies.

This addresses significant gaps in previous studies. First, there is a limited systematic determination of the factors of China's OFDI between advanced and emerging host countries within a coherent empirical framework. Second, although macroeconomic and structural variables such as GDP per capita, trade openness, inflation, natural resources and institutional distance are examined collectively over the multi-country panel covering an extended period of the post-global financial crisis and the BRI era. Third, most studies implicitly treat Chinese OFDI as homogeneous and do not clearly examine whether the key factors differ across countries with different development contexts.

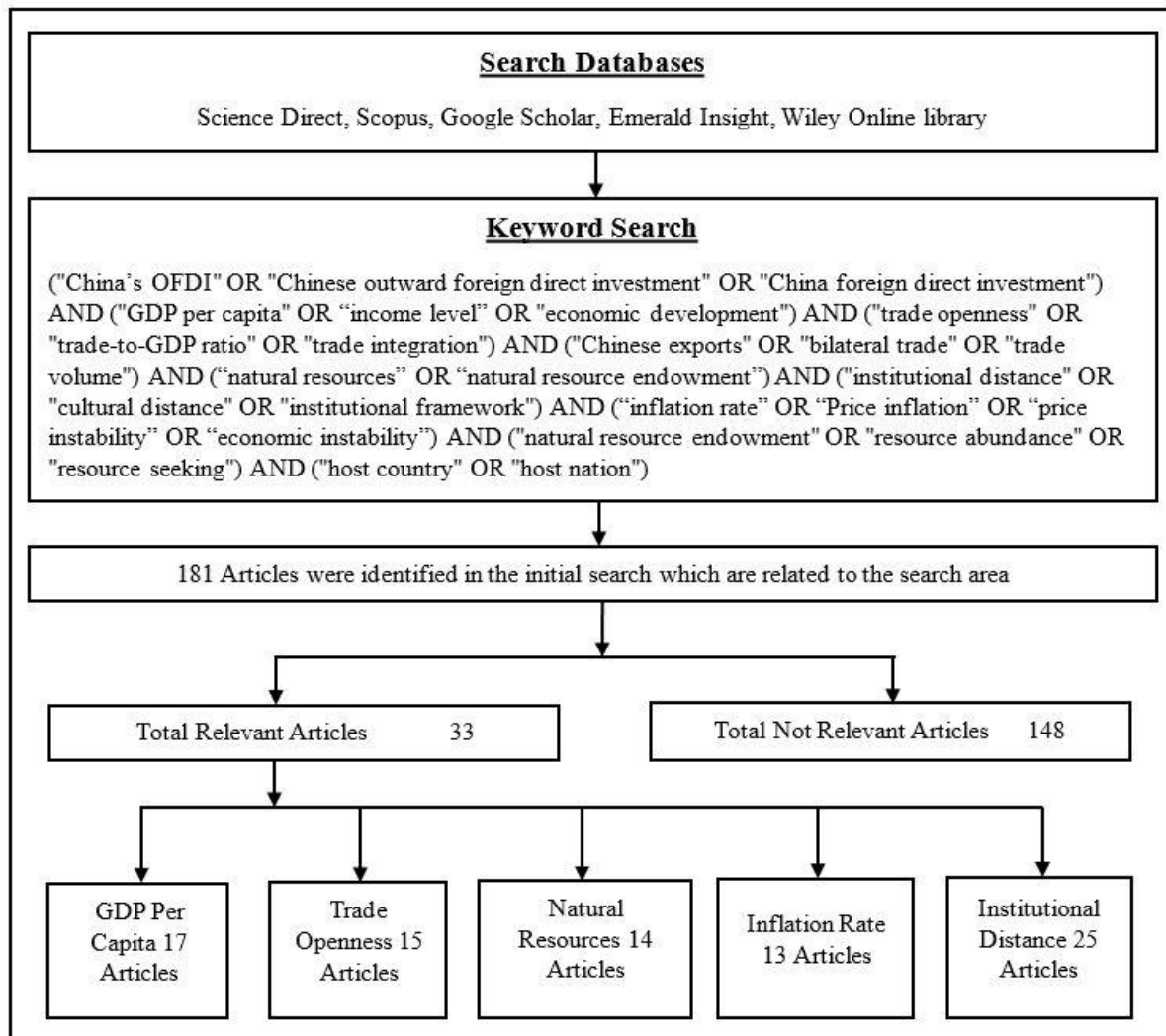
This study addresses these gaps by questioning China's OFDI stock in a broad sample of 123 advanced and emerging economies over the period 2006 - 2023. Therefore, the study focuses on five prominent host-country characteristics: GDP per capita, trade openness, inflation, natural resources and institutional distance. The study compares the distribution of China's OFDI between advanced and emerging countries and how economic and institutional frameworks influence these destinations. Also, it employs panel fixed-effects models to assess the selected determinants on China's OFDI stock.

This study provides significant contributions to the existing literature by distinguishing explicitly between advanced and emerging economies and integrating economic, macro-stability, resource and institutional variables. It provides an updated, wide-coverage assessment of the determinants of China's OFDI across 18 years. Also, it evaluates whether China's OFDI strategy is context-specific and provides policy insights for host governments on which structural and institutional factors attract Chinese OFDI and which conditions may discourage such investment. Therefore, the study refines theoretical understandings of

emerging economy multinational behaviour with OLI and internalisation theory ([Gao et al., 2022](#); [Liu et al., 2023](#); [Piperopoulos et al., 2018](#)). Also, it offers timely evidence for policymakers seeking to leverage Chinese OFDI for sustainable development while managing associated economic and political risks.

2. Literature Review

The literature review investigates the main elements which drive China's OFDI through an analysis of GDP per capita, trade openness, natural resources, inflation rate and institutional distance in different countries. The study provides an in-depth assessment of previous research studies which have not been adequately recognised in current academic work. The researchers conducted a database search, which included Google Scholar, ScienceDirect, Emerald and Scopus databases, resulting in 181 articles from which 33 relevant articles were chosen. This screening process ensured up-to-date and closely aligned with the objectives of the study.



GDP per capita on China's OFDI

Host country GDP per capita is a core determinant of China's OFDI, usually capturing market-seeking motives. Empirical research generally supports a positive relationship between host-country GDP per capita and China's OFDI. Most of the studies using global or BRI samples find that greater markets significantly attract Chinese investment, identifying market-seeking as a core motive ([Kang et al., 2018](#)). The study confirmed a significant positive impact of market size on Chinese OFDI. Similarly, [Murthy \(2015\)](#), [Ahmad et al. \(2018\)](#), [Jaiblai and Shenai \(2019\)](#) show a positive and significant effect, especially for developed and higher-income developing economies with host-country income and market potential. However, the studies [Zhang and Daly \(2011\)](#), [Kolstad and Wiig \(2012\)](#), [Mohsin et al. \(2020\)](#) analyse that Chinese firms focus more on investing to obtain natural resources, strategic assets, infrastructure connectivity and geopolitical advantages rather than to access large domestic markets. Whilst the large or volatile GDP economies receive high levels of Chinese OFDI, by undermining the explanatory strength of GDP. The use of GDP per capita

Figure 11: Literature Search

is preferred as a proxy to reflect the market and ability variations, indices of development, and the positive market size effect in the period 2006-2023.

2.1 Trade openness on China's OFDI

Trade openness is usually measured by exports and imports as a share of GDP. The study [Gao et al. \(2022\)](#) shows that trade openness plays a significant role in shaping the location choice of China's OFDI. Higher trade openness reduces tariff and non-tariff barriers. It improves information flows and increases host country familiarity for foreign firms. Therefore, more open economies are perceived as less risky and more efficient platforms for trade-related activities. Similarly, ([Ahmad et al., 2018](#); [Murthy, 2015](#); [Yu et al., 2019](#)) studied found a positive and significant relationship between Chinese OFDI and openness to trade. It implies that as open economies reduce transaction costs and facilitate export-platform strategies.

Prior studies constrain the evaluations of income categories or sectoral comparisons across an extensive timeframe. Consequently, trade openness is incorporated to evaluate China's willingness for OFDI in economies that are integrated into open trade as well as in protected markets. This relationship can differ between advanced and emerging economies from 2006 to 2023.

2.2 Natural resources on China's OFDI

Natural resources are one of the most consistently emphasised drivers of China's OFDI. Most of the studies identify resource-seeking as a dominant motive in China's OFDI investment decision. According to the study of ([Gao et al., 2022](#)) Chinese firms invest more in oil and mineral-rich economies, and higher natural resource rents are associated with significantly higher Chinese OFDI. Similarly, the study ([Kang et al., 2018](#)) encompasses the "strong driving effect" of resources on China's OFDI. However, the studies [Ma et al. \(2019\)](#), [Papageorgiadis et al. \(2019\)](#), [Ramasamy and Yeung \(2020\)](#) reveal that resource variables become insignificant when governance, risk or BRI policy dummies are included.

Although most of the studies find strongly significant positive effects of natural resources on China's OFDI into Africa, Central Asia and some BRI economies even after controlling for market size ([Kolstad & Wiig, 2012](#); [Shah et al., 2019](#); [Zhang & Daly, 2011](#)). According to [Buckley et al. \(2007\)](#), the inclusion of those natural resources does not have a statistically significant impact on China's location choice. This suggests that resource-seeking is a context-dependent variable with China's OFDI decisions. Most recent studies stated that the resource effect depends on institutional conditions ([Kang et al., 2018](#)). Because Chinese OFDI is more strongly attracted to resource-rich countries with weaker institutions, lower economic freedom and higher political risk. Previous studies that focus on single regions and limit the coverage to the period of 2006 -2023.

2.3 Inflation rate on China's OFDI

The inflation rate is employed as a proxy for macroeconomic stability and cost conditions. High inflation distorts relative prices and increases economic uncertainty. This will discourage

export-oriented FDI and raise local production costs ([Gao et al., 2022](#)). Generally, inflation is recognised as an indicator of macroeconomic mismanagement and instability. It shows that higher inflation rates significantly decrease the probability of hosting Chinese OFDI. Similarly, the studies by [Shah et al. \(2019\)](#) and [Mohsin et al. \(2020\)](#) on Chinese OFDI into BRI and South Asian economies find a negative and significant impact of inflation. This means that high inflation signals macroeconomic instability, discouraging long-term, capital-intensive projects and reducing the attractiveness of export-oriented OFDI.

In contrast, several cross-country studies [Murthy \(2015\)](#) and [Ahmad et al. \(2018\)](#) found that inflation is not statistically significant on China's OFDI, when the key factors such as governance quality and economic growth are controlled. Empirical studies often investigate time variation or distinctions between advanced and emerging economies, and inflation is frequently regarded as a control variable, which restricts a more profound understanding across various contexts and over time. Consequently, the inflation rate is incorporated to analyse if Chinese OFDI consistently steers clear of unstable environments or engages in opportunity-seeking behaviour in emerging economies with higher inflation from 2006 to 2023.

2.4 Institutional distance on China's OFDI

Institutional distance creates the most debated and conflict drivers of China's OFDI. At the macro level discussion, [Gao et al. \(2022\)](#) investigate that better host-country governance has a negative and statistically significant effect on China's OFDI. It implies that China tends to invest more in countries with weak governance. And this effect is particularly strong in low-income neighbouring countries. Similarly, the studies [Zhang and Daly \(2011\)](#), [Murthy \(2015\)](#), and [Ahmad et al. \(2018\)](#) show that better governance, rule of law and intellectual property protection in host countries are positively and significantly associated with Chinese OFDI. It suggests businesses usually prefer stable, high-quality institutional environments for projects focused on efficiency and technology development.

However, [Kolstad and Wiig \(2012\)](#), [Shahriar et al. \(2019\)](#), and [Ramasamy and Yeung \(2020\)](#) analyse that China's OFDI is attracted to weak institutions or higher corruption. Where the state-owned or politically connected enterprises can take advantage of institutional gaps or government agreements. According to [Xie and Yin \(2023\)](#), firm-level analyses show that greater institutional differences tend to prefer Chinese manufacturing enterprises to cross-border M&A over greenfield FDI rather than starting new projects. This preference is also stronger under the BRI because policy support helps them manage these institutional gaps through acquisitions. Similarly, recent works [Liu et al. \(2021\)](#) and [Liu et al. \(2022\)](#) stated that these effects vary by ownership, sector and region. But often relies on single governance proxies or coarse "distance of doing business" indices without distinguishing developed and developing hosts.

2.5 Theoretical Framework

The Investment Development Path (IDP) [Dunning \(2010\)](#) provides a logical, systematic framework for the Foreign direct investment decision. The study's application to the OLI

paradigm and IDP allows researchers to distinctly identify the push factors, such as ownership capabilities and internalisation benefits, as well as the pull factors, including host-country location advantages, that affect OFDI decisions in China. The integration of IDP with such variables as GDP per capita, trade openness, inflation, institutional distance and natural resources can serve as a universal paradigm to explain the factors that have influenced China's investment decisions. This provides a holistic view by capturing China's economic development stage, firm-level competitive advantages and host-country locational conditions shaping OFDI decisions ([Liu et al., 2005](#); [Mohanty et al., 2024](#)).

This theoretical framework offers a thorough analytical perspective that encompasses firm-specific ownership advantages and host country geographical considerations. It usually offers an asymmetric influence of institutions on China's OFDI trends.

2.6 Conceptual Framework and Hypothesis

The current study emphasises the selection of critical variables that are significant to China's decision-making process regarding OFDI. The study seeks to make a significant contribution to the field, building on prior research findings. To commence, it is important to embrace a more captivating methodology. Figure 2 illustrates the conceptual framework of the investigation. The analysis underscores the impact of GDP per capita, trade openness, inflation rate, natural resources and the institutional distance between China and the host country.

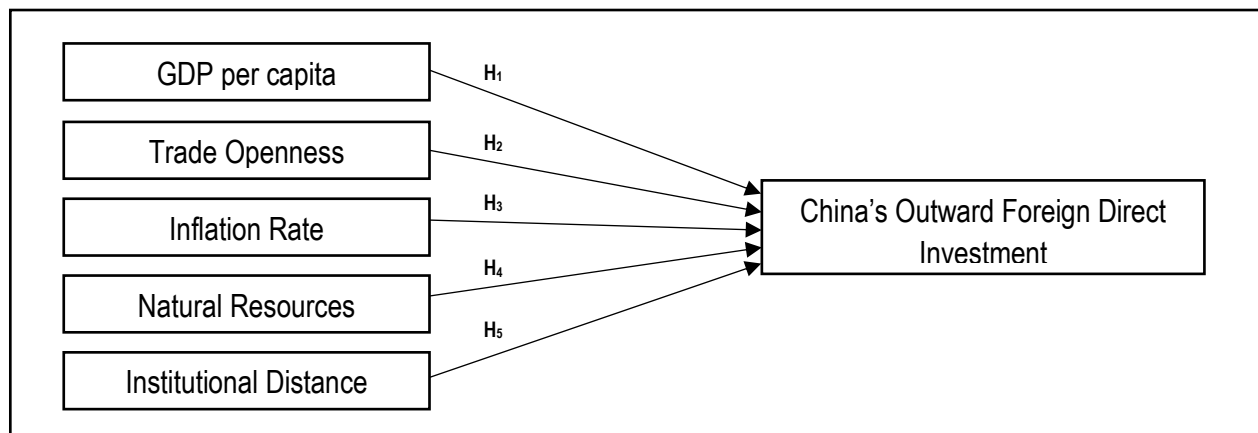


Figure 12: Conceptual Framework. Source: Authors' illustration

All the variables used in the study were used with the host country perspective. This study gives a holistic understanding of the economic and institutional impact on Chinese investment for the period of 2006 - 2023.

H₁: Per capita GDP positively impacts China's OFDI in advanced and emerging host nations.
H₂: Trade Openness positively impacts China's OFDI in advanced and emerging host nations.
H₃: Inflation Rate negatively impacts China's OFDI in advanced and emerging host nations.
H₄: Natural Resources positively impact China's OFDI in advanced and emerging host nations.
H₅: Institutional Distance positively impacts China's OFDI in advanced and emerging host nations.

These hypotheses have been formulated to examine the influence of the independent variables (economic, resource and institutional) on the dependent variable, China's OFDI in advanced

and emerging economies. The null hypotheses state that these independent variables have no significant effect on China's OFDI in advanced and emerging host countries at the given significance level.

3. Data and Methodology

This section outlines the data sources and methodologies employed in the study. Table 1 presents the data sources for the variables utilised in this study.

Table 20: Data Sources and Variables

Variable	Measurement	Source
China's OFDI stock	Millions of USD	MOFCOM https://fdi.mofcom.gov.cn/
GDP per capita	USD	World Bank Open Data https://data.worldbank.org/indicator/NY.GDP.PCAP.CD
Trade openness	Share (%) of GDP	World Bank Open Data https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS
Natural Resources	Share (%) of GDP	World Bank Open Data https://data.worldbank.org/indicator/NY.GDP.TOTL.RT.ZS
Inflation Rate	Annual (%)	World Bank Open Data https://data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG
Institutional Distance	Average with the KSI index method	World Bank Group https://www.worldbank.org/en/publication/worldwide-governance-indicators

The analysis employs a balanced panel data set spanning from 2006 to 2023, utilising data on OFDI stocks from China across 123 advanced and emerging economies. The institutional distance is constructed using six variables found within the Worldwide Governance Indicators. The KSI index was utilised to assess the institutional distance between China and the host country. Equation 1 presents the KSI index.

$$INSD_{it} = \frac{1}{6} \sum_{k=1}^6 (I_{kt} - I_{jkt})^2 / V_{Ik} \quad (1)$$

The institutional dimension of k for China in the year t is illustrated by I_{kt} . I_{jkt} illustrates the institutional dimension of k within the host country. V_{Ik} illustrates the variability of institutional scores on the dimension k across all the sample countries.

The study employed a quantitative approach to examine the impact of explanatory variables such as GDP per capita, trade openness, natural resources, inflation rate, and institutional distance on China's OFDI stock in both advanced and emerging economies. The panel regression method was employed to incorporate both cross-sectional and time series variations for the study.

The study employed logarithmic values of variables as a conventional method in economic literature ([Shan et al., 2018](#)). The IHS method was employed for the inflation rate due to the presence of negative values. The equation presented in Equation 2 was utilised for the study.

$$\ln OFDIS_{it} = \beta_0 + \beta_1 \ln GDPPC_{it} + \beta_2 \ln TO_{it} + \beta_3 \ln NR_{it} + \beta_4 \ln IR_{it} + \beta_5 \Delta \ln INSD_{it} + \varepsilon_{it} \quad (2)$$

The dependent variable of the equation is China's OFDI stock and i denotes the host country while t denotes the year. In order GDPPC, TO, NR, IR and INSD are the independent variables of GDP per capita, trade openness, natural resources, inflation rate and institutional distance. ε_{it} denotes the error term and it changes across countries (i), over time (t). β_0 represent the expected China's OFDI stock when all the independent variables are at the baseline. The effects of independent variables on the dependent variable are signified by the $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ in the study.

The analysis utilises a comprehensive panel dataset covering 18 years and including 123 countries globally. Panel regression was utilised to evaluate the impact of independent variables on the dependent variable. The preliminary stage of the investigation entails conducting a variable-wise Levin-Lin Chu (LLC) test to evaluate the stationarity of the variables. The analysis revealed that the variables GDPPC, TO, NR, and IR exhibited stationarity. The variable of INSD showed non-stationarity at first, leading to the implementation of the first differencing transformation method to address the problem. The Panel vector autoregression (VAR) model was utilised to evaluate the stability of the variables. All eigenvalues were found to be less than 1, and all roots were situated within the unit circle on the graph, demonstrating the stability of the variables. This study demonstrates the absence of multicollinearity among the variables through the application of the variance inflation factor test (VIF). The Modified Wald Test and the Wooldridge Test revealed the presence of heteroskedasticity and autocorrelation. To address these issues, cluster-robust standard errors were utilised in the study ([Stock & Watson, 2008](#)).

4.0 Results and Discussion

The values of mean, standard deviation, minimum and maximum in advanced and emerging economies are presented in Table 2 and Table 3.

Table 21: Summary Statistics of Advanced Economies

Variable	Mean	SD	Min	Max	N
OFDIS	2978.772	5631.141	0	31890.27	414

GDPPC	56837.67	22031.8	25331.82	138678	414
TO	113.1851	69.60515	24.39017	412.1772	414
IR	2.097699	2.66432	-11.0768	28.41679	414
NR	0.5734001	1.644065	0	12.61767	414
ID	3.614398	1.435141	0.8660638	6.495324	414

Table 22: Summary Statistics of Emerging Economies

Variable	Mean	SD	Min	Max	N
OFDIS	994.7144	2184.527	0	26346.26	1800
GDPPC	16898.36	18128.11	828.5829	145591	1800
TO	79.59758	38.5081	2.473729	222.1782	1800
IR	8.963773	30.51961	-28.76014	921.5353	1800
NR	9.660529	11.74967	0.0014713	66.05989	1800
ID	1.014494	0.6957305	0.0857146	3.881537	1800

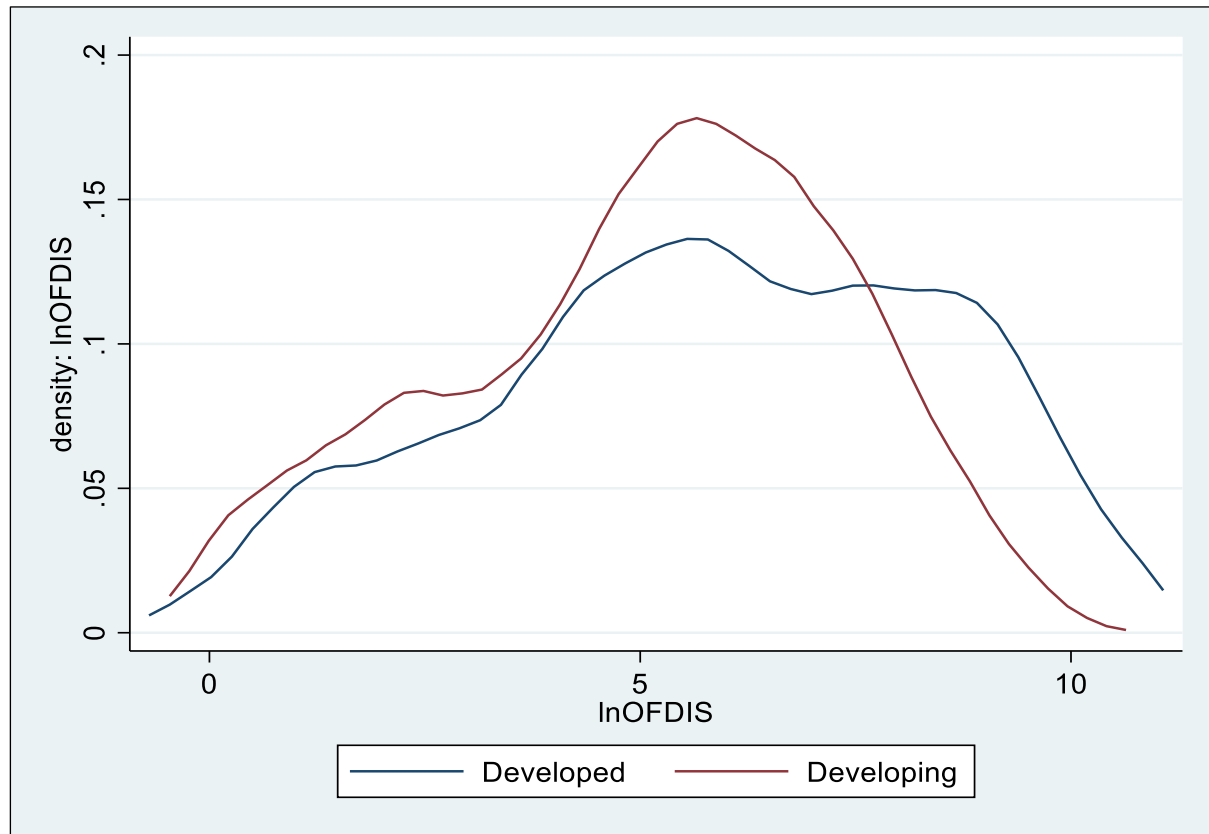
Based on the results, the average OFDI stock from China in advanced economies is nearly three times greater than that in emerging economies, and the standard deviation of China's OFDI stock is widely spread, indicating significant variability among the advanced nations. Moreover, advanced economies exhibit a greater income level compared to emerging countries, confirming the classification of development, and emerging economies exhibit significant variation in GDPPC which reflects income diversity.

The average values of trade openness indicate that emerging countries exhibit a higher level of integration in trade. However, both groups exhibit variations, reflecting the uneven effects of globalisation. Additionally, emerging economies often face elevated and fluctuating inflation rates, and it indicate the underlying macroeconomic instability. The extreme maximum value emphasises the instances of hyperinflation in several emerging countries. The statistics indicate that emerging countries heavily rely on natural resources. However, advanced economies demonstrate a constrained dependence. Advanced economies exhibit greater institutional distance, and this indicates Chinese investments directed towards host countries with varied institutional frameworks.

The distribution of the logarithm of China's OFDI among both advanced and emerging economies is illustrated in Figure 3, and employs the logarithmic value of China's OFDI due to the significant variation of China's OFDI stock.

The density of the developed economies exhibits a broader and flatter shape, which is characterised by a longer right tail. The data reveals the extensive distribution of China's

OFDI in advanced economies, and it highlights the significant value of these investments. The distribution of emerging economies shows a higher concentration around lower OFDI values.



(Emerging) Economies. Authors' Illustration Using STATA

The right tail decreases rapidly, and it indicates the reduction in large-scale episodes, and this trend exhibits that Chinese firms prefer to invest in moderate and stable economies. There is an overlap of the two distributions in the mid-range of OFDI stock, which indicates that China allocates similar OFDI amounts to certain advanced and emerging economies. This reveals that the development status of the host country is not the sole factor influencing the intensity of China's OFDI.

To ensure the most suitable panel regression technique, the study conducted three specification tests and presented them in Table 4.

Table 23: Specification Tests Results

Test	Null Hypothesis (H_0)	Alternative Hypothesis (H_1)	Statistic
F Test	Pooled OLS	Fixed Effects	58.28***
LM Test	Pooled OLS	Random Effects	7956.88***
Hausman Test	Random Effects	Fixed Effects	389.65***

Note: *** indicates significance at the 1% level.

The results of the F Test indicate that the country-specific FE model is important, while the Breusch-Pagan LM test indicates the random variation across the countries. The Hausman test rejects the RE model over the FE model with 1% of significance level.

The results of the panel regression of developed and developing economies with 123 countries worldwide are presented in Table 5.

Table 24: FE Results of Advanced and Emerging Countries

	Advanced Countries	Emerging Countries
Intercept	-62.77568*** (21.48964)	-22.38649*** (4.835233)
lnGDPPC	4.778285* (2.487171)	3.396295*** (0.5067942)
lnTO	3.923017* (1.979379)	-0.5059413* (0.2811104)
lnNR	-3.421017*** (1.18722)	-0.8382323*** (0.1541678)
ihIR	-0.2465696* (0.1411426)	-0.0217149 (0.0192329)
dlnINSD	-0.3195193 (0.976811)	0.4264697*** (0.1123539)
Observations	391	1700
R ² within	0.3053	0.3046

Note: * Significant at 10%, ** significant at 5%, and *** significant 1% significance level. Parentheses indicate the cluster-robust standard error. FE denotes Fixed Effects.

The findings from the FE regression reveal that the economic variables of interest exerted varying influences on China's OFDI towards the two categories of host countries. Thereby underscoring the distinct strategic motivations and risk considerations linked to China's investments across diverse economic contexts.

In the case of advanced economies, the findings reveal that China's OFDI is affected positively and strongly by the size of the host country's market (which is measured by GDP per capita), aligning with [Ramasamy and Yeung \(2020\)](#). But these findings contrast with [Zhang and Daly \(2011\)](#), [Mourao \(2018\)](#) and [Ross and Fleming \(2023\)](#). The findings of trade openness align with [Ahmad et al. \(2018\)](#) and [Yi et al. \(2020\)](#). This proves the H₁ and H₂ of our study. However, the effects can be considered only at the 10% significance level. It means that China is investing

in the advanced economies mainly to gain access to large, stable markets and integrated global trade networks, which is in line with both market-seeking and strategic asset-seeking motives. On the contrary, natural resources have a strong negative and statistically significant impact ($p = 0.009$), which indicates that China's OFDI in advanced economies is not primarily driven by the resource factor. This finding is in line with [Kolstad and Wiig \(2012\)](#), and it is consistent with the viewpoint that advanced economies are primarily chosen for technology, brand access and market rather than for raw materials. It failed to prove H_3 . Additionally, institutional distance and interest rates share the same traits as they are both negative, yet not statistically significant, thus indicating that in the context of advanced economies. The negative impact in advanced economies is in line with the findings of [Buckley et al. \(2007\)](#) and [Alam Iqbal et al. \(2019\)](#). China may be more focused on market prospects than on short-term capital costs or institutional variations. These findings failed to support H_4 and H_5 of our study.

Conversely, in emerging countries, China's OFDI shows a strong and highly significant positive relationship with GDP per capita ($p = 0.000$), which confirms that the size of the market is an important factor influencing the inflow of FDI in all host countries. The impact of trade openness negatively and marginally significant ($p = 0.075$). This suggests that China may be investing in emerging economies primarily for trade purposes, but also to avoid trade restrictions or to establish local manufacturing bases. Furthermore, the natural resources present a significant negative coefficient, but the reason here might be that a lot of the emerging economies in the sample that these economies are not major resource exporters; alternatively, it may suggest that China's resource-seeking investments are confined to a group of countries that are not fully represented here. More interestingly, institutional distance has a positive and significant impact ($p = 0.000$) in the case of developing countries, and this means that China is more likely to invest in units that are institutionally remote if they are emerging nations, perhaps because of higher risk tolerance, weaker governance or the existence of negotiation and influence. It aligns with the study of ([Mohsin et al., 2020](#)).

In general, the results of the study show the dual aspect of China's OFDI drivers: the accent in the advanced economies is on market entry and strategic assets, while the access to resources and institutional proximity have become less prominent. In emerging economies, although the size of the market is still vital, China appears to be more open to taking the institutional risk and may even be driven by a mixed set of motives, which include market-seeking, efficiency-seeking and strategic positioning objectives. These trends affirm the belief that China's OFDI is not uniform but rather strategically diversified according to the characteristics of the host economy, which is in line with its overall global integration, resource security, and geopolitical influence aspirations.

5. Conclusion

Future research ought to incorporate sustainability elements in China to explain the changing patterns of investments. While balancing technology, efficiency, and resource motives with sound governance, green requirements and adaptive policies should be incorporated into Chinese OFDI.

5.1 Policy Implication

The study emphasises the significant influence of GDP per capita, trade openness, natural resources, inflation rate and institutional distance on China's OFDI in developed and developing economies. In advanced economies, policymakers should continue to support technology-seeking OFDI, especially through mergers, acquisitions and collaborative research and development. Nonetheless, efficiency and resource-seeking OFDI in emerging economies should be promoted primarily when projects demonstrably contribute to infrastructure upgrading, structural transformation and local value-chain integration. These investments must be accompanied by stringent environmental standards, anti-corruption frameworks and social safeguards, in light of empirical findings that Chinese OFDI and BRI projects frequently gravitate towards institutionally fragile and high-risk environments, with the potential to exacerbate governance vulnerabilities.

In practice, the policy mix should place greater emphasis on service and regulation-oriented tools. They are risk-sharing financial instruments, information and matchmaking platforms, stringent supervision and compliance and disclosure rules rather than narrowly targeted promotional subsidies. Domestically, policymakers should invest in education, R&D and green financial systems and strengthen market-based environmental regulation. Because once these thresholds are met, OFDI produces strong green and innovation benefits.

OFDI governance should be dynamic and responsive to global shocks and policy uncertainty. This entails tightening the screening of speculative or non-viable projects, prioritising approvals for technology and green-oriented investments and leveraging instruments such as free trade zones, special economic zones and "green BRI" guidelines. This ensures that OFDI is consistently aligned with China's long-term objectives of high-quality, resilient and low-carbon growth. Therefore, these strategic solutions play a pivotal role in shaping the driving forces of China's OFDI in alignment with advanced and emerging host nations.

5.2 Limitations

This study does not include sustainability determinants such as environmental regulations, ESG considerations, carbon transition policies and strategic initiatives such as the BRI. While traditional variables explain China's OFDI, omitting these limits captures green, low-carbon and policy-driven investment. Future research can incorporate environmental policy stringency indices, ESG indicators and sector-level analysis of green OFDI, as well as examine the role of strategic initiatives such as the BRI in shaping China's OFDI.

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ECOTOURISM PRACTICES IN SRI LANKA: A CASE STUDY OF A LARGE-SCALE RESORT NEAR YALA NATIONAL PARK

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Abstract

Purpose: This study evaluates the ecotourism practices of a large-scale eco-resort near Yala National Park in Sri Lanka, using The International Ecotourism Society's principles as the guiding framework. It examines current operations, explores key challenges to developing genuine ecotourism, and proposes strategies, grounded in expert insights, to enhance conservation outcomes, empower local communities, and reduce greenwashing within Sri Lanka's hotel industry.

Design/methodology/approach: This study used a single-case design focusing on a large eco-resort near Yala National Park. Data came from a semi-structured interview with the resort manager and two industry experts. The six principles of The International Ecotourism Society were used as main coded themes, while specific criteria relating to practices and challenges were coded as sub-themes. Resort practices were mapped against these sub-themes, with their frequency and diversity analyzed, and results presented in tables, including an additional overarching theme covering challenges and corresponding strategies.

Findings: The resort shows strong ecotourism performance by reducing environmental impacts, supporting conservation, empowering local communities, enriching visitor experiences, and monitoring resource use. Its contribution to raising awareness of Sri Lanka's wider political and social context is limited, reflecting partial compliance with the sixth principle. Key barriers include weak policy, certification, marketing, state support, and community engagement. Experts propose training, financial support, certification, marketing, and research to align with international standards.

Research limitations/implications: Key system-level recommendations include providing targeted financial incentives and specialist training for eco-resort staff, introducing clear national ecotourism standards and certification schemes, streamlining approval processes for conservation and community projects, coordinating international marketing efforts for certified eco-resorts, and establishing a dedicated national body to oversee and evaluate ecotourism development.

Originality/value: This study makes a distinctive contribution by systematically applying TIES ecotourism principles to a large-scale resort in Sri Lanka's flagship protected area, generating detailed evidence that distinguishes genuine ecotourism from greenwashing and links resort performance to standards, certification design, and national policy reform, representing the first such study in Yala.

Keywords: Eco-resorts; Eco-tourists; Ecotourism; International Ecotourism Principles; Sustainable Tourism

1. Introduction

Ecotourism, a subcomponent of sustainable tourism, is defined as responsible travel to natural areas that conserves the environment and enhances local well-being (The International Ecotourism Society, 2015). It emphasizes conservation, education, community development, and low-impact travel, aiming to benefit both the environment and local communities while contributing to national economic gains. Sri Lanka's rich natural and cultural resources make it well-suited for ecotourism, and the global rise in ecotourists has created opportunities for eco-friendly accommodation (Ratnayake, 2012; Arachchi et al., 2015). However, ecotourists have constituted less than 5% of arrivals over the past decade, partly because hoteliers have misused the eco-resort concept and failed to clearly identify the ecotourist market segment (Fernando & Kaluarachchi, 2016; Arachchi et al., 2015). Simply being located near natural or protected areas does not qualify a facility as an eco-resort; it must be eco-friendly, people-friendly, and grounded in ecotourism principles (Sri Lanka Ecotourism Foundation, n.d.). The lack of common standards for assessing ecotourism against global benchmarks has enabled superficial use of the "ecotourism" label, with governments also tending to promote it more as a marketing tool than as a rigorously implemented practice (Fernando & Kaluarachchi, 2016).

The International Ecotourism Society (1990, as cited in TIES, 2013) proposes six key principles of ecotourism: minimizing impact on nature, building environmental and cultural awareness and respect, providing positive experiences for visitors, providing direct financial benefits for conservation, providing financial benefits and empowerment for local people, and raising sensitivity to host countries' political, environmental, and social climates. These principles offer a common framework for assessing the ecotourism practices of local resorts.

Yala National Park, located in southeastern Sri Lanka, is the country's most visited and second-largest national park, attracting large numbers of tourists each year due to its rich biodiversity and famous leopard population. As Yala is a protected area, eco-resorts operating nearby are expected to practice genuine ecotourism in line with international standards to safeguard the park's ecosystems and support surrounding communities.

Accordingly, this study conducts an in-depth examination of the ecotourism practices of a large-scale eco-resort near Yala National Park to assess the extent to which its operations align with the principles set out by The International Ecotourism Society (TIES), and to identify the key challenges it faces as well as potential opportunities for future growth.

1.1. Significance and Justification of the Study

Although Sri Lanka is internationally recognized for its rich biodiversity and cultural heritage, the proportion of genuine ecotourists visiting the country has remained below 1% over the last decade, indicating a serious underperformance of its ecotourism potential (Arachchi et al., 2015). Prior studies reveal that many Sri Lankan hoteliers have misused or misunderstood the eco-resort concept, frequently adopting the "ecotourism" label without fully meeting international sustainability standards or clearly identifying the ecotourist market segment (Arachchi et al., 2015). Against this backdrop, an in-depth examination of a large-scale eco-resort near Yala National Park, the country's most visited protected area, using The

International Ecotourism Society's principles as an evaluative framework provides a much-needed empirical basis to distinguish genuine ecotourism practices from superficial claims (The International Ecotourism Society, 2015). The findings of this study will not only help resort operators to better align their operations with global ecotourism benchmarks and enhance visitor and community benefits, but will also offer insights for policymakers and destination managers seeking to develop credible standards, reduce greenwashing, and promote Sri Lanka as an authentic ecotourism destination in an increasingly competitive global market (Arachchi et al., 2015; Fernando & Kaluarachchi, 2016).

1.2. Research Questions

1. What are the current ecotourism practices of the large-scale eco-resort near Yala National Park when assessed using a standardized ecotourism framework?
2. What challenges does this eco-resort face in developing genuine ecotourism practices?
3. What are the most effective strategies that can be adopted to promote genuine ecotourism in the hotel industry in Sri Lanka, based on key informant interviews with industry experts?

1.3. Research objectives

2. To examine the current ecotourism practices of a large-scale eco-resort near Yala National Park using a standardized ecotourism framework.
3. To identify and analyze the challenges faced by this eco-resort in developing genuine ecotourism practices.
4. To propose effective strategies for promoting genuine ecotourism in Sri Lanka's hotel industry, based on findings from key informant interviews conducted.

2. Literature review

2.1. Emergence and Definitions of Ecotourism

The emergence and development of ecotourism are closely linked to the rise of the environmental movement and growing recognition of the importance of nature for human well-being. Over time, various conceptual approaches have been used to define ecotourism, primarily categorized into two perspectives: the activity-based approach and the industry-based approach. The activity-based perspective emphasizes the role of ecotourists in minimizing environmental and cultural impacts on host destinations. In contrast, the industry-based perspective focuses on the supply-side characteristics of ecotourism, highlighting its potential as a tool for conservation and development through interactions between local communities and the tourism industry (Stewart & Sekartjakrarini, 1994). This study adopts the latter perspective, with particular emphasis on the hotel sector.

The earliest formal definition of ecotourism by Ceballos-Lascurain (1987) describes it as travel to relatively undisturbed natural areas to admire, study, and enjoy nature and cultural features. This definition underscores the educational and experiential aspects of ecotourism, encouraging appreciation and conservation of natural and cultural resources. However, critics argue that it overlooks the responsibility of the ecotourism industry in ensuring sustainable practices (Donohoe & Needham, 2006). Similarly, Figgis (1993, as cited in Saatsakis, 2017)

and Wheat (1994, as cited in Saatsakis, 2017) emphasize environmentally conscious travel and nature observation, reinforcing the role of tourists in ecotourism.

Conversely, other scholars highlight the importance of strategic planning and management by industry stakeholders. Boo (1991b, as cited in Diamantis, 1999) stresses that successful ecotourism requires a well-planned approach integrating conservation, economic benefits, and environmental education, including funding protected areas and supporting local employment. Boyd and Butler (1993) further define ecotourism as an environmentally and socially responsible form of tourism focused on conservation and intrinsic environmental values.

Overall, ecotourism is widely understood as responsible tourism that integrates conservation, education, and community development, requiring active participation from both tourists and industry practitioners.

2.2. Principles of Ecotourism

The industry and government are increasingly recognizing that adopting principles and taking proactive supply-side management approach by industry stakeholders, such as hotel owners, is essential for ensuring the long-term sustainability of ecotourism (Blamey, 2001)

The International Ecotourism Society (1990, as cited in, TIES 2013) has introduced a set of guidelines that practitioners in ecotourism are expected to follow. These guidelines encompass: (1) minimizing impact on nature, (2) fostering environmental and cultural awareness and respect, (3) ensuring positive experiences for visitors, (4) offering direct financial benefits for conservation efforts, (5) providing economic benefits and empowerment to local communities, and (6). Raise sensitivity to host countries' political, environmental, and social climate. (TIES,2013). These principles will serve as the framework for examination within the scope of this research. These six principles of ecotourism first introduced by TIES (1990, as cited in, TIES 2013) were used in the study as the theoretical lens for assessing the ecotourism practices of the Sri Lankan eco-resorts in the study.

Table 1: Principles of Ecotourism

Characteristic	Definition
Minimizes impact on nature	• This principle emphasizes the importance of ecotourism in minimizing the negative impact of hotels or other facilities on nature by utilizing recycled or locally sourced construction materials, sustainable energy sources, waste recycling, and proper garbage disposal.
Builds environmental and cultural awareness	• This principle highlights the importance of ecotourism in offering awareness on environment and culture for tourists and employees.
Provides direct financial benefits for conservation	• This principle mandates that ecotourism should contribute to generating funds for the protection of the environment offering direct financial benefits from its proceeds to aid in preserving the local ecosystem.

Provides financial benefits and empowerment for local people	• This principle emphasizes the involvement of local communities in ecotourism to create employment opportunities, improve their financial well-being, and provide tangible benefits to the residents.
Provide positive experiences for visitors	• This principle highlights the importance of providing fulfilling experiences for visitors
Raise sensitivity to host countries' political, environmental, and social climate	• This principle emphasizes the active promotion of visitors' awareness regarding the political, environmental, and social conditions in the host country.

(Source: Compiled by the author using secondary data from TIES, 2013)

2.3. Implementation of Ecotourism Practices in the Sri Lankan Hotel Industry

Research on ecotourism practices in the Sri Lankan hotel industry remains limited, yet existing studies provide useful insights into how eco-resorts interpret and apply ecotourism principles. A study of 15 eco-lodges assessed against International Ecotourism Society (IES) guidelines found that, although operators acknowledged the importance of ecotourism, there was a substantial gap between awareness and practice; managers showed limited enthusiasm for fully adopting ecotourism principles, and even low-cost measures were often neglected (Bandara, 2009). Similarly, an investigation of 32 eco-resorts in the Central Province, based on qualitative interviews and observations, revealed that many operators lacked a clear understanding of ecotourism, frequently equating it with nature, wildlife, conservation, or cultural tourism alone. This study also reported inconsistencies between actual practices and international standards, particularly in responsible marketing, cultural respect, and customer satisfaction (Arachchi et al., 2015).

In contrast, a case study of a large-scale eco-resort near Sinharaja Rain Forest, using seven ecotourism principles as a conceptual framework, documented a wide range of practices under each principle, demonstrating a strong commitment to genuine ecotourism and alignment with international standards (Fernando & Kaluarachchi, 2016). Building on this work, the present study focuses on Yala National Park and provides an in-depth analysis of ecotourism practices within a large-scale eco-resort, examining barriers to implementation and identifying strategies for promoting genuine ecotourism in Sri Lanka (Fernando & Kaluarachchi, 2016; Arachchi et al., 2015; Bandara, 2009).

3. Methodology

3.1. Data Collection

The case study method (Yin, 2009) was utilized as the research approach, focusing on a single self-declared eco-resort located within a 5 km radius of Yala National Park. The selected resort is classified as a large-scale eco-resort, based on the number of rooms, following international standards for hotel classification, where a large-scale resort is defined as having more than 100 rooms (Arachchi et al., 2015).

For this research, in-depth interviews were considered the most appropriate source of data collection to gather evidence from management. Accordingly, semi-structured interviews were

conducted with the manager of the eco-resort to obtain detailed information on its ecotourism practices, as the manager plays a crucial role in designing, implementing, and overseeing the resort's operational and sustainability-related activities.

3.2. Data Analysis

3.2.1. Data analysis approach

This study adopts a data analysis approach like that used in a previous investigation of the Rainforest Eco Lodge, where the researchers applied ecotourism principles introduced by Honey (2008) and used thematic analysis to identify sub-themes and specific practices under each principle (Fernando & Kaluarachchi, 2016). In that work, the lodge's practices were systematically mapped to these sub-themes to understand its commitment to genuine ecotourism.

In the present research, a single-case study design was used, focusing on one large-scale eco-resort located near Yala National Park (Yin, 2009). The ecotourism practices of this resort were analyzed qualitatively through the six principles of ecotourism proposed by The International Ecotourism Society (1990, as cited in TIES, 2013):

- Minimize impact on nature
- Build environmental and cultural awareness and respect
- Provide positive experiences for visitors
- Provide direct financial benefits for conservation
- Provide financial benefits and empowerment for local people
- Raise sensitivity to host countries' political, environmental, and social climate

The interview data were transcribed and analyzed manually. First, the six ecotourism principles were coded as the main themes. Then, more specific criteria related to each principle were coded as sub-themes. The resort's observed and reported practices were classified under these sub-themes to build a clear picture of how the resort implements each principle. The frequency and diversity of practices under each sub-theme were then examined, and the results were presented in tables summarizing the number and type of practices adopted by the resort.

3.2.2. Data sources

Resort manager's interview

The main source of primary data on current practices and challenges was an in-depth, semi-structured interview with the manager of the large-scale eco-resort. As the individual responsible for planning and overseeing operational and sustainability initiatives, the manager provided detailed insights into how ecotourism principles are applied in practice and what difficulties arise in implementation.

Key informant interviews

Additional primary data were gathered through key informant interviews with two industry experts familiar with ecotourism and the Sri Lankan hotel sector. These interviews were used to explore broader strategies for strengthening genuine ecotourism in Sri Lanka, using the selected resort as a reference point.

Detailed analysis procedure

Part I – Analysis of resort-level data

The interview with the resort manager was analyzed using inductive thematic analysis. The six ecotourism principles were used as the main organizing themes to assess the resort's current practices. Alongside these, an additional main theme, "challenges in implementing genuine ecotourism," was created to capture the barriers faced by the resort. Sub-themes were then developed to represent specific types of practices (e.g., energy management, community engagement, interpretation and education) and specific categories of challenges (e.g., financial, regulatory, market-related). This process allowed the researcher to systematically map concrete practices and constraints to each ecotourism principle and to understand the depth and consistency of implementation.

Part II – Analysis of expert interviews

The key informant interviews were also analyzed using inductive thematic analysis. Here, the focus was on identifying practical strategies for enhancing genuine ecotourism in Sri Lanka's hotel industry. Sub-themes emerged around strategic areas such as policy and regulation, certification and standards, capacity building, community partnerships, and marketing to ecotourists. These themes were then used to develop a set of proposed strategies that can be adopted by hotels, including the case resort, to improve their alignment with ecotourism principles and to attract a larger share of ecotourists to Sri Lanka.

4. Results and discussion

4.1. Minimizing Impact on Nature

The first principle, and the corresponding main theme, is minimizing the impact on nature. Table 2 highlights Resort C (a large-scale resort) as following 18 practices. Table 3 provides further insights by breaking down the number of practices followed by the three eco-resorts under the criteria identified within the first main principle.

Table 2: Number of practices followed by eco-resorts under minimizing impact on nature

First Principle	Resort C (Large-scale Resort)
Minimize impact on nature	18

(Source: Compiled by the author using interview findings)

Table 3: Number of practices followed by eco-resorts for the criteria under minimizing impact on nature

Criteria under first principle	Resort C (Large-scale Resort)
Energy conservation	5
Water conservation	4
Solid waste and plastic usage management	9

(Source: Compiled by the author using interview finding)

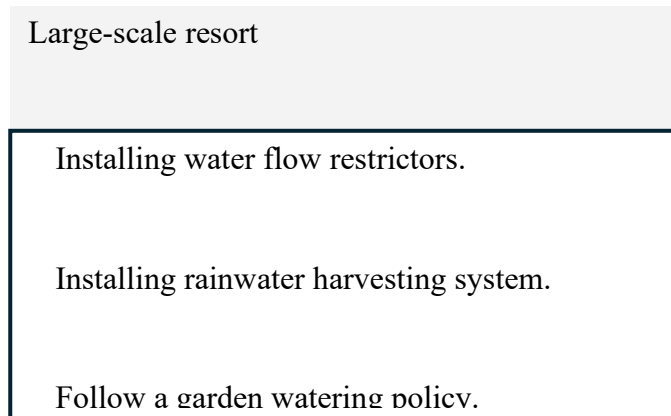
According to Figure 1, Resort C (the large-scale resort) implements five key energy conservation measures, including energy-efficient technologies such as LED lighting, photocell sensors, inverter systems, time-based lighting, solar power for water heating, outsourcing of laundry and generator services, and the provision of electric vehicle charging stations. M3 also noted that the resort monitors its carbon footprint monthly, indicating the use of regular energy audits to identify and address energy inefficiencies within the system.

Energy conservation

Large-scale resort
Invest in energy efficient technology.
Install solar power systems.
Outsource laundry and generator services.
Fix electronic vehicle charging stations in the resort.
Conduct regular energy audits at the resort.

(Source: Compiled by the author using interview findings)

Figure 1: Practices followed by the eco-resorts under energy conservation

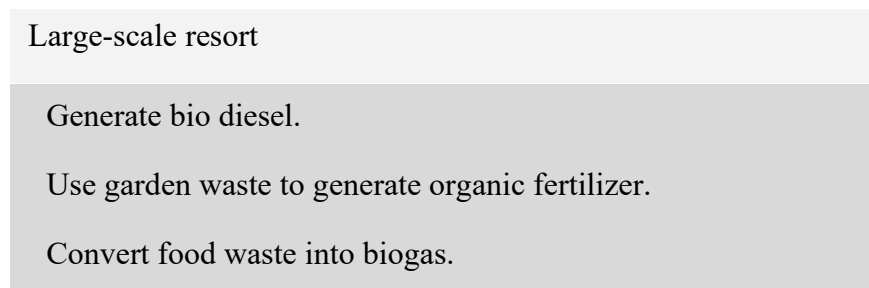


(Source: Compiled by the author using interview findings)

Figure 2: Practices followed by the eco-resorts under water conservation

According to Figure 2, Resort C (the large-scale resort) implements four key water conservation measures: installing water flow restrictors in guest bathrooms, using rainwater harvesting systems, optimizing garden watering times to reduce evaporation, and reusing kitchen wastewater for gardening. In addition, M3 explained that the resort operates a wastewater treatment plant, with the treated water discharged into a man-made lake to provide a water source for wild animals.

Solid waste and single use plastic management



(Source: Compiled by the author using interview findings)

Figure 3: Practices followed by eco-resorts under solid waste and single use plastic

Management

According to Figure 3, Resort C (the large-scale resort) implements nine solid waste and plastic management practices, including producing biodiesel from waste oil, making organic fertilizer from garden waste, and converting food waste into biogas for kitchen and heating use. The resort also reduces plastic by replacing single-use items with sustainable alternatives such as glass water bottles, ceramic amenity bottles, paper straws, cups, and take-out boxes, while substituting polythene laundry bags and plastic containers with cloth and glass options. In addition, a plastic minimization policy, supported by a rigorous monitoring system, tracks single-use plastic generated by guests, with M3 noting that the resort records plastic consumption each month as a key performance indicator, measured in grams.

4.2. Build Environmental and Cultural Awareness and Respect

The second principle and corresponding second main theme is, building environmental and cultural awareness. According to Table 3, Resort C (large-scale eco-resort) implements 12 practices. Further insights into these practices are detailed in Table 4, which breaks down the sub-themes associated with the second principle.

Table 3: Number of practices followed by eco-resorts under building environmental and cultural awareness and respect

Second Principle	Resort C (Large-scale resort)
Build environmental and cultural awareness and respect	12

(Source: Compiled by the author using interview findings)

Table 4: Number of practices followed by eco-resorts for criteria under building environmental and cultural awareness and respect

Criteria under second principle	Resort C (Large-scale resort)
Reporting and communication	3
Information and interpretation	3
Staff awareness	6

(Source: Compiled by the author using interview findings)

a) Reporting and communication

Large-scale resort

Placing energy conservation stickers in guest bedrooms.

Making available reading materials on the resorts' sustainability commitments to the guests.

(Source: Compiled by the author using interview findings)

Figure 4: Practices followed by eco-resorts under reporting and communication

According to Figure 4, under reporting and communication, Resort C (large-scale resort) has implemented 3 measures such as making reading materials regarding sustainability available for guests, placing energy conservation stickers in guests' rooms where M3 stated that scanning the barcode on the sticker would allow customers to access the hotel's sustainability report. The resort allows guests to use a towel reuse card system, enabling the guests to inform the staff whether they are willing to reuse the towels, promoting efficient communication.

b) Information and interpretation

Large-scale resort

Providing wildlife education to guests.

Educating guests on the cultural sites near the area.

(Source: Compiled by the author using interview findings)

Figure 5: Practices followed by eco-resorts under information and interpretation

According to Figure 5, under information and interpretation, resort C (large-scale resort) follows 3 steps such as providing wildlife education to guests through in-house naturalists where M3 stated that a skilled naturalist team in-house, tracks leopards by analyzing their spot patterns and their biological history, seamlessly sharing this knowledge with guests. Additionally, cultural awareness is provided by educating guests on the history of cultural sites around the area and by providing travel tips for guests when visiting cultural sites to help them integrate seamlessly into the local culture.

c) Staff Awareness

Large-scale resort

Communicating about turning off unnecessary lights in the hotel.

Offering on the job training on sustainable measures.

Providing mandatory modules on environmental management.

Employing compliance executives for staff training.

Introducing programs to develop in house naturalists.

Maintaining an online academy with accessible training materials.

(Source: Compiled by the author using interview findings)

Figure 6: Practices followed by eco-resorts under staff awareness

According to Figure 6, under the criteria of staff awareness, Resort C (large-scale resort) implements 6 practices such as educating the staff on light turn off policy, training the staff on practicing sustainable measures, continuous staff training using compliance executives, providing mandatory modules on environmental management, maintaining an online academy with accessible training materials and introducing programs to develop junior naturalists on-site.

4.3. Provide Direct Financial Benefits for Conservation

The third principle and corresponding third main theme is, providing direct financial benefits for conservation. According to Table 5, the large-scale resort (Resort C) follows 4 practices. Further insights into these practices are provided in Table 5, which breaks down the sub-theme associated with the third principle

Table 5: Number of practices followed by the eco-resorts under Providing Direct Financial Benefits for Conservation.

Third Principle	Resort C
	(Large-scale Resort)
Provide direct financial benefits for conservation	4

(Source: Compiled by the author using interview findings)

Table 6: Number of practices followed by the eco-resorts for criteria under Providing Direct Financial Benefits for Conservation

Criteria under third principle	Resort C (Large-scale resort)
Biodiversity and wildlife conservation	4

(Source: Compiled by the author using interview findings)

a) Biodiversity and wildlife conservation

Large-scale resort

- Conducting biodiversity mapping using in house ecologists.
- Scientifically identify and name leopards within Yala National Park.
- Sharing the data received by scientifically identifying and naming leopards with the department of wildlife conservation.
- Conducting leopard conservation project.

(Source: Compiled by the author using interview findings)

Figure 7: Practices followed by eco-resorts under biodiversity and wildlife conservation

Figure 7 indicates that Resort C undertakes four main biodiversity and wildlife conservation practices. It conducts biodiversity mapping with in-house ecologists to identify IUCN red-listed species, invasive species, and overall fauna and flora diversity, informing mitigation strategies. The resort also scientifically identifies and names leopards, sharing this data with the Department of Wildlife Conservation. Through its leopard pen project, it supplies steel cages to local cattle farmers, protecting cattle at night and reducing leopard killings, thus fostering coexistence. Additionally, the resort runs a bat conservation project to enhance bat habitats in the surrounding area.

4.4. Provide Financial Benefits and Empowerment for Local People

The fourth principle and corresponding fourth main theme is, providing financial benefits and empowerment for local people. According to Table 7, Resort C (large-scale resort) follows 10 practices. Further insights into the number of practices followed by resorts are detailed in Table 8, which breaks down the sub-themes associated with the fourth main principle.

Table 7: Number of practices followed by eco-resorts under providing direct financial benefits for conservation

Fourth principle	Resort C (Large-scale resort)
Provide financial benefits and empowerment for local people	10

(Source: Compiled by the author using interview findings)

Table 8: Number of practices followed by eco-resorts for criteria under providing direct financial benefits and empowerment for local people

Criteria under fourth principle	Resort C (Large-scale resort)
Community support	5
Local employment and local purchasing	5

(Source: Compiled by the author using interview findings)

a) Community support

Large-scale resort

Conducting biodiversity mapping using in-house ecologists.

Scientifically identify and name leopards within Yala National Park.

Sharing the data received by scientifically identifying and naming leopards with the department of wildlife conservation.

(Source: Compiled by the author using interview findings)

Figure 8: Practices followed by eco-resorts under community support

According to Figure 8, under community support, Resort C (large-scale resort) follows practices such as provision of higher education scholarships and English language scholarships in collaboration with Gateway School for local students, conducting annual wheelchair donation campaigns and eye camps for nearby elder homes, conducting home gardening programs in the community to share gardening knowledge and donating a solar project to a nearby hospital.

b) Local employment & local purchasing

Large-scale resort

Collaborating with hotel schools to employ 7.5% of local youth to the resort.

Launching the GAP farmer project to empower 25 local farmers.

Initiating women empowerment program to increase the number of women in leadership roles and women in the normal cadre.

Conducting programs such as "Empower Her" which aims to develop communication skills of women.

Sourcing over 70% of food supplies from the local community.

(Source: Compiled by the author using interview findings)

Figure 9: Practices followed by eco-resorts under local employment and purchasing

Figure 9 shows that Resort C promotes local employment and purchasing through five main practices. The resort partners with hotel schools to employ 7.5% of local youth and runs the GAP Farmer Project, supporting twenty-five farmers with sustainable inputs and linking them to the hotel and Keells collection center for better market access. It prioritizes women's empowerment through leadership and skills programmes, targeting 30% female executives and 25% female staff by 2025, supported by initiatives like "Empower Her." Additionally, a local supplier development programme enables the resort to source over 70% of its food, including all fresh produce, from the surrounding community.

4.5. Providing positive experiences for visitors

The fifth principle and corresponding fifth main theme is, providing positive experiences for visitors. According to Table 9, the large-scale resort (Resort C) follows 5 practices.

Table 9: Number of practices followed by eco-resorts under providing positive experiences for visitors

Fifth principle	Resort C (Large-scale resort)
Providing positive experiences for visitors	5

(Source: Compiled by the author using interview findings)

a) Customer experience

Large-scale resort
Offering free informative excursions to Yala National Park with in-house naturalists.
Offering nature walks and bird watching tours

(Source: Compiled by the author using interview findings)

Figure 10: Practices followed by eco-resorts under customer experience

Figure 10 shows that Resort C enhances customer experience through five key practices. These include free guided excursions to Yala National Park with in-house naturalists, where guests can observe elephants, leopards, and diverse bird species. The resort offers ecotourism activities such as nature walks and birdwatching to deepen guests' connection with the natural environment. It also showcases local culture via authentic culinary experiences and workshops on local crafts and arts. Additionally, it provides wellness activities like yoga and meditation sessions in natural settings, further enriching the eco-focused guest experience.

4.6. Raising Sensitivity to Host Countries' Political, Environmental, and Social climate

The sixth principle and corresponding main theme is, raising sensitivity to host countries' political, environmental, and social climate. According to Table 10, the large-scale resort (Resort C) follows 3 practices.

Table 10: Number of practices followed by eco-resorts under raising sensitivity to host countries' political, environmental and social climate.

Sixth principle	Resort C (Large-scale resort)
Raising sensitivity to host countries' political, environmental, and social climate	3

(Source: Compiled by the author using interview findings)

a) Raising sensitivity to host countries' environmental climate

Large-scale resort

Educating guests on ongoing conservation efforts of the resort.

Integrating sustainable practices to guest experience.

Using social media platforms to educate guests on sustainability.

(Source: Compiled by the author using interview findings)

Figure 11: Practices followed by eco-resorts to raise sensitivity of guests to the host countries' environmental climate

Under the criterion of raising guests' environmental sensitivity, Resort C actively educates visitors about conservation initiatives and endangered leopard species in Sri Lanka. In-house naturalists share stories that deepen guests' appreciation for wildlife conservation. The resort also embeds sustainable practices across the guest experience and communicates about environmental issues via its website and social media, encouraging guests to adopt similar behaviors. However, it avoids addressing the host country's political and social context, viewing this as inappropriate for guests, which the researcher identifies as a limitation in its educational approach.

4.7. Common Challenges Faced by Eco-resorts in Developing Ecotourism Practices

This section will delve into common challenges faced by all three eco-resorts in developing ecotourism practices. A summary of the findings from the following section is presented in Appendix D.

a) Lack of established ecotourism policies, guidelines, or regulations

A primary challenge faced by Resort C (the large-scale resort) is the absence of published ecotourism policies, guidelines, or regulations. In Resort C, M3 stated that the lack of published ecotourism policies for eco-lodges has been a major obstacle in implementing ecotourism practices. This highlights a deficiency in policy materials and regulation by the responsible authorities in the country.

Unlike other resorts, Resort C conducts independent research on international ecotourism practices using its own human resources to guide its operations. This situation indicates that there is a lack of coordination between government organizations in creating formalized policies and standards for the sector, leaving individual resorts to develop their own approaches to ecotourism.

b) Challenges due to lack of an ecotourism certification system

Resort C faces a major challenge due to the absence of a formal ecotourism certification system in Sri Lanka. M3 noted that such certification would be a valuable marketing tool to attract ecotourists and provide assurance of the resort's genuine commitment to ecotourism. Although Resort C follows ecotourism principles, it cannot formally demonstrate this through recognized certification. Introducing a robust certification scheme would enhance the credibility of large-scale resorts like Resort C, encourage other eco-resorts to upgrade their practices, and potentially boost occupancy by attracting more genuine ecotourists, thereby supporting the long-term viability and growth of the ecotourism industry.

c) Lack of proper marketing avenues

Resort C (the large-scale resort) faces a major challenge due to the lack of national-level promotional events and programmes that position Sri Lanka as an eco-friendly destination, which limits its ability to attract ecotourists. M3 noted that most visitors come as beach tourists and are unfamiliar with ecotourism, and even eco-tourists are often unaware of eco-resorts near Yala National Park. As a result, genuinely eco-focused resorts like Resort C struggle to gain visibility and attract their target market. The weak public-sector promotion of ecotourism also discourages further investment in genuine ecotourism practices, as the potential demand from eco-conscious travelers is not fully realized, thereby constraining the resort's market reach.

d) Lack of government support

Resort C faces major difficulties securing approvals from key government agencies, including the Ministry of Tourism, SLTDA, and environmental authorities. Lengthy, complex procedures for conservation projects and eco-resort activities around protected areas like Yala National Park often take months, even when initiatives aim to benefit the environment. This indicates that ecotourism's role in conservation is not fully recognized or supported. As a result, eco-resorts such as Resort C are discouraged by bureaucratic red tape and prolonged approval processes from implementing environmentally beneficial projects.

e) Insufficient community support

Insufficient community support is a key challenge for Resort C, where local residents' negative attitudes toward tourism limit their participation in ecotourism initiatives and reflect fear and mistrust of the resort's intentions. This distrust stems from low awareness and understanding of ecotourism and its potential community benefits. In response, the resort is trying to build trust through community development projects and local participation opportunities. Because ecotourism depends on the well-being and involvement of host communities, their support is vital for effectively implementing and sustaining ecotourism initiatives at the resort.

4.8. Strategies for Advancing Ecotourism in Eco-resorts: Insights from Key Informant Interviews

This section will present insights drawn from key informant interviews, identifying the most effective strategies for the successful implementation of ecotourism practices in Sri Lanka's eco-resorts, ensuring alignment with international standards.

b) Awareness building

Experts identify awareness building through education and training as a primary strategy for strengthening ecotourism. They highlight that knowledge gaps, especially in small and medium resorts, hinder proper implementation of ecotourism practices, and that targeted training can equip managers and staff to follow international guidelines. These programmes should adopt a stakeholder-wide approach, engaging businesses, local communities, and destination management agencies. Organizations such as SLTDA and the MOT should lead tailored initiatives that close knowledge gaps and help align stakeholder practices with international ecotourism standards.

c) Provision of financial assistance

Targeted financial support is crucial for strengthening ecotourism practices in Sri Lankan eco-resorts. Assistance such as low-interest loans can help small and medium resorts invest in sustainable infrastructure, renewable energy, conservation, education, and community projects. Large-scale resorts can be incentivized through tax reductions and green financing that reward adherence to international ecotourism standards. These measures can motivate non-ecotourism properties to transition, gradually transforming Sri Lanka's ecotourism landscape and attracting more environmentally conscious travelers.

c) Establishing ecotourism certification schemes

Another strategy to strengthen ecotourism in eco-resorts is to establish ecotourism certification schemes. Experts propose beginning with a self-assessment computer system containing criteria that allow operators to evaluate and evidence their compliance with ecotourism practices. The system would generate a percentage score, highlight areas for improvement, and permit repeated assessments, with resorts above a set threshold qualifying for certification. This approach would help eco-resorts understand key ecotourism criteria, measure alignment with international principles, and use certification as a strong incentive to adopt and continuously improve genuine ecotourism practices.

d) Providing strong marketing opportunities for eco-resorts

Experts recommend providing strong marketing opportunities for eco-resorts, prioritizing those certified as genuinely practising ecotourism. Certification would distinguish these properties, which should receive targeted financial and promotional support, including grants, subsidies, collaborative campaigns with tourism bodies and travel agencies, and media exposure through press trips, digital marketing, and ecotourism conferences. These incentives would encourage non-certified resorts to meet international ecotourism standards and seek certification to attract environmentally conscious guests. Ultimately, this strategy would boost occupancy rates, strengthen ecotourism's economic benefits, and build a more sustainable and competitive tourism sector in Sri Lanka.

e) Research and development initiatives

Experts highlight the lack of dedicated research and development as a major barrier to ecotourism growth in Sri Lanka. Comprehensive R&D is needed to analyze international tourist profiles, destination-selection factors, resort practices, implementation challenges, and environmental, social, and economic impacts. Academic institutions should lead these studies and share findings with industry stakeholders and policymakers to inform strategies and track progress. Such evidence-based efforts would support conservation, strengthen community engagement, and help position Sri Lanka as a leading ecotourism destination.

5. Conclusion

Tourism is vital to Sri Lanka's economy but strains the natural resources that sustain it, making ecotourism key to balancing conservation, community well-being, and economic gains. Using a single-case study of a large eco-resort near Yala National Park, this research shows that, when carefully designed and managed, large-scale operations can systematically apply ecotourism principles and provide a practical model beyond "green" marketing. However, weak national policies, absent certification, limited marketing, bureaucratic barriers, and community mistrust constrain progress. Fully realizing Sri Lanka's ecotourism potential therefore requires stronger national frameworks, certification, promotion, and community partnerships.

5.1. Recommendations

Based on the case of the large-scale eco-resort near Yala, the study recommends actions at two levels: the resort itself and the wider tourism system.

At resort level, the eco-resort should deepen its environmental management by setting clear targets and monitoring energy, water, and waste, and by expanding investment in renewables, wastewater treatment, and plastic reduction. It should strengthen education and awareness through richer guest interpretation on wildlife and culture and regular staff training on ecotourism and responsible visitor management. The resort is also encouraged to increase and formalize financial support for conservation via dedicated funds and long-term partnerships for research and habitat restoration. In terms of community benefits, it should further expand local hiring, local sourcing, and community projects, with a strong focus on women's and youth empowerment. Finally, it can do more to raise guest sensitivity to Sri Lanka's social, environmental, and political context by integrating these issues into briefings and encouraging support for local enterprises and community initiatives.

At system level, the study recommends targeted financial and human resource support, such as low-interest loans and incentives for eco-resorts, and specialized training to develop naturalists, environmental officers, and community liaison staff. It calls for clear ecotourism policies, standards, and a national certification scheme to recognize genuinely eco-focused resorts and guide others. Government bodies should streamline approval processes for conservation and community projects, especially around Yala, to reduce delays and encourage more initiatives.

Finally, stronger marketing and policy coordination is needed: national promotion should highlight Yala and certified eco-resorts, and a dedicated national committee should oversee planning, guidance, and evaluation of ecotourism development in large-scale eco-resorts while supporting smaller operators.

5.2. Avenues for Future Research

Future research could extend this study in three main ways. First, it could examine multiple eco-resorts in different protected areas and include more stakeholder perspectives (communities, officials, tour operators, guests) to improve generalizability and provide a more holistic view of ecotourism implementation. Second, researchers could develop and test context-specific indicators based on The International Ecotourism Society's principles to create practical monitoring tools, benchmarking systems, and certification schemes suited to Sri Lankan eco-resorts. Third, future work could quantitatively assess the economic and environmental impacts of successful ecotourism practices in large-scale resorts—using cost–benefit analysis and similar methods, to demonstrate their value for revenue, livelihoods, biodiversity conservation, and reduced environmental pressure, thereby informing investment and policy decisions.

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EFFECT OF CORPORATE SOCIAL RESPONSIBILITY DISCLOSURES ON FINANCIAL PERFORMANCE: EVIDENCE FROM LICENSED COMMERCIAL BANKS IN SRI LANKA

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Abstract

Purpose: The banking sector in Sri Lanka is exceptionally competitive. Consequently, bankers are more concerned with CSR initiatives in a financially advantageous way. Therefore, the researcher examines the effect of corporate social responsibility (CSR) disclosures on the financial performance (FP) of licensed commercial banks (LCBs) in Sri Lanka. Even though numerous researchers explore this area, findings of such CSR initiatives on FP remain controversial.

Design/methodology/approach: A sample of ten out of twenty -four LCBs was selected over a five-year period (2021 to 2025). The independent variables were customer, workplace and workforce, community, and environmental CSR, measured using CSR indexes. The dependent variables were return on assets (ROA) and return on equity (ROE), while bank size and age were included as control variables, calculated using the natural logarithms of total assets and years of operation. Secondary data, mainly obtained from the banks' annual reports, were analyzed using regression analysis, correlation analysis, and descriptive statistics to examine the impact and relationship of LCBs' CSR disclosures on FP.

Findings: The findings indicate that CSR activities positively and significantly influence financial performance, particularly ROE, while their effect on ROA is insignificant. Regression results suggest that CSR programs enhance profitability but do not significantly impact loans, investments, or other asset-related components. These findings provide important insights for banking sector decision-makers and policymakers. This study further approaches the research problem and the research question of whether CSR practice affects the financial performance of the LCBs in Sri Lanka and aims to fill the research gap in the existing literature by conducting this study more rationally.

Research limitations/implications: This study focuses only on licensed commercial banks in Sri Lanka, limiting generalizability to other institutions or industries. It uses selected variables, suggesting future research should include broader financial institutions, additional moderating or mediating factors, and cross-industry or cross-country comparisons to enhance understanding of CSR–financial performance relationships.

Originality/value: This study provides new empirical evidence on the CSR–financial performance relationship in Sri Lanka's licensed commercial banks by analyzing multiple CSR dimensions. It adds value by revealing differential impacts on ROA and ROE, offering practical insights for banking decision-makers.

Keywords: Corporate Social Responsibility; Financial Performance; Licensed Commercial Banks; Return on Assets; Return on Equity

1. Introduction

1.1 Background of the study

The concept of Corporate Social Responsibility (CSR) originated before the Second World War, with significant development occurring during the 1960s, influenced by social movements such as civil rights, consumer rights, and environmental awareness (Sandaruwan & Ajward, 2017). These movements increased societal attention on business practices and encouraged enterprises to adopt CSR. CSR plays a vital role in helping firms sustain competitiveness in today's corporate environment, linking social responsibility to financial performance (FP) (Carroll & Shabana, 2010). According to Jeewanthi et al. (2021), CSR is a global disclosure practice that benefits stakeholders and promotes social, economic, and environmental sustainability.

Initially focused on environmental and community issues, CSR disclosures have expanded to include workplace, employee, and customer concerns, addressing all stakeholder groups (Tangamani et al., 2022). Concepts such as the triple bottom line, corporate citizenship, sustainable business, social and environmental accountability, business ethics, and corporate accountability are closely linked to CSR (Balagobei & Anandasayanan, 2018). Although CSR and FP have been studied extensively in accounting and management literature over the last forty-five years (Wood, 2010), research on the impact of CSR on banking sector FP, especially in developing markets like Sri Lanka, is limited and inconsistent (AlAjmi et al., 2023a; Bătae et al., 2020; Fijałkowska et al., 2018; López-Penabad et al., 2023). This study aims to examine the impact of CSR disclosures on the FP of licensed commercial banks in Sri Lanka, addressing existing research gaps.

1.2 Research Objectives and Question

1.2.1 Research objectives

The dissertation aims to achieve the following objectives to address the above-mentioned research problem.

1. To identify the relationship between corporate social responsibility disclosures and the financial performance of the licensed commercial banks in Sri Lanka.
2. To analyze the impact of corporate social responsibility Disclosures on the financial performance of the licensed commercial banks in Sri Lanka.

1.2.2 Research question

This research addresses the following critical question,

- Do corporate social responsibility practices affect the financial performance of the Licensed Commercial Banks in Sri Lanka?

2. Literature review

2.1 Corporate Social Responsibility

2.1.1 Definition and concept of corporate social responsibility

Corporate Social Responsibility (CSR) is an emerging concept in today's business world. Dahlsrud (2008) identified 37 distinct definitions of CSR, though this underestimates the true number, as many academic constructs were excluded (Carroll & Shabana, 2010). CSR definitions vary widely. Friedman (1970) argued that a company's only social obligation is to increase profits within legal boundaries, focusing solely on shareholders. In contrast, Davis (1973, as cited in Galant & Cadez, 2017) emphasized that CSR requires considering factors beyond a firm's economic, technical, and legal duties, including stakeholders' interests. Modern definitions align more closely with Davis, describing CSR as a company's voluntary engagement in sustainable development beyond legal requirements (Buttigieg et al., 2019; Luthfiani, 2024). CSR reflects how businesses act toward stakeholders such as consumers, suppliers, employees, investors, governments, and the public (Bodiyabaduge & Rajakaruna Mudalige, 2024; Singhal et al., 2024). According to the World Business Council for Sustainable Development (1999, as cited in Jathurika, 2022), CSR is an ongoing commitment to ethical practices, economic growth, and improving the quality of life for employees, communities, and society. By disclosing CSR initiatives, companies maintain goodwill, benefit stakeholders, and enhance overall performance (Tanggamani et al., 2022). Consequently, to achieve competitive advantages, many modern bankers actively implement CSR practices (Wijesinghe & Senaratne, 2011).

2.2 Concept and Measures of Financial Performance

Financial performance (FP) measures an organization's financial health over a period, indicating how effectively it uses resources to generate revenue (Mohamud, 2018). Traditionally, CSR is seen as costly due to investments in pollution control, employee benefits, community contributions, and sponsorships (Galant & Cadez, 2017). However, the Stakeholder Theory suggests that neglecting stakeholder interests can harm financial value and threaten a company's future (Clarkson, 1995, as cited in Galant & Cadez, 2017), making FP measurement essential. Bank FP can be evaluated externally via market indicators or internally through accounting metrics (Bodiyabaduge & Rajakaruna Mudalige, 2024; Galant & Cadez, 2017). Accounting-based measures include ROE, ROA, ROCE, and ROS, with ROA considered the most reliable for assessing asset utilization to generate profits (Jitaree, 2015b; Tanggamani et al., 2022). Therefore, this study employs internal metrics, specifically ROE and ROA, to evaluate the financial performance of licensed commercial banks, reflecting short-term profitability and management efficiency (Yoon & Chung, 2018).

2.3 Theoretical Review

Several theories explain how CSR disclosures affect financial performance (FP) (Jitaree, 2015). Stakeholder theory emphasizes that businesses have obligations to stakeholders, including employees, consumers, suppliers, governments, and the public (Bodiyabaduge & Rajakaruna

Mudalige, 2024). Organizations must consider both explicit contracts, legally defining stakeholder relationships, and implicit contracts, which are self-enforcing relational agreements. Meeting stakeholders' interests, such as providing safe workplaces, eco-friendly services, and socially responsible operations, can improve corporate outcomes (Chtourou & Triki, 2017). CSR initiatives also enhance reputation and help achieve business goals (Kabir & Thai, 2017). This theory supports the study by suggesting that when LCBs respond effectively to stakeholder needs through CSR activities, they are more likely to gain trust, loyalty, and positive stakeholder engagement. These outcomes are expected to improve FP, supporting the expectation that CSR disclosures have a meaningful influence on the FP of LCBs in Sri Lanka.

Institutional theory suggests that socially responsible disclosures promote ethical conduct and strengthen ties with society, increasing profits (Brammer et al., 2012; Gunasekara & Wanniarachchige, 2022). This theory contributes to the study's reasoning by proposing that CSR reporting enhances institutional legitimacy, public confidence, and social acceptance. When banks demonstrate adherence to social norms and ethical expectations, they can benefit from improved reputation and operational stability, which are likely to positively influence FP. This strengthens the argument that CSR practices may have a significant impact on FP.

Resource-based theory highlights that CSR enhances employee loyalty, knowledge, and customer trust, boosting competitiveness. Together, these theories support the relationship between CSR initiatives and FP in licensed commercial banks (Nair & Bhattacharyya, 2019; Hamidu et al., 2015). This theory aligns with the study by explaining that CSR activities generate valuable internal capabilities, such as skilled and empowered employees, strong client relationships, and increased corporate reputation. These internal strengths can create competitive advantages that translate into better FP, reinforcing the expectation that CSR activities positively contribute to FP.

2.4 Empirical literature on the Relationship between CSR and financial performance

Previous research on the effect of CSR on licensed commercial banks (LCBs) shows mixed results. Several studies report a positive association between CSR disclosures and financial performance (FP) (Ahamed et al., 2014; Nimsith et al., 2017; Szegedi et al., 2020). Stakeholder theory suggests that focusing on multiple stakeholders, not just shareholders, improves FP (Jeewanthi et al., 2021), and this is supported by resource-based and institutional theories through ethical practices and unique resources that enhance stakeholder interest (Fauzi & Idris, 2010). Conversely, some studies find a negative relationship, arguing that CSR initiatives are costly and may waste resources without yielding significant returns (Abeyasinghe & Basnayake, 2015; Dharmaratne, 2020b; Nguyen et al., 2022; Utami & Hasan, 2021; Friedman, 1970). Other research finds no association, suggesting FP is influenced by factors beyond CSR (Chetty et al., 2015; De Silva, 2019). Some studies report mixed results, showing positive effects on ROA but negative on ROE (Hossain et al., 2015; Mohamud, 2018). This study examines CSR's effect on FP of LCBs in Sri Lanka to address these gaps.

3. Methodology

3.1 Research Design

The research design has been explored to answer the research question and test the hypothesis by using empirical data, and as a summary, research design means how researchers conduct the research. The quantitative/positivist research design is employed in this study. According to Mohajan (2020), the use of a quantitative approach is beneficial for research, because it is possible to generalize findings from a sample to a large population in a statistical and usable way. Accordingly, the research employed secondary data collected through the bank's annual report as a data collection method. Further, use the simple random sampling method as a sampling technique.

3.2 Population and Sample Selection

Population is a vast area of data, and it is not necessarily simple or feasible to examine. There are 24 LCBs in Sri Lanka as of March 31, 2025, according to the Central Bank of Sri Lanka. This can be regarded as the research population.

The research sample consists of 10 LCBs for 5 years, selected from a total of 24 LCBs listed on the Colombo Stock Exchange. The rationale for selecting only 10 banks is based on the need to create a manageable sample while maintaining sufficient coverage of the population, representing over 40 percent of all LCBs in Sri Lanka. This proportion is considered adequate to ensure that the sample reflects the diversity and key characteristics of the LCBs. Furthermore, using data from these 10 LCBs over a five-year period provides a sufficient number of observations for robust statistical analysis. Collectively, these considerations ensure that the sample is representative, the data are sufficient, and the study's reliability, validity, and generalizability are strengthened. The Simple random sampling technique was used as the sampling technique for that study. Since the population is small. Additionally, when using this technique each bank in a population has the same chance of being selected for the sample, using that technique reduces bias and increases representativeness, which ultimately leads to generalizable results.

3.3 Conceptual Framework

The fundamental and overall conceptual framework for this study indicating the association between CSR and FP is shown in figure 3.1.

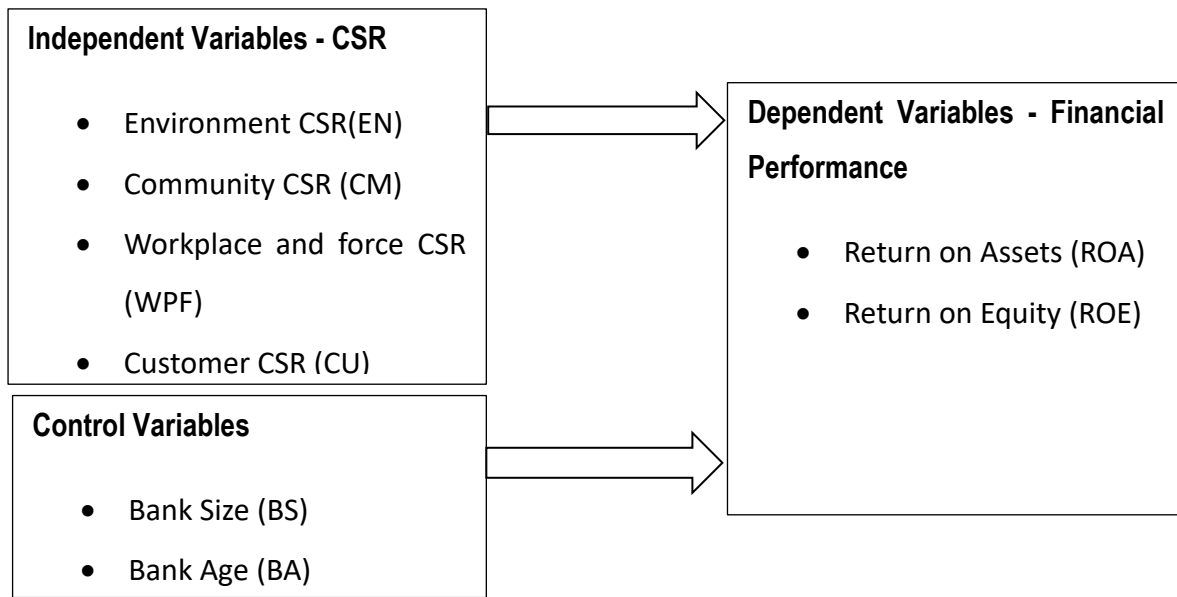


Figure 3.14 : Conceptual Framework

3.4 Operationalization of variables

3.4.1 Independent variables

Independent variables in a study exist independently. This variable's value is independent and unaffected by any other factors in the research. In this study, CSR is the primary independent variable. CSR was measured using a CSR index that represented the four CSR categories of environment, community, workplace and workforce, and customer (Chtourou & Triki, 2017; Ho et al., 2019; Jitaree, 2015a). This study determines the CSR index for each of the ten banks in the sample as a measurement of CSR. This study employed content analysis to examine the degree of CSR disclosure in the annual report. Further, other previous studies have used similar methodology (Ho et al., 2019; Mbelwa et al., 2019; Zainal et al., 2013). The CSR index was calculated using table 3.1 mentioned characteristics (Chtourou & Triki, 2017). By using a checklist, assign one if these characteristics were disclosed in the annual report; otherwise, assign zero. The total score for each category is used as the basis for calculating the CSR index (Ho et al., 2019). Furthermore, this approach has been widely adopted, particularly in developing countries (Ho et al., 2019)

Table 3.25: Independent Variables

Variables	Measurements	Similar Studies
Environment CSR	Environmental policy, recycling activities, energy, water, and reduction of carbon emission.	As per the prior studies of Ho et al. 2019, has utilized these measurements to assess the CSR practices in each category that are disclosed in the annual report of the Mongolian banks.
Community CSR	Creating job opportunities, supporting education, supporting culture and sport, and funding scholarship programs	
Workplace and Workforce CSR	Employee health, remuneration, recruitment policies, employee training	
Customer CSR	Client Issues, improving quality of Life, and introducing New Products or Services	

3.4.2 Dependent variables

Table 3.2: Dependent Variables

Variables	Measurement	Similar Studies
Return on Asset (ROA)	Net income	(Bodiyabaduge & Rajakaruna Mudalige, 2024; Jeewanthi et al., 2021a; Nireesh & Silva, 2018)
	Total asset	
Return on Equity (ROE)	Net Income	(Rusmawati et al., 2025; Sandaruwan & Ajward, 2017; Zhou et al., 2021)
	Shareholder's equity	

3.4.3 Control variables

Table 3.26: Control Variables

Variables	Measurement	Similar Studies
Bank size	Natural logarithm of total assets	(Elsayed & Wahba, 2013; Haryati et al., 2019; Işık & Ersoy, 2022; Jeewanthi et al., 2021a; Talavera et al., 2018)
Bank age	Natural logarithm of number of years	(Elsayed & Wahba, 2013; Işık & Ersoy, 2022; Sekhon & Kathuria, 2020)

3.5 Data and Data Collection

In this research, the researcher used secondary data, that is, annual reports of the LCBs in Sri Lanka.

Data pertaining to CSR, FP, and control variables were gathered from secondary sources, primarily the annual reports of the ten LCBs that have been selected for five years from 2021 to 2025.

3.6 Method of Data Analysis.

3.6.1 Descriptive statistical analysis

Descriptive statistical analysis is mainly used to ascertain the behavior of the CSR Disclosures and FP of the banks (Abeysinghe & Basnayake, 2015). Descriptive statistical analysis consumed two typical measures, that is, measures of variability and measures of central tendency (Bodiyabaduge & Rajakaruna Mudalige, 2024). The mean is a central tendency measure used in this study and employed the standard deviation, minimum, and maximum values as a measure of variability.

3.6.2 Correlation analysis

According to Janse et al. (2021), correlation analysis is a statistical metric frequently used in research to examine the association between two approaches or to demonstrate an association between variables. By doing so, it is possible to determine the direction and strength of the link between two quantitative variables.

3.6.3 Multiple regression analysis

Multiple regression analysis is an approach used in statistics to estimate the level of impact between the variables. This implies that the value of the variable may be predicted using multiple regression analysis based on the values of two or more other variables (Bodiyabaduge & Rajakaruna Mudalige, 2024).

In order to identify the impact of CSR on FP, developed a Regression model.

$$ROA = \alpha + \beta_1 EN + \beta_2 CM + \beta_3 WPF + \beta_4 CU + \beta_5 BS + \beta_6 BA + \epsilon \quad \text{Model 01}$$

$$ROE = \alpha + \beta_1 EN + \beta_2 CM + \beta_3 WPF + \beta_4 CU + \beta_5 BS + \beta_6 BA + \epsilon \quad \text{Model 02}$$

In these two models, ROA denotes Return on Asset, ROE denotes the Return on Equity, α denotes constant term, β denotes Beta coefficient of the independent variables, EN denotes the environment CSR, CM denotes community CSR, WPF denotes workplace and workforce CSR, CU denotes customer CSR, BS denotes bank size, BA denotes bank age, and ϵ denotes error term.

3.7 Hypothesis

The following two hypotheses were created for this investigation using the conceptual framework shown in figure 3.1.

H0: There is no significant relationship between corporate social responsibility and financial performance of the licensed commercial banks in Sri Lanka.

H1: There is a significant relationship between corporate social responsibility and financial performance of the licensed commercial banks in Sri Lanka.

4. Data Analysis and Discussion

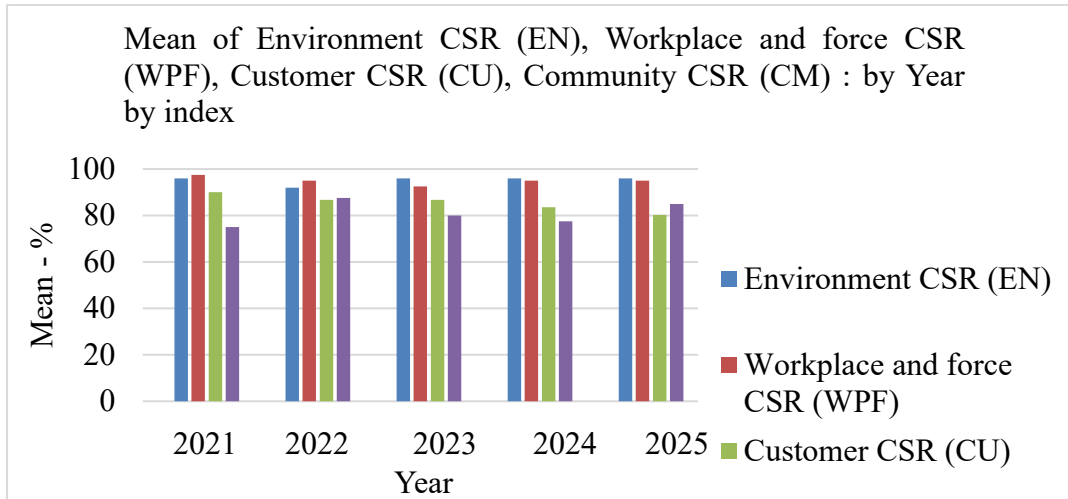
4.1 Descriptive Statistics Analysis

Table 4.27: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Environment CSR (EN)	50	40	100	95.20	11.822
Community CSR (CM)	50	50	100	81.00	15.617
Work Place and Force CSR (WPF)	50	75	100	95.00	10.102
Customer CSR (CU)	50	67	100	85.48	16.547
ROA	50	0.30	1.96	1.01	0.363
ROE	50	1.70	21.34	11.12	4.595
Bank Size (BS)	50	11.94	20.06	14.95	2.322
Bank Age (BA)	50	3.00	4.43	3.73	0.433

Source: Survey data 2025

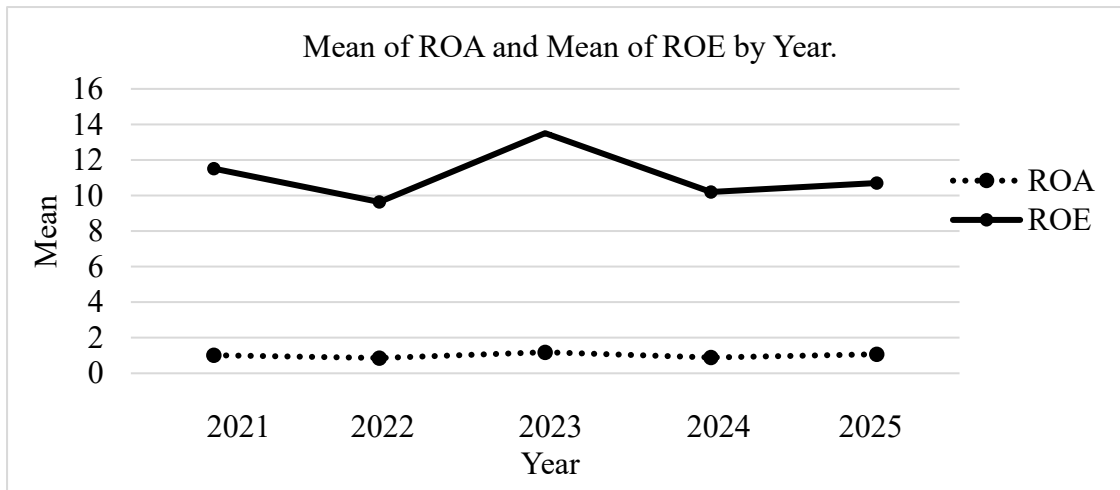
The descriptive statistics, based on data from ten LCBs over 2021–2025, show that environmental CSR and workplace CSR have minimums of 40% and 75%, maximums of 100%, and means of 95.20% (SD = 11.822) and 95% (SD = 10.102), indicating high levels of disclosure. Community CSR and customer CSR have minimums of 50% and 67%, maximums of 100%, and means of 81% (SD = 15.617) and 85.48% (SD = 16.547), reflecting satisfactory but slightly lower disclosure levels. Higher standard deviations across categories indicate wide variation. Overall, Sri Lanka's LCBs demonstrate a favorable level of CSR disclosures, as also illustrated in Figure 4.1.



Source- survey data- 2025

Figure 4.1: CSR disclosures of Licensed Commercial Banks for the five years

Figure 4.1 shows year-wise mean CSR disclosures over five years. Environmental and workplace CSR remain high, around 90% or above, while customer and community CSR fluctuate near 80%, slightly lower than the former, indicating banks prioritize environmental and workplace initiatives. Table 4.1 shows ROA, measuring asset utilization, ranges from 0.3% to 1.96%, with a mean of 1.01% (SD = 0.363), reflecting minimal deviation and stable performance. ROE, indicating shareholder equity use, ranges from 1.70% to 21.34%, with a mean of 11.12% (SD = 4.595), showing greater variability. Overall, higher ROE suggests banks effectively use shareholders' funds to generate profit, complementing CSR efforts.



Source- survey data- 2025

Figure 4.2 Financial Performance of the Licensed Commercial Banks

Figure 4.2 shows ROA remains low, fluctuating 0–2%, indicating limited asset profit generation, while ROE varies, dropping from 11% to 9% (2021–2022) then rising, with a mean of 11%, reflecting satisfactory FP. Bank age ($\mu = 3.73$, SD = 0.433) and size (11.94–20.06%) show minimal change, while total assets ($\mu = 14.95$, SD = 2.322) vary slightly.

4.2 Correlation Analysis

Table 4.28: Correlation Analysis

	EN	CM	WPF	CU	ROA	ROE	BS	BA
ROA	.102	.046	.311*	.026	1	.827**	.031	-.038
ROE	.125	.163	.405**	.316*	.827**	1	-.009	.104

Source: Survey data 2025

*. Correlation is significant at the 0.05 level (2-tailed) $P < .05$

**. Correlation is significant at the 0.01 level (2-tailed). $P < .01$

According to illustrates 4.2 table, presents the correlation coefficient between CSR and FP. As per the above findings, there is a weak positive association between environmental CSR with both ROA and ROE ($r = .102, .125, p > .05$). Similarly, community CSR also has a weak positive association between the ROA and ROE ($r = .046, .163, p > .05$). Further, workplace and force CSR have a statistically significant moderate positive association with both ROA and ROE ($r = .311, .405, p < .05$). Equivalently, customer CSR having with a statistically significant association with the ROE ($r = .316, p < .05$) and a moderate positive association with the ROA ($r = .026, p > .05$). Further, there is a significant strong positive association between the ROA and ROE ($r = .827, p < .05$). Bank size has the weak positive association with the ROA ($r = .031, p > .05$). whereas negative week association with the ROE ($r = -.009, p > .05$). Furthermore, bank age has a weak negative association with the ROA ($r = -.038, p > .05$) and week positive association with the ROE ($r = .104, p > .05$). As a summary, the data indicate a positive association between CSR and FP in banks, since all CSR metrics had positive correlations with ROA and ROE. However, WPF exhibits statistically significant associations with FP and CU has statistically significant associations with ROE. suggesting that some CSR initiatives may influence profitability more than others.

These findings are in line with some of the past researcher's findings (Cavaco & Crifo, 2014; Saleh et al., 2011). According to Tan et al. (2022), CSR indexes that strengthen employee relations have a significant positive association with FP in the Malaysian context. Companies that focus CSR activities on employee relations may enjoy improved financial success, because employees are inspired, bringing in higher operating performance in terms of staff productivity and that ultimately leads to a better FP (Sun & Yu, 2015). Further, the findings related to customer CSR are in line with the previous research findings (Branco & Rodrigues, 2006; Pan et al., 2014). According to Yang et al. (2019), offering high-quality products and services allows businesses to distinguish themselves from rivals and generate strong client loyalty, and doing better CSR initiatives toward the customer affects the FP of the firms in China. However, some researchers find that there is no significant association between WPF and CU CSR with FP (Maqbool & Hurrah, 2021; Nyeadi et al., 2018).

Further, environmental CSR and community CSR indicate an insignificant positive association with FP. These findings are in line with the previous researcher's findings (Cherian et al., 2019; Nyeadi et al., 2018). According to Nyeadi et al. (2018), there is little evidence to support claims about the association between environmental CSR and the FP of South African listed corporations. Further, Cherian et al. (2019) suggest that environment and community-related CSR Disclosures do not significantly affect the FP, but customer-related CSR affects the FP of the firm in the Indian context. However, several scholars argue that there is a significant association between the environment and community CSR with FP. (Ahamed et al., 2014; Yusoff & Adamu, 2016).

4.3 Multiple linear regression analysis

Multiple linear regression analysis is an approach to statistical analysis that examines the relationship between one dependent variable and numerous independent variables. To determine the acceptability of the data and data-collecting procedure, the researcher tests the assumption for both regression models as a prerequisite for the multiple linear regression analysis.

4.3.1 Testing assumption

4.3.1.1 Normality

According to the below histograms, it is clear that the regression model one and two has appropriate levels of normality. As a result, it can be inferred that the data used for this investigation is normally distributed.

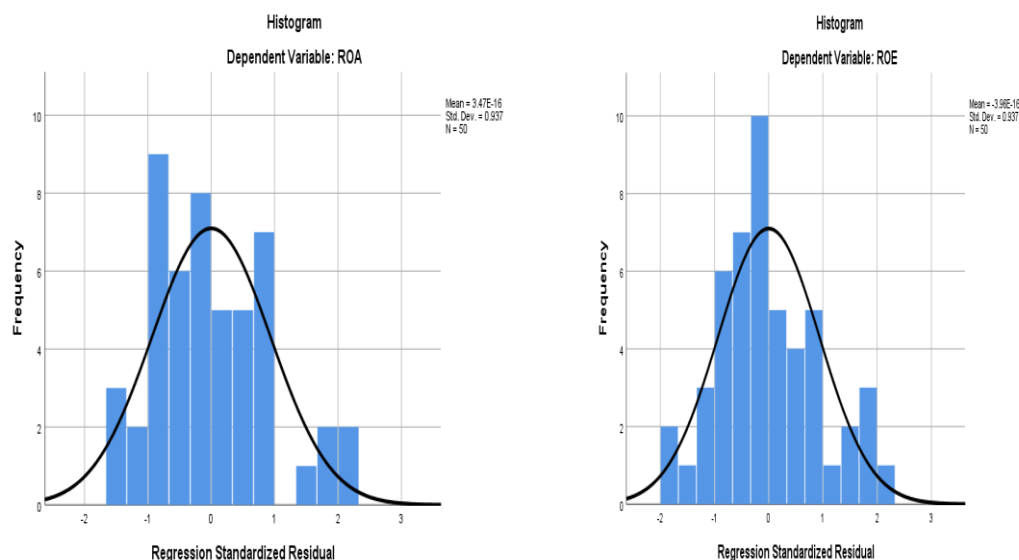


Figure 4.3: Normality test for regression model 1 and 2

4.3.1.2 Multicollinearity

Multicollinearity arises when two or more independent variables in a regression model have a substantial level of correlation, making it difficult to assess the individual influence of each independent variable on the dependent variable. The variance inflation factor (VIF) measures the level of multicollinearity in regression analysis. In general, variables with a VIF of ten or less are not correlated. According to table 4.3, all VIFs less than ten and tolerance values greater than 0.1 suggest that there is no multicollinearity throughout the investigation.

Table 4.29: *Multicollinearity statistics*

	Regression model 1 for ROA		Regression model 1 for ROE	
	Tolerance	VIF	Tolerance	VIF
EN	0.683	1.465	0.683	1.465
CM	0.489	2.044	0.489	2.044
WPF	0.743	1.346	0.743	1.346
CU	0.810	1.234	0.810	1.234
BS	0.599	1.669	0.599	1.669
BA	0.337	2.964	0.337	2.964

Source: Survey data 2025

4.3.1.3 Autocorrelation

Autocorrelation determines the independence of the observations within the regression analysis. Durbin-Watson statistics in the 1.5 to 2.5 range indicate an appropriate level of independence within the model. According to the research findings, Durbin-Watson statistics for model 1 is 1.628 and it indicates an appropriate level of independence. However, based on the Durbin-Watson value for model 2 of 1.412, a score below 1.5 to 2.5 implies some difficulties with the independence of the data inside model 2.

Table 4.30: *Autocorrelation statistics*

	Regression model 1 for ROA	Regression model 1 for ROE
Durbin-Watson Statistic	1.628	1.412

Source: Survey data 2025

4.3.1.4 Linearity

The principle of linearity implies that the connection between the independent and dependent variables should be linear. According to the below normality plot, it indicates that these two models comply with the test of linearity.

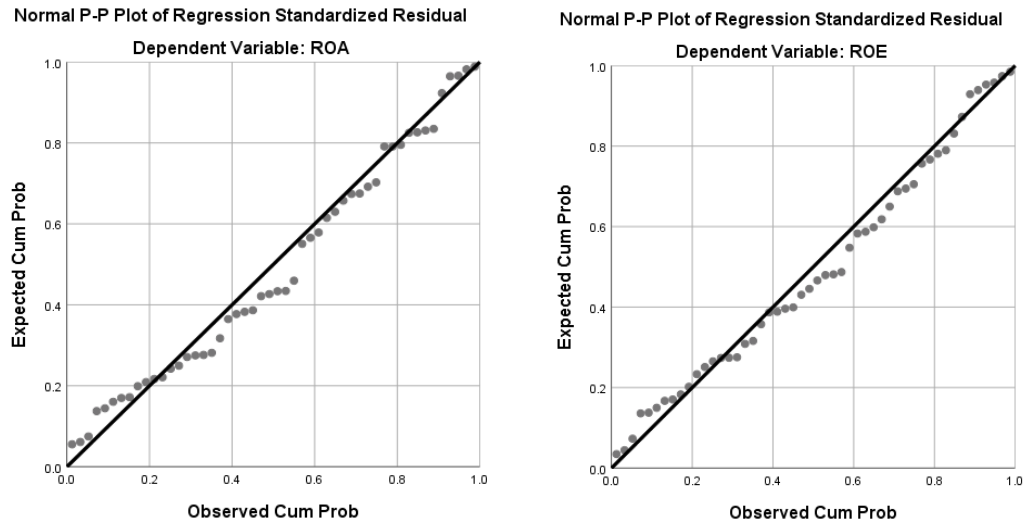


Figure 4.4: Linearity test for the regression model 1 and model 2

4.3.2 Findings of the Regression Analysis

Table 4.31 Multiple Linear Regression Analysis

	Regression model 1 – ROA			Regression model 2 – ROE		
	Beta Coefficient	T-value	P-value	Beta Coefficient	T-value	P-value
EN	0.150	0.894	0.376	0.086	0.556	0.581
CM	0.164	0.829	0.412	0.159	0.873	0.388
WPF	0.438	2.729	0.009	0.464	3.137	0.003
CU	0.007	0.044	0.965	0.322	2.273	0.028
BS	0.086	0.481	0.633	0.257	1.560	0.126
BA	-0.375	-1.574	0.123	-0.218	-0.994	0.326
R ²	0.176			0.301		
F - statistic	1.535			3.087		
P – value	.190 ^b			.013 ^b		

Source: Survey data 2025

4.3.2.1 Effect of CSR on Financial Performance – Regression model 01 – ROA

In order to test the research question, multiple regression was performed. findings of the regression model are shown in the above table 4.5. The individual influence of each independent variable on a dependent variable may be determined through the study's beta coefficient. Except for the WPF, all other independent and control variables do not have a significant impact on ROA ($P > 0.05$), which means WPF CSR has a significant positive impact on ROA ($\beta = 0.438$, $t = 2.729$, $P < 0.01$). The significant effect of WPF CSR on ROA, in

contrast to other CSR dimensions, can be explained using stakeholder theory, which emphasizes the importance of internal stakeholders, particularly employees. CSR initiatives targeting the workplace (WPF) directly improve employee welfare, engagement, and productivity, which may enhance operational efficiency and asset utilization, thus influencing ROA. Other CSR dimensions, such as customer or community initiatives, primarily affect external stakeholders and may not immediately impact operational returns, explaining their insignificant effects on ROA.

Further, bank age has an insignificant negative impact on ROA ($\beta = -0.375$, $t = -1.574$, $P > 0.01$). The R^2 value of 0.176 indicates that the model explains 17.6% of the variance in the ROA and the remaining 82.4% generated by the influence of extraneous variables. F - statistics can determine the entire model fit to the data and the overall significance of the model. Accordingly, the results showed that the overall regression model is not significant at the 5% level ($F = 1.535$, $R^2 = 0.176$, $P > 0.05$). As a result, the null hypothesis can not be rejected, because there is no significant impact between CSR and FP (ROA).

These findings are in line with some of the past researcher's findings (Angraini et al., 2024; Aras et al., 2010; Mosaid & Boutti, 2012). According to the findings of Mosaid & Boutti (2012), there is no significant impact between CSR and ROA in the LCBs. While some researchers argue that, (Balagobei & Anandasayanan, 2018; Bodiyaabaduge & Rajakaruna Mudalige, 2024; Mohamud, 2018; Wijesinghe & Senaratne, 2011) there is a significant impact between the CSR and FP (ROA).

4.3.2.2 Effect of CSR on Financial Performance – Regression model 02 – ROE

As per the above table 4.5, the results indicate that WPF CSR and CU CSR Disclosures of the banks have a significant positive impact on the ROE ($\beta = 0.464$, $t = 3.137$, $P < 0.05$ and ($\beta = 0.322$, $t = 2.273$, $P < 0.05$). However, EN CSR and CM CSR Disclosures of the banks had insignificant positive impact on the ROE ($\beta = 0.086$, $t = 0.556$, $P > 0.05$ and ($\beta = 0.159$, $t = 0.873$, $P > 0.05$). The significant impact of WPF and CU CSR on ROE, compared to their limited effect on ROA, can be explained through resource-based theory, which highlights how CSR initiatives build intangible resources such as employee loyalty, brand reputation, and customer trust. These resources enhance a firm's ability to generate shareholder returns, which is captured by ROE rather than ROA. Additionally, stakeholder theory explains that customer-focused CSR activities (CU CSR) strengthen relationships with external stakeholders, increase customer satisfaction and loyalty, and ultimately enhance equity returns. The differential significance across ROA and ROE indicates that different CSR dimensions affect financial performance through distinct pathways.

Further, as a controllable variable bank size has an insignificant positive impact on the ROE ($\beta = 0.257$, $t = 1.560$, $P > 0.05$), while Bank age has an insignificant negative impact on the ROE ($\beta = -0.218$, $t = -0.994$, $P > 0.05$). The R^2 value of 0.301 indicates that the model explains 30.1% of the variance in the ROE and the influence of extraneous variables generates the remaining 69.9%. F - statistics can determine the entire model fit to the data and the overall significance of the model. Accordingly, the results showed that the overall regression model is

significant at a 5% level ($F = 3.087$, $R^2 = 0.301$, $P < 0.05$). As a result, the null hypothesis is rejected. Because, there is a significant influence between CSR and FP (ROE).

These findings are in line with some of the past researcher's findings (Bodiyabaduge & Rajakaruna Mudalige, 2024; Eranga & Wijesinghe, 2021; Wijesinghe & Senaratne, 2011). Further, Akpa & Odo (2024), findings revealed that CSR has a significant impact on the ROE in the Nigerian bank for the period of 2011 to 2021. Moreover, Mohamud (2018) findings suggest that, there is a significant negative influence between the CSR and ROE in the East African commercial bank, while Mosaid & Boutti (2012), argue that there is no significant impact between the CSR and ROE of the banks.

5.0 Conclusion

Despite extensive research on CSR and financial performance (FP), its effect on licensed commercial banks (LCBs) in Sri Lanka remains debated. This study addresses two objectives. First, correlation analysis examines the relationship between CSR disclosures and FP, showing that workplace-focused CSR (WPF) has a significant positive association with ROA and ROE, while customer-focused CSR (CU) is positively linked to ROE. Other CSR indicators show no significant relationship. Second, regression analysis assesses the impact of CSR on FP, confirming that CSR significantly improves ROE but not ROA. Controllable variables, such as bank size and years of operation, do not influence this relationship.

5.1 Implications

Today, many bankers question whether spending on CSR enhances financial performance and competitive advantage or simply wastes resources. Therefore, evaluating CSR's effect on the financial performance of licensed commercial banks is essential and offers important managerial and social implications. Correlation results indicate that workplace-related CSR positively and significantly influences both return on equity and return on assets, while customer-focused CSR significantly affects return on equity only; community and environmental CSR show positive but insignificant relationships. The findings imply that bank management should prioritize employee welfare, training, fair compensation, and improved customer services. Effective CSR disclosure can strengthen stakeholder trust, goodwill, loyalty, and ultimately contribute to higher long-term profitability and social well-being.

5.2 Limitations and Future direction of the study

This study investigates how CSR disclosures influence the financial performance of licensed commercial banks in Sri Lanka. A key limitation is its focus solely on these banks, which restricts the generalizability of findings to other financial institutions, industries, or countries. Future research could include all banking and financial institutions in Sri Lanka to broaden applicability. The study also considers only selected dependent, independent, and control variables; therefore, future studies may incorporate moderating factors such as market competition and mediating factors like customer loyalty. Further research could compare CSR and financial performance across different industries, developed and developing countries, and additional measures such as firm value and dividend policy.

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Appendices

From the entire population of 24 licensed commercial banks, only 10 banks have been selected as a sample, it is as follows.

1. Bank of Ceylon
2. Commercial Bank
3. DFCC Bank
4. HNB Bank
5. Nation Trust Bank
6. Pan Asia Bank
7. Peoples Bank
8. Sampath Bank
9. Seylan Bank
10. Union Bank

ENTREPRENEURSHIP DEVELOPMENT IN SRI LANKA: INSIGHTS FROM LITERATURE AND EMERGING RESEARCH GAPS ON ENTREPRENEURIAL TRAJECTORIES

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Abstract

Purpose: This literature review attempts to evaluate the progress of entrepreneurship development in Sri Lanka going through well recognized literature review sources to comprehend the real research focus on this subject.

Design/methodology/approach: The study mainly adopts a structured narrative literature review approach to examine evolving paradigms of entrepreneurship and to identify further trajectories. Literature was carefully chosen through a targeted search using academic databases such as Google Scholar, Scopus-indexed journals, and already published systematic literature reviews by other authors of the subject. Sri Lankan studies were mainly obtained from accessing to referred local journal and treatises of economic history relating to the beginning of the modern commercial era. Primarily, references are identified for the study by going through keywords including small industries, self-employment, opportunity entrepreneurship, and static and dynamic aspects of entrepreneurial development.

Findings: Entrepreneurship development in Sri Lanka is still carried out following a static approach starting from practicing inward-looking policies until 1977 and subsequently changing to out-ward looking policies recognizing the private sector as engine of growth. Irrespective of this policy change the study finds that subsistence-oriented entrepreneur class is continuously increasing while stagnating the development-oriented, opportunity entrepreneur class which is in contrast to developing countries. Moreover, unlike Sri Lanka the attention of world research has shifted from intention forming to transition self-employed into opportunity entrepreneurs. Finally, the study recognizes the importance of COVID 19 pandemic and subsequent economic crises too, for emerging new self-employed class and their quick transition.

Research limitations/implications: Research gaps identified by this review are expected to be filled by future research on entrepreneurship. However, it needs substantiate these gaps by carrying out more depth empirical analyses since the present study based on limited evidence. Like so, future research can utilize proposed ideas by this study for further promoting entrepreneurship.

Originality/value: This study is the first of its kind to identify why Sri Lanka could not develop its entrepreneurship in tandem with its economic reforms introduced over time. As perseverance it found that for Sri Lanka's speedy development what is needed is having and promoting of high propensity, opportunity entrepreneurs instead of continuing with increasing subsistence-oriented, low propensity, self-employed entrepreneurs.

Keywords: Dynamic Approach; Economic Growth; Entrepreneurship Development; Self-Employment Transition; Static Approach

1. Introduction

Many countries, especially in the developing world, desperately face economic difficulties such as prolong unemployment, increasing income disparity and declining economic growth necessitating their economies to be revitalized soon. In this strive, customary strategies advocated by development economists from 1950s onward did not work out as expected for making their economies progressed (Chatterjee & Das, 2015, World Bank (WB), 2023). In this setting, among many researchers such as Sendra-Pons et al., 2022; Thai and Turkina, 2023 and leading international agencies such as United Nations Conference on Trade and Development, (UNCTAD), Organization for Economic Co-operation and Development (OECD), International Labour Organization (ILO) etc. advocate entrepreneurship development policies to be adopted for filling this vacuum. Accordingly, Sri Lanka too has given priorities as emphasized in its current and previous policy agendas and established an institutional support for facilitating entrepreneurship development. However, empirical evidence shows that Sri Lanka's relative progress in this respect is highly unsatisfactory (Bruton et al., 2013; Hall et al., 2012; Jayasuriya & Perera 2020; Lopez et al., 2025; Mirza, 2017).

1.1 Entrepreneurship Instigation

'Entrepreneur' is a commonly used word giving different connotations in varying countries over time. For example, Sri Lanka under the British Colonial period first, identified to develop customary 'home industries', expecting to diversify its classical export economy (Snodgrass, 1966), with catering only to the local market without challenging the laissez-fair economic policies used at that time (Industries Commission Report, 1922). Then, Ten Year Plan (1959-68) using the term, 'cottage industry' underlined the need for promoting Infant Industry Argument (IIA) to generate more employment for rapidly increasing youth population in late 1950s onwards (Oliver, 1957). Also, the prevailing depressed financial market created through following administered policy of interest rates until 1977 encouraged 'sub-optimal industrial projects at the cost of optimal projects (Alayah, 2022; Athukorala and Rajapathirana, 2000; McKinnon, 1973). These inward-looking policies created an expanding force of self-employed making the country's formal business class expansion subdued. Also, irrespective of changing industrial and trade policies from inward-looking policies to outward looking policies from 1977 onward, the same trends perpetuated between self-employed and the business class (opportunity entrepreneurs) in the formal sector, could be identified recording a comparatively lowest level of economic growth as a whole in Sri Lanka continuing up to the present day. Sri Lanka's this trend is different from the similar countries in the region which indicates a retardation of entrepreneurship development in all over the past period in Sri Lanka (Patabendige & Senarath, 2013).

The section - 2 of the article presents methods of finding literature and stating evolving research gaps and section - 3 reviews literature to highlight how chronologically different entrepreneurial approaches evolves. The section - 4 and 5 distinguishes between formal sector and informal sector entrepreneurship behavior and barriers emerge for expansion of opportunity entrepreneurs. The section - 6 discusses emerging gaps found by the study and the

section - 7 gives future research direction and limitations of the study and section 8 - Conclusion.

2. Method

This study mainly adopts a structured narrative literature review approach to examine evolving paradigms of entrepreneurship and to identify further areas, if found, to be expanded. Literature was carefully chosen through a targeted search using academic databases such as Google Scholar, Scopus-indexed journals, and going through already available Systematic Literature Review on transforming entrepreneurship from intention to action by Rohanaraj (2023) which has used PRISMA framework. Sri Lankan studies on this area were mainly obtained from accessing to referred local journal and treatises of economic history and valuable, but hardly found policy documents relating to the beginning of modern commercial era starting from the turn of the 20th century. Primarily references are identified for the study by going through keywords including small industries, self-employment, opportunity entrepreneurship, and static and dynamic aspects of entrepreneurial development.

3.0 Literature Review

3.1 Static Approach

The concept of entrepreneurship has evolved over time, and the word 'entrepreneur' was first, derived from the French word 'entreprendre', meaning 'to undertake' a business. Accordingly, Richard Cantillon, presenting Risk Theory (1755) defines entrepreneur as an arbitrageur or a speculator, who conducts all exchange and bears risk due to buying at a certain price and selling at in known price (Casson, 1993). Jean-Baptiste Say through Say's Theory (1803) highlights the entrepreneur's ability to identify and move resources (capital, land, and labor) from less productive uses to more productive and profitable ones (Beattie, 2024). Alfred Marshall popularizing 'Theory of Firm Equilibrium' introduces 'organization and entrepreneurship' as the fourth factor to be added to the production function, highlighting that the 'entrepreneur and the laboring class are vital to acquire a higher productivity. Thus, it seems that these founder theorists' definitions are akin to the risk theory of profit which was introduced by Hawley (1893). Accordingly, entrepreneurs are compensated for risks while other factors of production (like capital, land and labor) are guaranteed to receive a fixed income, although the entrepreneur's income is uncertain. Thus, it assumes a direct relationship between the degree of risk and the potential for profit, outlining that higher risk should lead to higher profits to incentivize for undertaking a venture. Going in this line, Webster's Dictionary too defines the term 'entrepreneur as a person who organizes and manages a business undertaking, assuming the risk for the sake of profit'. As a whole, these theoretical views, taken together, have led to provide a static approach assuming that an entrepreneur acts rationally to maximize his self-interest as an economic man involved in a linear process, but failing to account for the iterative and constantly evolving nature of new ventures. As such, guidance given by these earlier definitions and theories are considered as a static approach for entrepreneurship development which is being still followed by policy makers in some countries. For example, this is still happening in Sri Lanka, as proved by the fact that although industrial expansion was started as

early as 1931 by establishing the 'Department of Small Industries' in Sri Lanka, its name was changed only in 2020 that is after 90 years, as the 'Ministry of Industries and Entrepreneurship' recognizing the significance of entrepreneurship at a much later time. Contrary to this trend, it is shown that East Asian four tigers and other neighboring countries have formed their development strategies from late 1950s onward depending on dynamic nature of entrepreneurship development.

Although these mainstream definitions are more akin to creating a static approach, they highlight a common fact that entrepreneurs are risk takers. Karunathilake (1987), Snodgrass (1966) present evidence from Sri Lanka which is contrary to this idea. Accordingly, from the beginning of the British Colonial Administration, Sri Lankan businessmen became highly apprehensive to face risk in the buyers' market particularly emerged when following laissez-faire economic policies. However, this reluctance disappeared whenever sellers' markets were emerged by practicing Import-Substitution Industrial (ISI) policies during the Second World War period and the era from late 1950s to 1977. But, with the introduction of the open economic policies from 1977 onward and creating a competitive market, many of the local industries collapsed within a shorter period (Karunathilake 1987; Patabendige 2006; Snodgrass 1966). This trend proves the fact that the Sri Lankan industrialists intrinsically are feeble to experience changes, responds to them, and exploit changes as opportunities. As such, one can suspect that this practice has led to have a lean entrepreneur class in Sri Lanka from the very inception (CBSL, various).

3.2 Dynamic Approach

At the next stage of development this discipline was started to be considered based on a dynamic approach. Schumpeter (1833-1950) was the architect in this changing and was pointing out that 'a sparkling defense of capitalism' is on the ground that capitalism stimulates entrepreneurship (Henderson, 2007). Distinguishing invention from innovation he argues that entrepreneurs lead to gales of creative destruction as innovation causing inventories, ideas, technologies, skills, and equipment to be obsolete. The question arisen here is not only 'how capitalism administers existing structures, but also how it creates and destroys them, as creative destruction emphasizing that this process results in continuous progress and improvement in the standards of living for everyone' (ibid, 2007). Accordingly, later researchers such as Bygrave (2010) put this idea more refining way defining entrepreneurship as a force of creative destruction for making innovative and better ways to develop new and existing businesses. Further, with this line of thinking, Peter Drucker (1909-2005) describes the entrepreneur as someone who searches for change, responds, and exploits change as an opportunity leading to distinguish opportunity entrepreneurs from self-employed. Moreover, giving a second place to capital requirement for commencing business, some researchers define entrepreneurship as a management style (mindset) that involves pursuing business opportunities even without regarding the resources that can be currently controllable (Byers et al., 2007; Stevenson & Jarillo, 2007). As such. these later definitions consider that Entrepreneurship approach is

dynamic and will be the engine of economic growth and social development (Sendra-Pons et al., 2022).

3.3 Push-Pull Theory

Meanwhile, early motivational scholars such as Shapero and Sokol (1982), Gilad and Levine (1986), and Brockhaus (1980), David Deakins and Mark Freel (from 1990s), made a further contribution to the subject introducing the push-pull theory of entrepreneurship considering the motivational differences seen among entrepreneurs. Accordingly, they distinguish between self-employed with necessity-orientation and opportunity-driven entrepreneurship. Parallel to this dichotomy the 3rd Global Entrepreneurship Monitor (GEM) Conference held in 2008 which, as the most influential empirical exertion, categorizes and divides entrepreneurial motives into survival-driven and opportunity-driven types (Eister & Msimango-Galawe, 2024). Out of these two categories survival-driven are alternatively identified as subsistence-oriented self-employed while other kind is considered as development-oriented opportunity entrepreneurs who later became successful businessmen. Further according to Ngo et al. (2023) push factor motivation is related to negative circumstances, such as job dissatisfaction, lack of job security, or unemployment, that push someone into entrepreneurship out of necessity forcing to stay in this status for a long duration particularly in developing countries. While pull factors are positive opportunities or desires, like the pursuit of independence, financial growth, or the ability to chase a personal vision, which pull / attract someone towards opportunity entrepreneurship. Thus, entrepreneurs are often thought of as being pulled into starting a new business and taking on the risk by the lure of financial and intangible benefits. However, if attractive alternatives are not available many, particularly in the traditional sector, are pushed to be engaged in some activity as self-employed to earn their living. (Graham 2005; Rosa et al. 2006; Thai & Turkina, 2023).

Further, researchers like Matos & Hall (2020) confirm that individuals engage in entrepreneurial activities differently between developed and developing countries implying entrepreneurial motives into survival-driven to opportunity-driven categories. Further, more importantly, considering economic history of development with regard to the entrepreneurial progress in developed and developing countries, Porter (1990) and a number of other researchers; Acs, Desai and Hessels, (2008) Sendra-Pons et al. (2022); Thai and Turkina (2023); find entrepreneurial orientation and structure, change to varying degrees across countries in respond to changes in economic development over time. Accordingly, three stages of entrepreneur expansions corresponding to changes in economic development have been identified and discussed how these structures change over time (Ordeñana, et al., 2024). The first is the 'factor-driven' stage based on factor accumulation production (Subramaniam & Yogambigai, 2020). Accordingly, self-employed involving in home industries and subsistence farming at this stage are higher. The second is the 'efficiency-driven' stage and countries in this stage compete through producing low costs, standardized products for export markets exploiting economies of scale, displaying how more informal sector labourers are becoming wage employees with emerging large scale production (Bannaga et al., 2024) and the third is

the ‘innovation-driven’ stage starting from 1970s and 1980s showing how countries are transitioning from the efficiency-driven stage to the innovation-driven stage. Sustained growth in this stage is powered by the capacity to produce technologically advanced differentiated products, requiring strong institutions, education, and innovation-based know-how development (UNCTAD, 2022) where more opportunity entrepreneurs emerged and can be instrumental for acquiring a higher level of economic development (Zeng et al., 2022).

Considering the correlation between changes in entrepreneurial structure and economic development researchers guide policy makers for converting self-employed into opportunity entrepreneurs for attaining a speedy development. Even international organizations ILO (2024) and World Employment & Social Outlook: Trends (2025) highlight the need to expand formal sector employment in countries, addressing the underexplored socio-psychological side of entrepreneurial motivation and intention forming for becoming a real entrepreneur, looking at relationship between socio-psychological factors and the probability of being an opportunity entrepreneur in a given society.

3.4 Paradigm Shift

In this respect, Rohanaraj’s (2023) systematic literature review on ‘Intension to Action’ is significant and it identifies two distinct eras for research expanding on entrepreneurship development; first being the period of 1981-2000, where the focus is on the role played by personal and social factors for the formation of entrepreneurial intention assuming that higher the level of entrepreneurial intention higher will be the rate of action (transformation from self-employed to opportunity entrepreneurs). Then, starting from the period 2001-2020, a considerable amount of research publications continued with the same focus, but after 2016 with paying more attention to identify the factors that influence the transformation of such intention into action. Majority of latest articles question the assumption of direct correlation between entrepreneurial intention and action but with more focus on other influencing factors for the transformation of entrepreneurial intention to action. Thus, this development is recognized as a paradigm shift (ibid, 2023) and it is already confirmed by Li and Di (2023) showing that entrepreneurial activity is influenced by institutional factors also in addition to considering entrepreneurial cognition and cultural influences.

Thus, although there is general agreement in the literature that opportunity entrepreneurship is more growth oriented the phenomenon of entrepreneurship in the informal economy too cannot be ignored because informal commercial activities account for a sizeable share of economic activities around the world-over 30% on average and in many countries, it reaches as high as 70% (World Bank, 2020). Thus, the informal entrepreneurs too have become dominant class, particularly in developing countries forcing majority to become self-employed due to lack of job generation in formal economy (Coates & Martina, 2024). Thus, although the scope of entrepreneurship has become wider and recognized as a major policy guidance to be adopted and following more than four decades, over a third of the world's population remains in poverty forcing confining them to be informal sector activities (Chatterjee & Das, 2015). However, additional importance was attached to self-employed entrepreneurs by the COVID-19

pandemic experience and recent geopolitical crises showing that these crises have led youths, first, to be self-employed and later getting them converted into opportunity entrepreneurs (Kumar et al., 2022; Kumar & Sureka, 2022).

4. Formal and Informal Sector Entrepreneurs

All economies, whether they are developed or developing have formal and informal sectors. Monetary authorities consider public sector, private sector and business sector as main components of the formal economy while self-employed and family support workers constitute the informal economy (Status of Employment data, CBSL, 2023). Burns and Stalker (1961) and Weber (1864-1920) identify that in the formal economy there are many written rules and regulations characterized by a hierarchical structure, rules-based management, and employment based on technical qualifications. Thus, for its part, the informal economy is defined as those activities where monetary transactions are not declared to the state for tax, social security and labour law purposes but which are legal in all other respects (Evans et al. 2006; Williams 2006; Williams & Winderbank, 2006). However, both sectors influence each other in differently.

5. Barriers for Transmission Self-employed to Opportunity Entrepreneurs

Researchers (Han, et al. 2025; Kim, 2010; McMillan, 2006; Porta & Shleifer, 2008) found a number of reasons for many activity (self-employed) entrepreneurs to remain in the informal economy for years and years, sometimes for their entire life. In this case, it is necessary to understand the factors that drive entrepreneurs to be in the informal economy for a long time (Figure 1).

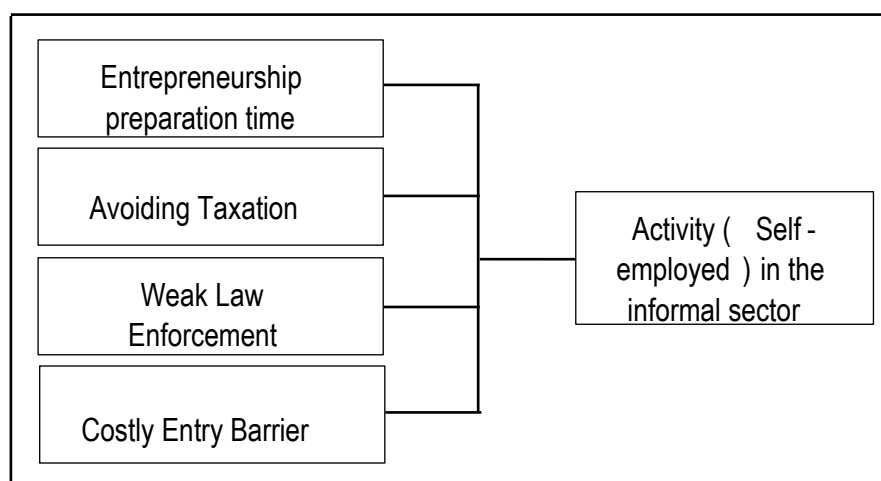


Figure 1

Reasons for self-employed to Remain Informal Economy for Years and Years

Note. Kim, 2010

As Kim (2010) finds that those who like to move from informal economy to formal economy need some time for preparation for that shift. In this regard, some indicate that there is a positive

correlation between informal entrepreneurship and the reduction of the risk of failure. Also, some entrepreneurs decide not to register their firms to evade punitive taxation (McMillan, 2006; Porta & Shleifer, 2008). Thus, Higher tax rates encourage taxpayers to hide their activities, and as such, there is a negative correlation between increasing tax and the expansion of the informal economy in developing countries (Lee, 2023). In this way, informal economy entrepreneurs may be effective at taking advantage of weak law enforcement by formal institutions. Often, it is costly for firms to register in poor countries where the benefits from registering are small. Also, the cost could be large because of corrupt people, and it increases entry barriers to formal economy (Han, et al. 2025).

Further, researchers (Leo-Paul Dana, 2023; Williams and Youssef, 2023) find that informal economy is highly heterogeneous, therefore, adopting a single explanation for transforming to opportunity entrepreneurs is not effective. It needs developing a more nuanced policy approach that are tailored to different types of entrepreneurs.

6. Findings and Discussion

Researchers, Alkharafi et al. (2024); Cheng et al. (2025); Etemad (2021); Maseda et al. (2025); Porter (2002) among others find that entrepreneurial orientation, nature and structure change to varying degrees in developed and fast developing countries for instigating economic development over time. As such, three stages of entrepreneur expansions corresponding to changes in economic development have been identified and discussed how these structures change over time (Ordeñana, et al., 2024). The first is the ‘factor-driven’ stage, comprising of high level of activity entrepreneurs and the second is the ‘efficiency-driven’ stage, displaying substitution of informal sector labourers to capital and the third is the ‘innovation-driven’ stage where more opportunity entrepreneurs emerged. But empirical evidence proves that self-employed in Sri Lanka is unmoving toward the second and the third stages of entrepreneur development although which has already experienced in developed and fast developing countries. Also, it finds that even under the private sector dominance (after the 1977 economic reforms), the entrepreneurship structure has not changed for strengthening the business class in the economy. Consequently, it seems that this phenomenon has hindered the entrepreneurship development for reaching the next step of change. As a result, it seems that the Sri Lankan policy makers have failed to adjust their strategies appropriately for reaching the next stage of development. Also, this reveals that these facts are not yet covered by the Sri Lankan research indicating that there is a knowledge gap remaining to be filled.

In addition, this review finds that there is a performance gap to be understood in terms of employment generation through entrepreneurship development. Performance gap refers to the difference between actual and desired outcomes expected to be achieved through entrepreneurship development (Sujova et al., 2023). When the Entrepreneur development is prescribed by researchers and international donor agencies for developing countries their expectation is to create an opportunity (real) entrepreneur class rather than promoting self-employed or activity entrepreneurs who are already expanded in countries like Sri Lanka as subsistence-oriented and inefficient small business sector entrepreneurs (Thai & Turkina,

2023). Depending on this trend, it is possible to see how entrepreneurship structure has been changed over time in Sri Lanka. This deterioration is quantified based on the status of employment structure data (CBSL, various). It exhibits that the formal economy (consisting of the public sector + the formal private sector + the employers' sector or the real entrepreneurs in the economy) has reduced its employment share from 64.7% (22.9+39.5+2.3) in 1991 to 61.7 % (14.6+44.5+2.6) by 2023. In contrast, the informal economy (the self-employed and the family support sectors') employment share has increased from 35.4% (25.4+10.0) to 38.3% (32.8+5.5) over the same period. As endorsed by Thai and Turkina (2023); Zawani et al. (2016), this trend indicates that more job aspirants are shifted to the informal sector as self-employed entrepreneurs since the formal economy's job generation and absorption have been stagnant over time. According to labour economists, this phenomenon is considered as a deterioration in the labour market status (World Employment Report, 2024). Further, the employment data for the economy reports that the employers' or the real entrepreneur class remains at a lowest level varying from 2.0% to 3.0 % continuously. Also relative to the country's total population, only 1.5% represents active entrepreneurs which is extremely low compared to other countries in the Asian region (Nishantha, 2021). This performance gap can be estimated and the relevant trend equations are shown below.

$Y_1 = 0.85 X + 25.83$ is the trend equation of the employment generation by the self-employed sector in the informal economy and the Equation, $Y_2 = 0.065 X + 2.29$ is the trend equation of the percentage of employers or successful entrepreneurs in the formal economy who can be considered as more development-oriented opportunity entrepreneurs. However, both estimates show positive slopes indicating employment generations have increased over time but with higher growth shown by the self-employed entrepreneur sector. It is as high as 12 times (0.85/0.07) compared to that of the business sector. Also, where the out-and-out size of the self-employed entrepreneur sector is concerned, it is 11 times (25.8/2.3) bigger than that of the opportunity / employer's sector of the economy.

These trends attest to the fact that the efforts so far made by government and several entrepreneurial development agencies have failed to achieve desired outcome by failing to create a strong opportunity driven entrepreneur class in the economy although the policy environment too has shifted from the closed economy (prior to 1977) era to the open economy (after 1977), and this trend highlights a performance gap to be filled by making individuals, institutions, and other interventions more effective to speed up entrepreneurship development.

In this context, Institutional Theory suggests that the transition of self-employed individuals into opportunity entrepreneurs can be facilitated through the strengthening of regulatory frameworks, socio-cultural and cognitive norms, and social networks. But, since Institutional Theory based research is much Euro-American bias, it has a number of drawbacks such as it is overly static and does not examine temporal changes. Also, this theory is more formal sector bias and mainly has a "macro-level focus. Accordingly, interaction between levels such as

macro and micro is rarely theorized. As a whole, institutional theory has a weak-cultural cognitive theorization.

Also, this study expects to examine why there is a lean entrepreneur class exists in the Sri Lankan labour market (CBSL, 2023) irrespective of various effort made so far, this issue is not yet logically and empirically studied based on entrepreneur structural data by existing research on entrepreneurship development. Consequently, this phenomenon suggests that there is an empirical gap to be filled which generates context-rich, multilevel evidence on how institutional, socio-cultural, and cognitive factors jointly shape the transition from activity to opportunity entrepreneurship relationships that remain empirically underexplored in both global and South Asian developing-economy contexts.

7. Future Research Directions and Limitations

This brief review finds a number of important reasons to be considered for entrepreneurship development noticing its evolution from the beginning. As a result, it helps to study whether our researchers and policy formulators have followed a rational process to be consistent with our counterparts for acquiring a similar level of development. Basically, this review finds that still entrepreneurship development research and policy formulation strategies are based on a static perspective and examining reasons, formulating policies and strategy development forcing them to be confined to this traditional and closed system. This shows our experts are deviated from considering dynamic nature of the subject like forming entrepreneurial idea among self-employed and transforming them into opportunity entrepreneurs through examining to what extent ecosystem variables can involve in this transformation. Accordingly, reviewing the literature through refereed journal articles and other sources this study finds a number of research gaps such as knowledge gap, performance gap, and empirical gap for future researchers to study further in these lines and promote entrepreneurship development in the country.

Thus, this study mainly considers the research findings used in developed and developing countries for expanding their entrepreneurship to acquire a rapid economic growth. Therefore, it does not consider a literature review on concept or theory development exertion.

8. Conclusion

This literature review presents a full description of how entrepreneurship as a separate discipline has evolved chronologically, first starting from forming the static approach of entrepreneurship emphasizing its furtherance to developing countries. Then, explains how the dynamic approach of entrepreneurship is architected by founders necessitating continuation of capitalism through entrepreneurship development. Next, it shows how this dynamic approach can be used to transfer self-employed in the informal economy to opportunity entrepreneurs in the formal economy, particularly in countries like Sri Lanka to strengthen their entrepreneur or business class in the economy taking into account the role played by socio-psychological factors' for forming individual motivation and encouragement given through cultural, institutional and other macro factors for transforming self-employed into opportunity

entrepreneurs. Finally underlines the barriers emerged in the transforming entrepreneur intention to transforming (action) becoming opportunity entrepreneurs in the formal economy, the study highlights different research gaps particularly appropriate for future researchers to carry out more contributory research for entrepreneurship development in Sri Lanka which is already lagged behind the fast-developing neighboring countries in the Asian region.

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EVALUATING THE EFFECTIVENESS OF THE QUALITY MINUS JUNK (QMJ) FACTOR IN EXPLAINING STOCK RETURNS: EVIDENCE FROM THE COLOMBO STOCK EXCHANGE

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Abstract

Purpose: The study examines the relevance and effectiveness of the Quality Minus Junk (QMJ) factor in explaining cross-sectional stock returns on the Colombo Stock Exchange (CSE). Although quality-based investment has become more popular in developed and some emerging markets, it has not been tested in Sri Lanka.

Design/methodology/approach: A quantitative, positivist, and deductive approach was employed using secondary data from 172 CSE-listed firms covering the period 2011 - 2024. Following established factor-investing methodologies and the Quality Minus Junk (QMJ) framework adapted from prior emerging - market studies, firms were sorted into portfolios based on firm - level quality characteristics to distinguish between high-quality and low-quality stocks. A long-short QMJ portfolio was then constructed by taking long positions in high-quality firms and short positions in low-quality firms, alongside the construction of size and market factors. Excess returns were tested using the Fama-Macbeth two-pass regression with Newey-West corrections to examine the quality premium and the QMJ factor's explanatory power.

Findings: The results indicate that although firm-level quality measures conceptually differentiate high-quality firms from low-quality firms, the QMJ factor does not generate statistically significant excess returns in the Sri Lankan context. None of the analyzed indicators (MKT, SMB, QMJ) demonstrate significant risk premia. The findings suggest weak explanatory power of traditional multifactor asset pricing models in the CSE, possibly due to structural inefficiencies, low liquidity, and speculative behavior.

Research limitations/implications: The findings imply that globally recognized factor-based investment strategies may not yield expected risk-adjusted returns in Sri Lanka. Investors may need to adopt more active strategies, while policymakers should enhance market transparency, liquidity, and institutional participation.

Originality/value: The study conducts the first comprehensive empirical investigation into the QMJ factor in the Sri Lankan equity market, extending quality-based asset pricing research to an emerging economy and contributing to the limited literature on factor investing in South Asia.

Keywords: Asset Pricing; Colombo Stock Exchange; Factor Investing; Portfolio Construction; Quality Minus Junk (QMJ); Sri Lanka

1. introduction

Sri Lanka's economy is recovering, however there are uncertainties, exchange rate volatility and lack of investor confidence, which make it harder to make investment decisions. These conditions have shifted investor focus away from short-term speculative gains toward strategies that emphasize long-term stability and risk-adjusted performance. As a result, more effort is being made to find firms that have strong financial foundations, stable profitability, and long-term development potential, which are all traits that are often associated with high-quality firms.

Asness et al. (2019) introduced the Quality Minus Junk (QMJ) factor, which made quality-based investment strategies more prominent in asset pricing literature. The QMJ framework is based on the idea that high-quality firms with strong profitability, stable earnings, efficient capital allocation and sound balance sheets tend to be systematically underpriced relative to low-quality or "junk" firms. By constructing portfolios that are long in high-quality stocks and short in low-quality stocks, the QMJ strategy seeks to generate abnormal risk-adjusted returns not captured by traditional risk factors, thereby extending conventional asset pricing models through an explicit focus on firm fundamentals.

Although the idea of firm quality is not new, its systemic application in investment strategies remains relatively underexplored, particularly in emerging markets. Challenges such as limited market depth, inconsistent financial reporting and market inefficiencies complicate the measurement of quality in these contexts (Asness et al., 2019). Nevertheless, distinguishing between high- and low-quality firms becomes especially important in volatile markets where downside risk and mispricing are more pronounced.

The Colombo Stock Exchange (CSE), as Sri Lanka's primary capital market, provides a suitable setting for examining the relevance of the QMJ factor. The market has experienced substantial volatility driven by both domestic economic disruptions and global shocks, with stock prices often influenced more by investor sentiment and speculative behavior than by firm-specific fundamentals. Under such conditions factor-based strategies that exploit systematic return patterns may offer enhanced explanatory and predictive power.

Despite the increasing attention given to factor-based investment strategies in global financial markets, empirical evidence on quality-based investing in Sri Lanka remains extremely limited. Stock prices in the Colombo Stock Exchange (CSE) often reflect investor sentiment and speculative behavior rather than firm-specific fundamentals, potentially leading to misprice and inefficient capital allocation. Although firms listed on the CSE operate under similar macroeconomic conditions, they demonstrate considerable differences in profitability, earnings stability, financial strength and return volatility. Prior international studies have examined Quality Minus Junk (QMJ) factor in several developed and emerging markets have found that firm quality can significantly explain cross-sectional variations in stock returns (Asness et al., 2019). For example, Reenen (2021) shows that firm quality explains a significant portion of stock return variation on the Johannesburg Stock Exchange, although the strength of this relationship varies across market condition. However, to the best of the researcher's

knowledge, no empirical study has specifically tested the applicability of the QMJ factor in the Sri Lankan equity market. This absence of empirical evidence creates uncertainty regarding whether firm quality significantly influences stock returns and contributes to superior risk-adjusted performance within the context of the Colombo Stock Exchange.

Against this background, the present study aims to evaluate the applicability and effectiveness of the Quality Minus Junk (QMJ) factor in the Colombo Stock Exchange. The study identifies and measures firm-level quality characteristics of listed firms, examines whether these characteristics can distinguish high-quality firms from low-quality firms and investigates whether portfolios constructed using the QMJ factor generate statistically significant excess returns in the Sri Lankan equity market. In addition, the study compares the explanatory power of the QMJ factor with traditional asset pricing factors, particularly the size factor (SMB), in explaining variations in stock returns.

This study contributes to existing literature in several ways. First, it extends the application of the QMJ framework to the Sri Lankan stock market, which has received very limited attention in the global factor investing literature. Second, it provides empirical evidence on the role of firm quality in explaining stock returns in a small emerging market characterized by volatility and potential market inefficiencies. Third, the findings offer practical insights for investors, portfolio managers and policy makers by highlighting whether quality-based investment strategies can support more efficient capital allocation and improved investment decision-making in Sri Lanka's capital market.

The remainder of the paper is organized as follows: Section two reviews the relevant literature on asset pricing models and the quality factor. Section three describes the research methodology, including data sources, variable construction and empirical models used in the analysis. Section four presents empirical results and discussion. Finally, Section five concludes the study and discusses the implications for investors and directions for future research.

2. Literature review

2.1. Critical Discussion

2.1.1. Asset Pricing Theory and the Evolution of Factor Models

The Capital Asset Pricing Model (CAPM) is the foundation of asset pricing research, it assumes there is a linear relationship between expected return and systematic risk (as measured by beta). Jensen et al. (1972) provide early empirical evidence showing systematic differences between actual and predicted returns, thereby asking whether it was reasonable to assume that systematic risk could fully explain the behavior of returns. More specifically, portfolios with low betas typically had higher than predicted returns whereas portfolios with high betas tended to have significantly lower than predicted returns. Thus, it can be inferred that systematic risk alone does not adequately explain returns.

Multifactor asset pricing models that consider more sources of systematic risk were created because of these drawbacks. One of the most significant additions is the Fama-French three-factor model, which adds two more risk factors to the CAPM they are the value factor (HML)

and the size factor (SMB). By using portfolios based on book-to-market equity ratios and business size, Fama and French (1993) show that these variables reflect systematic changes in stock returns that are not only attributable to market risk. The results reveal that a variety of risk factors impact asset pricing in stock markets, since small-capitalization firms and firms with high book-to-market ratios typically provide greater average returns.

Subsequent developments in asset pricing research further expanded this framework, for example, the Fama-French five factor model incorporates additional factors related to profitability and investment to enhance the explanatory power of asset pricing models. While these extended models provide stronger empirical support or evidence for multifactor asset pricing, their effectiveness varies across different markets. Lalwani and Chakraborty (2019) argue that traditional factor models often fail to fully explain variations in stock returns in emerging markets due to structural characteristics such as limited liquidity, information asymmetry, and market inefficiencies. This variation suggests that traditional factor models may not fully capture firm-specific characteristics influencing stock returns, thereby motivating the inclusion of additional factors such as firm quality in asset pricing research.

2.1.2. Theoretical Foundations of Quality-Based Investing

As more people began to recognize that firms with strong fundamentals consistently exceed those with weak fundamentals, quality-based investing came about as a direct reaction. Several studies conducted by (Asness et al., 2019) have validated this concept by constructing the Quality Minus Junk (QMJ) factor. This factor measures the differential rate of return between firms with high-quality and low-quality fundamentals.

According to the theory, the QMJ model disputes the traditional risk-return tradeoff by providing evidence that there are high-quality companies (those that have high levels of profitability, stable earnings, conservative levels of leverage, and sustainable growth) that do not exhibit a higher level of risk than low-quality companies and have greater risk-adjusted returns. This finding challenges the classical assumption that higher returns must be compensation for higher risk and instead suggests that behavioral biases, market efficiencies or limits to arbitrage may lead investors to undervalue high quality firms.

2.1.3. Conditional Asset Pricing Models and Market Anomalies

Conditional multifactor frameworks allow for the risk premium to change based upon macroeconomic variables (e.g. GDP growth, inflation) and investor sentiment (pessimism to optimism). Dash and Mahakud (2013; 2015) show conditional specifications do better in addressing size, momentum and liquidity anomaly in emerging markets, such as India. The results indicate there is an interaction between the firm's fundamentals and the business cycle (economic upturns & downturns). Thus, unconditional models will not do a good job of addressing anomalies when there is volatility in the market.

These findings highlight the importance of considering macroeconomic conditions and investor sentiment when analyzing asset pricing models, particularly in emerging markets where market inefficiencies and volatility are more pronounced.

Further extensions incorporating higher moments (skewness and kurtosis), liquidity, volatility risk, and calendar anomalies reinforce the argument that asset returns are influenced by multiple, interacting sources of risk and behavioral factors. Studies by (Ali & Badhani, 2021; Chakroun & Hmaied, 2019) provide empirical support for augmenting traditional frameworks to improve explanatory power, particularly in emerging economies.

2.1.4. Empirical Evidence on Quality Minus Junk in Emerging Markets

International studies on the QMJ factor have produced ambiguous results, but are generally favorable for quality investments, with many studies demonstrating quantifiable evidence of positive excess performance for quality-based investment strategies. Lalwani and Chakraborty (2019) show that quality-enhanced investment models outperform certain developing markets. Similarly, Reenen (2021) provides empirical evidence that quality stocks outperform on the Johannesburg Stock Exchange (JSE), generating positive excess returns.

Sectoral differences are also believed to influence the performance of the QMJ factor. For example, Kahlon and Kvisle (2018) provide evidence that, although sector-neutral QMJ portfolios provide lower raw returns than their sector relative counterparts, there is still strong risk-adjusted performance. This suggests that while sector composition may influence returns, the quality premium is fundamentally linked to firm-level financial strength rather than purely sector-specific characteristics.

Despite this growing body of literature, empirical validation of QMJ remains concentrated in developed markets and a limited number of emerging economies, leaving smaller frontier markets largely unexplored.

2.2.Lacunae/Research gap

After reviewing some of the existing research, there are clear gaps in the current literature on Quality Minus Junk (QMJ) factor research based on previous studies. While numerous empirical studies have examined the QMJ factor in developed markets such as United States and in emerging markets including India and South Africa, there is currently no comprehensive empirical investigation of the QMJ factor within the Colombo Stock Exchange (CSE).

Empirically tested asset pricing models in Sri Lanka have primarily used either traditional model such as Capital Asset Pricing Model (CAPM) or basic multifactor asset pricing models. More advanced models incorporating firm quality dimensions, such as profitability, safety and growth factors have received very limited attention in the Sri Lankan context. Furthermore, conditional asset pricing models that incorporate time-varying macroeconomic conditions and investor sentiment have rarely been applied in Sri Lankan financial markets.

Consequently, the role of firm quality in explaining cross-sectional stock return variation in the CSE remains largely unexplored. Addressing this gap is important because emerging markets often exhibit higher levels of market efficiency and information asymmetry, which may amplify the relevance of quality-based investment strategies. Therefore, examining the

applicability of the QMJ factor in Sri Lanka can provide important insights into the effectiveness of quality-based asset pricing in emerging markets.

2.3.Hypotheses Development

Theoretical and empirical literature on asset pricing suggests that firm-level financial fundamentals play an important role in explaining cross-sectional variations in stock returns. Studies such as (Asness et al., 2019) show that firms with strong profitability, stable earnings and lower financial risk tend to outperform firms with weaker fundamentals. Similarly, empirical evidence from emerging markets (Reenen, 2021) indicates that quality-based investment strategies can generate positive risk-adjusted returns and improve the explanatory power of traditional asset pricing models (Lalwani & Chakraborty, 2019).

The findings imply that firm quality may represent a significant determinant of stock returns, particularly in markets characterized by higher volatility and information inefficiencies. Since the Colombo Stock Exchange exhibits characteristics typical of emerging markets including market volatility and potential mispricing, it is reasonable to expect that firm quality may influence stock return behavior in this market. Based on these theoretical arguments and empirical findings, the following hypotheses are proposed.

2.4.Hypotheses

H1: Firm level quality attributes significantly differentiate between high-quality and low-quality firms listed on the CSE.

H2: The QMJ factor generates statistically significant excess returns in the Sri Lankan context

H3: The QMJ factor provides superior explanatory power for cross-sectional stock returns compared to traditional asset pricing factors such as the Size (SMB) factor in the Sri Lankan context.

2.5.Conceptual Framework

The conceptual framework illustrates the relationship between systematic risk factors and excess stock returns at the firm level. The framework incorporates three key factors used to explain stock returns in the Colombo Stock Exchange they are market factor (MKT), the size factor (SMB) and the quality factor (QMJ).

The market factor represents economy wide systematic risk affecting all firms in the market. The size factor captures differences in firm size, typically by market capitalization and reflects the return variation between small and large firms. The quality factor represents firm-level financial strength, measured through indicators such as profitability, growth and financial stability. The framework assumes that both market-wide conditions and firm-specific characteristics jointly influence excess stock returns, with particular emphasis on the additional explanatory role of firm quality in determining stock return variation.

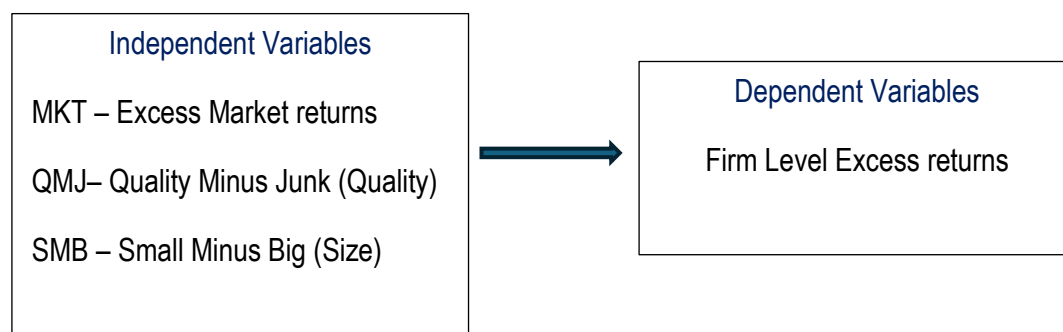


Figure 15- Conceptual Framework

3. Methods

3.1.Research Approach

This study adopts a quantitative, positivist and deductive research design to investigate whether firm-level quality characteristics and the QMJ factor explain cross-sectional stock returns on the Colombo Stock Exchange (CSE). The Quality Minus Junk (QMJ) framework developed by (Asness et al., 2019) forms the basis of the research design. The model is adapted for an emerging market context following the empirical approach of (Reenen, 2021), with necessary adjustments to reflect the structural characteristics of the Sri Lankan equity market.

3.2.Strategies

A factor-based asset pricing strategy is employed, focusing on the construction of systematic risk factors and their ability to explain excess stock returns. The study constructs three factors: the market factor (MKT), the size factor (SMB), and the quality factor (QMJ). Firms are sorted into portfolios based on firm-specific characteristics, and a long-short quality portfolio is formed to capture the quality premium. Hypotheses are tested using an econometric asset pricing framework consistent with established empirical finance literature.

3.3.Site

The research is conducted within the Colombo Stock Exchange (CSE), which represents Sri Lanka's primary equity market. The All-Share Price Index (ASPI) is used as the market proxy, reflecting overall market performance during the study period.

3.4.Sample

The sample consists of 172 firms listed on the CSE over the period 2011–2024, representing approximately 70% of ASPI-listed companies. Purposive sampling is applied to ensure data availability and consistency, particularly for growth-related quality measures that require at least five consecutive years of financial data. Secondary data are obtained from Central Bank of Sri Lanka publications, the CSE database, and audited annual financial statements.

Portfolio construction follows the methodology of (Reenen, 2021), adapted to the Sri Lankan context. First, firm-level quality scores were calculated annually using accounting-based measures representing profitability, growth and safety.

These three dimensions are widely used in the literature to capture different aspects of firm quality and reflect a firm's financial strength, operating performance and financial stability. (Asness et al., 2019).

Each variable was standardized to ensure comparability across firms, and a composite quality score was computed as the average of these standardized indicators.

At the end of each year, firms were ranked based on their overall quality score and split at the cross-sectional median. Firms that were above the median were classified as high-quality firms (Q) that were below the median were classified as low-quality firms (J).

The median split was selected in accordance with the portfolio construction approach adopted by (Reenen, 2021). Firms were divided at the cross-sectional median of the quality score to form balanced portfolios of high-quality and low-quality firms. This approach is particularly suitable for markets with relatively limited number of listed firms, as it ensures sufficient observations within each portfolio for reliable statistical estimation while maintaining consistency with prior empirical studies applying the QMJ framework in emerging market context.

The market factor (MKT) was proxied by the excess return on the ASPI, while the SMB factor was constructed by sorting firms annually based on market capitalization and dividing them at the median into small and big portfolios. The SMB return was calculated as the difference between small-cap and big-cap portfolio returns.

3.5.Measures

- **Excess Return:** Calculated as firm-level stock returns minus the risk-free rate, proxied by the 91-day Treasury bill rate.

$$R_{i,t}^{ex} = R_{i,t} - R_{f,t} \quad (1)$$

- **Market Factor (MKT):** Measured as the excess return on the market portfolio, calculated using the ASPI index minus the risk-free rate.

$$MKT_t = R_{m,t} - R_{f,t} \quad (2)$$

- **Size Factor (SMB):** Constructed as the return differential between small-cap and large-cap firms, based on market capitalization.

$$SMB_t = R_{small,t} - R_{big,t} \quad (3)$$

- **Quality Factor (QMJ):** Measured as the return difference between portfolios of high-quality and low-quality firms. Firm quality is assessed using three standardized dimensions such as profitability, growth and safety. Profitability reflects the ability of firms to generate earnings from their assets and equity and is measured using Return on Equity (ROE) and Return on Assets (ROA). Growth captures long-term improvements in profitability over a five-year period. Safety represents financial stability and risk characteristics and is measured using financial leverage. These dimensions follow the quality classification proposed by (Asness et al., 2019) who identify profitability, growth and safety as key indicators of firm quality within the QMJ framework.

- **Profitability:**

$$Profitability = z(z_{roe} + z_{roa}) \quad (4)$$

- **Growth:**

$$Growth = z_{roe(5)} \quad (5)$$

- **Safety:**

$$Safety = z_{lev} \quad (6)$$

Each quality metric is standardized using z-scores and combined to form a composite quality score.

$$Quality = z(Profitability + Growth + Safety) \quad (7)$$

Firms are ranked annually based on their composite quality score and divided at the cross-sectional median into two groups such as high-quality (Q) firms and low-quality (J) firms.

The Quality Minus Junk factor is constructed as the return difference between the high-quality portfolio and the low-quality portfolio.

$$QMJ = \frac{1}{2}(Quality) - \frac{1}{2}(Junk) \quad (8)$$

3.6. Analysis Tools

To examine the constructed factors, explain cross-sectional variations in stock returns, this study employs the two-pass regression methodology proposed by (Fama & MacBeth, 1973). This approach is widely used in empirical asset pricing research because it allows researchers to estimate factor loadings through time-series regressions and subsequently test whether these factors explain differences in expected stock returns across firms.

The Fama-MacBeth method is particularly suitable for factor-based asset pricing studies because it separates the estimation of risk exposures (betas) from the estimation of factor risk premia. This two-step procedure helps address potential cross-sectional correlation in

regression errors and provides more reliable statistical inference when testing asset pricing models.

First-pass regression (Time series regression)

In the first step, firm-specific factor loadings are estimated using time-series regressions of excess stock returns on the market, size, and quality factors.

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_{i,MKT}MKT_t + \beta_{i,SMB}SMB_t + \beta_{i,QMJ}QMJ_t + \varepsilon_{i,t} \quad (9)$$

Where:

- $R_{i,t}$ = Return of firm i at the time t
- $R_{f,t}$ = Risk-free rate
- MKT_t = Market factor
- SMB_t = Size factor
- QMJ_t = Quality factor
- β = Factor loadings

Second-pass regression (cross-sectional regression)

In the second step, cross-sectional regressions are performed to estimate factor risk premia associated with each factor.

$$R_{i,t} = \gamma_{0,t} + \gamma_{1,t}\beta_{i,MKT} + \gamma_{2,t}\beta_{i,SMB} + \gamma_{3,t}\beta_{i,QMJ} + u_{i,t} \quad (10)$$

Where:

- γ represents the risk premium associated with each factor.

Diagnostic test

To ensure reliable statistical inference, heteroscedasticity and auto-correlation consistent (HAC) standard errors, also known as Newey-West standard errors are applied. These adjustments account for potential serial correlation and heteroscedastic commonly observed in financial time series data.

In addition, Variance Inflation Factor (VIF) tests are conducted to examine potential multicollinearity among the explanatory variables. The diagnostic results confirm that multicollinearity is not a significant concern in the model. These diagnostic procedures help improve the robustness of the estimated results, particularly in the context of emerging financial markets where volatility clustering and serial correlation may occur.

4. Results and discussion

4.1.Data Description

The dataset covers monthly observations for firms listed on the Colombo Stock Exchange (CSE) over the period 2011–2024. The final sample consists of 172 firms, yielding approximately 24,500 firm-month observations. The variables analyzed include firm-level excess returns, the market factor (MKT), the size factor (SMB), and the quality factor (QMJ).

Table 32- Descriptive Statistics

	<i>Excess return</i>	<i>MKT</i>	<i>SMB</i>	<i>QMJ</i>
Mean	-0.09475351	-0.109807174	0.005915	-0.00115
Standard Error	0.00126155	0.000558915	0.000229	0.000213
Median	-0.09397379	-0.087840038	0.002635	0.003172
Mode	-0.0751	-0.154299173	-0.00746	-0.01102
Standard Deviation	0.197262264	0.087484023	0.035796	0.03339
Sample Variance	0.038912401	0.007653454	0.001281	0.001115
Kurtosis	467.809871	4.853460594	5.639841	3.289476
Skewness	11.93297031	-1.931663022	1.582486	-1.11336
Range	10.08219212	0.597745374	0.271842	0.239761
Minimum	-1.2592152	-0.514492365	-0.09482	-0.15302
Maximum	8.822976923	0.083253009	0.177024	0.08674
Sum	-2316.72339	-2690.275755	144.9295	-28.0636
Count	24450	24500	24500	24500

The descriptive statistics provide insights into the distribution and volatility of excess returns and factor portfolios during the sample period. As shown in Table 1, excess returns exhibit substantial volatility and strong positive skewness, indicating that stock returns are influenced by occasional extreme positive movements rather than stable average performance. The extremely high kurtosis suggests the presence of heavy tails in the return distribution, which is consistent with financial markets experiencing significant macroeconomic and political shocks.

These characteristics align with several major disruptions affecting Sri Lanka during the sample period, including the 2019 Easter attacks, the COVID-19 pandemic and the 2022 economic crisis (World Bank, 2023). Such events typically lead to unexpected market declines followed by short recovery periods, contributing to the observed non-normal distribution of returns.

The market factor (MKT) also exhibits a negative average excess return, suggesting that the overall market performance was frequently below the risk-free rate during the sample period. This reflects broader macroeconomic instability and declining investor confidence that characterized the Sri Lankan economy over the study period.

The size factor (SMB) shows a slightly positive average return, which means that small-cap firms tend to do better than large-cap firms. This is known as a small-cap premium. This pattern

aligns with findings from emerging markets, indicating that smaller firms are linked to increased risk and potential growth opportunities (Fama & French, 1993).

The quality factor (QMJ) has a little negative average return. This indicates that high-quality firms in Sri Lanka did not consistently outperform low-quality firms, contrasting with worldwide research that demonstrate a tendency for high-quality enterprises to excel. (Fama & MacBeth, 1973).

Overall, the descriptive statistics indicate that the Sri Lankan equities market is marked by significant volatility, asymmetry, and the occurrence of extreme return observations. The characteristics require the utilization of robust econometric techniques, such as Newey-West (HAC) standard errors, to eliminate heteroskedasticity and serial correlation in asset pricing evaluations.

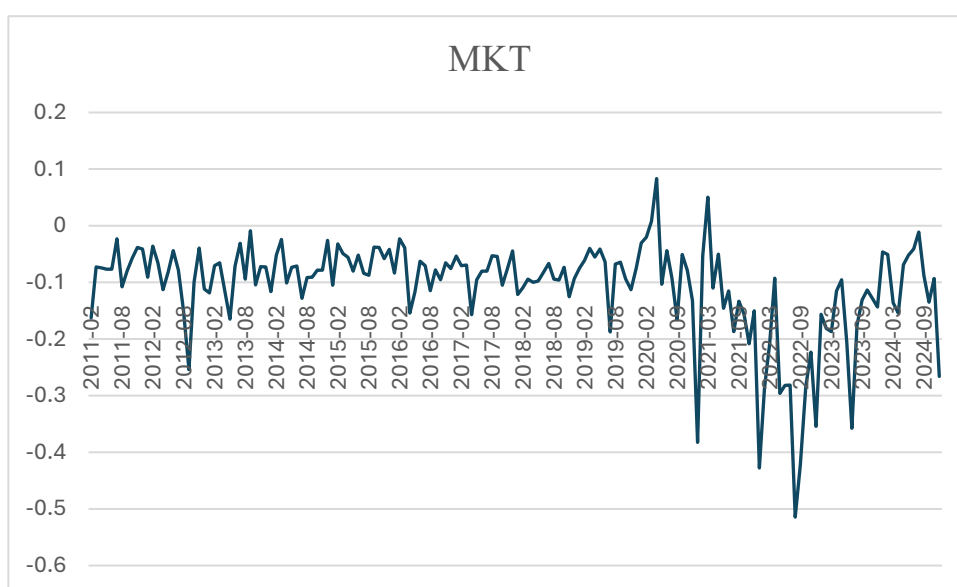


Figure 16 - Market Factor portfolio returns (2011-2024)

Figure 2 shows the time-series behavior of the market factor (MKT). It shows that there are often negative excess returns and significant volatility. A few sharp declines correspond to major macroeconomic disruptions, followed by relatively short recovery phases.

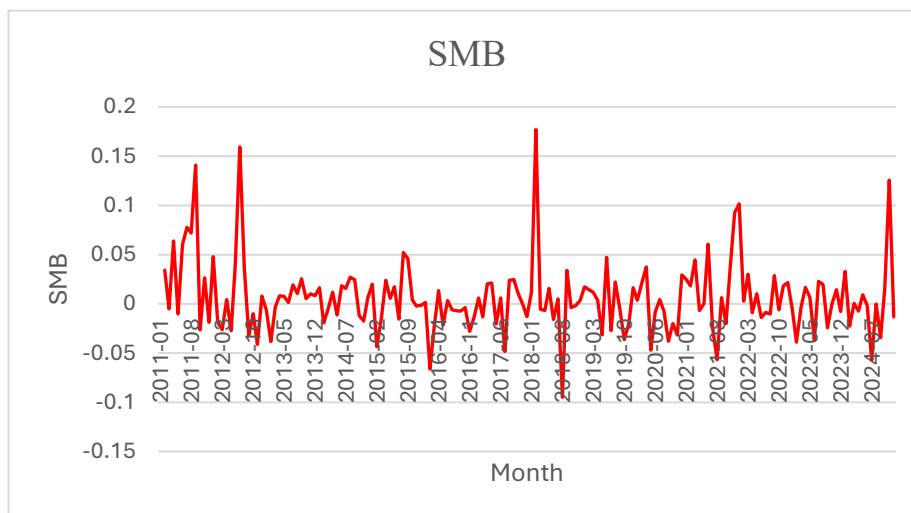


Figure 17- Size factor portfolio returns (2011-2024)

Figure 3 shows frequent fluctuations in the SMB factor with occasional sharp spikes, indicating periods in which small-cap firms temporarily outperform large-cap firms.

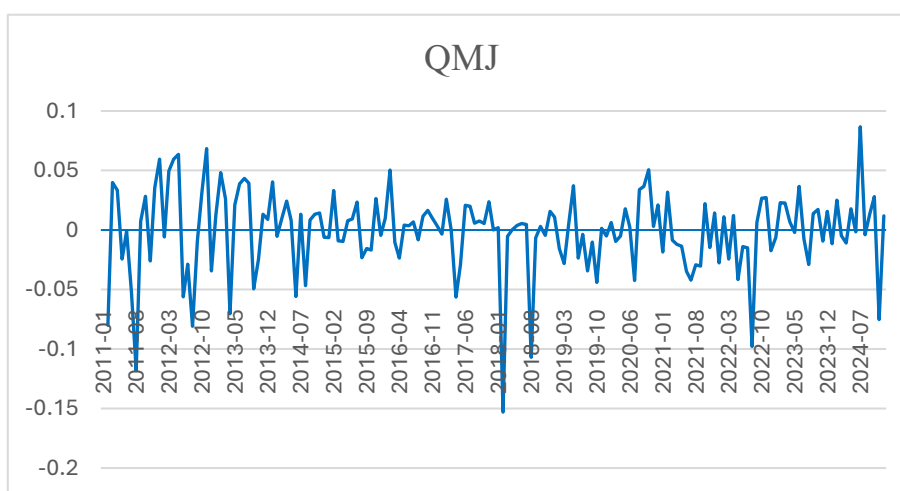


Figure 18- Quality Factor portfolio returns (2011-2024)

Figure 4 shows that the QMJ factor fluctuates around zero throughout the sample period. This suggests that the performance difference between high-quality and low-quality firms is relatively unstable in the Sri Lankan market.

Table 33 – Correlation Analysis

	<i>Excess return</i>	<i>MKT</i>	<i>SMB</i>	<i>QMJ</i>
Excess return	1			
MKT	0.092156357	1		

SMB	0.002406033	-0.0824	1	
QMJ	-0.09253695	0.195737	-0.40735	1

The correlation matrix provides preliminary evidence on the relationships between excess returns and the factor portfolios.

The weak positive correlation between excess returns and the market factor indicates that systematic market risk alone does not adequately demonstrate variations in firm-level returns on the CSE. This finding aligns with evidence from various emerging markets, where the explanatory power of traditional asset pricing models is often limited. For instance, (Lalwani & Chakraborty, 2019) show that the multifactor asset pricing models in emerging economies do not always fully capture cross-sectional variations in stock returns due to market inefficiencies, lower liquidity, and structural characteristics. These features can weaken the relationship between market beta and expected returns, indicating that additional firm-specific or behavioral factors may influence return dynamics in emerging equity markets.

The near-zero correlation between excess returns and the size factor indicates that firm size does not play a major role in explaining cross-sectional return differences in the Sri Lankan market. The correlation between excess returns and the quality factor is slightly negative. This suggests that periods in which quality firms outperform junk firms are not associated with higher overall excess returns in the market. Among the factors, the strongest relationship occurs between SMB and QMJ, which exhibit a moderate negative correlation. Economically, this indicates that smaller firms in the Sri Lankan market tend to exhibit lower quality characteristics, while larger firms are generally associated with stronger financial fundamentals.

Table 34 - Fama-MacBeth Regression

Factor	lambda/Risk premium	se_nw	t_stat	p_value
(Intercept)	-0.0912	0.0139	-6.5554	0.0000
MKT	-0.0079	0.0106	-0.7446	0.4576
SMB	0.0057	0.0037	1.5266	0.1288
QMJ	-0.0016	0.0031	-0.5161	0.6065

The Fama-MacBeth regression results estimate the cross-sectional risk premia associated with the market, size, and quality factors.

During the sample period, none of the three factors show statistically significant risk premia. This shows that traditional asset pricing factors do not explain cross-sectional differences in excess returns in the Colombo Stock Exchange.

The market factor generates an insignificant risk premium. This contradicts the prediction of the Capital Asset Pricing Model, which assumes that investors should be compensated for exposure to systematic market risk.

The size factor shows a positive but statistically insignificant coefficient. This provides weak evidence of a size premium but indicates that firm size is not consistently priced in the Sri Lankan equity market.

The quality factor has a negative and statistically insignificant coefficient. This discovery contradicts global data indicating that high-quality firms often provide high risk-adjusted returns (Asness et al., 2019). Research on emerging economies, including South Africa, has demonstrated that quality variables substantially account for stock returns (Reenen, 2021).

The lack of a quality premium in Sri Lanka indicates that fundamentals like profitability, growth, and financial stability are not reliably reflected in stock prices.

Table 35 - Variance Inflation Factor

MKT	1.039819
SMB	1.198891
QMJ	1.238184

The VIF statistics indicate that multicollinearity is not a concern in the regression model.

4.2.Hypothesis Testing

- **H1:** Firm-level quality attributes significantly differentiate between high-quality and low-quality firms listed on the CSE.
Result: Partially supported. Quality conceptually distinguishes firms into quality and junk portfolios, but these distinctions do not translate into superior return outcomes.
- **H2:** The QMJ factor generates statistically significant excess returns in the Sri Lankan context.
Result: Rejected. The QMJ factor exhibits a negative and statistically insignificant risk premium, indicating the absence of a quality premium.
- **H3:** The QMJ factor provides superior explanatory power for stock returns compared to the size (SMB) factor.
Result: Rejected. The size factor shows that it is relatively stronger, though still insignificant, explanatory power than the quality factor.

4.3.Inferences

The findings indicate that traditional factor-based asset pricing factor models have limited explanatory power in the Sri Lankan context. Specifically, systematic risk factors such as

market risk, firm size, and firm quality do not generate statistically significant risk premia. The lack of a quality premium is especially significant as it contradicts extensive international literature, evidencing the superior performance of high-quality firms. Studies such as (Asness et al., 2019) show that quality-based investment strategies generate consistent excess returns across global markets.

The findings suggest that firm fundamentals may not be consistently reflected in stock prices in the Sri Lankan equity market. Similar patterns have been observed in several emerging markets where structural characteristics and market frictions weaken the explanatory power of traditional asset pricing models (Lalwani & Chakraborty, 2019). From an economic perspective, this implies that global factor-based investment strategies may not produce similar outcomes in smaller emerging markets such as Sri Lanka. Empirical studies also show that the performance of factor strategies can vary across markets, particularly between developed and emerging economies (Lalwani & Chakraborty, 2019; Reenen, 2021). Overall, the insignificant risk premia observed in this study therefore suggests that traditional factor models have limited explanatory power in explaining stock returns on the Colombo Stock Exchange.

5. Conclusion

5.1. Summary

The objective of this research was to investigate the significance of the Quality Minus Junk (QMJ) factor as an indicator for stock returns on the Colombo Stock Exchange (CSE) within an emerging market structure. The research adopted a quantitative approach and relied on secondary data for the period from 2011 to 2024.

The research framework adapted the methodology proposed by (Reenen, 2021). The Fama-MacBeth two-pass regression method was employed to examine the role of market (MKT), size (SMB), and quality (QMJ) factors for analyzing cross-sectional excess stock returns.

The results indicate that quality factors based on firm-level quality attributes of profitability, growth, and financial stability can conceptually differentiate high-quality firms from low-quality firms. However, none of the examined factors generated statistically significant risk premia. Specifically, the QMJ factor did not produce a positive quality premium, suggesting that quality as a systematic risk factor is not priced in the Sri Lankan equity market during the study period.

Overall, the findings indicate that traditional factor-based asset pricing models provide limited explanatory power for stock return variation in the Colombo Stock Exchange during the study period.

5.2. Recommendations

To improve the effectiveness of factor-based investing and pricing efficiency in the Colombo Stock Exchange, regulatory authorities should prioritize enhancing corporate disclosure quality and transparency. Improved disclosure can strengthen the availability of firm-level information, which may help investors better incorporate fundamental signals such as profitability and financial stability into stock prices.

Measures to improve market liquidity and broaden institutional investor participation could also support more efficient price discovery mechanisms, thereby strengthening the relationship between firm fundamentals and stock returns. Investor education initiatives may further encourage long-term investment strategies and reduce short-term speculative trading behavior.

5.3.Limitations

This study is subject to several limitations. The presence of regulated short selling in the CSE (Colombo Stock Exchange, 2025) limits the full implementation of long-short factor strategies such as the QMJ portfolio, which may affect the ability to capture the return difference between high-quality and low-quality firms. Portfolio rebalancing was conducted annually, which may reduce the responsiveness of factor portfolios to short-term changes in firm characteristics. In addition, transaction costs, liquidity effects, and alternative measures of firm quality were not included in the analysis, which may influence the estimated magnitude of factor returns. Data availability and software constraints also limited the scope of the study. Finally, the study period coincides with significant economic and political instability in Sri Lanka, including the 2019 Easter attacks, the COVID-19 pandemic and the 2022 economic crisis which may have influenced the estimated factor risk premia (World Bank, 2023).

5.4.Future Research

Future studies could extend this research by incorporating additional risk factors such as momentum, liquidity or ESG characteristics as these factors can also affect stock and may capture risks that are not reflected in the traditional market, size and quality factors. Using different measures of firm quality and higher frequency data may also help researchers better understand how stock returns change over time and how firm characteristics influence market performance.

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EXPLORING DISABILITY RELATED-BARRIERS AND THEIR IMPACT ON WOMEN ENTREPRENEURS WITH DISABILITIES IN SRI LANKA: A QUALITATIVE STUDY

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Abstract

Purpose: Although entrepreneurship by women is crucial to economic development, women with disabilities are grossly underrepresented with intertwined social and structural disadvantages. This paper discusses the special issues of women entrepreneurs with disabilities in Sri Lanka and how these systemic issues affect their personal experiences, the level of participation, and the sustainability of the business venture within the larger national economy.

Design/methodology/approach: The study will follow a qualitative research design based on semi-structured interview on 20 women entrepreneurs with disabilities in Sri Lanka. Selection was done using purposive and snowball sampling methods and data saturation was reached after 15 interviews. Patterns were identified and interpreted through thematic analysis that gave interpretations about lived experiences and social-economic challenges of the participants. Such a stringent analysis methodology emphasizes the obstacles that these women encounter in the larger national economy and makes certain that their voices are properly articulated via systematic identification and interpretation of the gathered qualitative data to both academic and policy ends.

Findings: Results indicate a mix of external and internal challenges that affect women entrepreneurs with disabilities in Sri Lanka. External factors include a lack of access to finance, education, technology and competitive markets, social stigma, and lack of institutional support. The internal barriers are associated with self-confidence, psychological strength, and coping strategies. In spite of these limitations, participants exhibited incredible perseverance, flexibility, and resolve to continue with business operations. These findings highlight the necessity of a comprehensive strategy that considers structural inequalities, and psychological empowerment in the specific national context of these particular resilient women entrepreneurs who are currently in operation.

Research limitations/implications: The study is qualitative and its sample size is too small to be generalized. However, it offers valuable implications for policymakers to design inclusive support systems and targeted interventions to improve opportunities for women entrepreneurs with disabilities within the unique, challenging Sri Lankan economy.

Originality/value: The paper helps to fill the gap in the literature on disability and gender in entrepreneurship by offering context-specific information about the situation in Sri Lanka. It highlights intersectional issues and the importance of more inclusive and equitable entrepreneurial ecosystems.

Keywords: Disability Barriers; Entrepreneurship; Gender; Women

1. Introduction

Globally, entrepreneurship continues to be one of the arenas of intense exclusion in relation to some 1.3 billion individuals with disabilities as it is estimated to be about 16% of the world's population ([Hai Anh & Vinh, 2024](#); [UNDESA, 2024](#)). Within this population, WWD face a certain and compounded difference vulnerability based on the multifaceted and co-constitutive nature of gender bias, disability status, and socio-economic marginalization ([Gannon et al., 2022](#); [Hidegh et al., 2023](#)). Although the 2030 Agenda that related to Sustainable Development explicitly states that it will leave no one behind, these individuals stay visibly invisible in the mainstream economic development. They are often marginalized through what can be described as architectures of absence, in which their needs and lived realities are simply overlooked in an organized manner by the existing mainstream economic systems ([Bigler et al., 2025](#); [Yousfzai et al., 2025](#)).

The attainment of meaningful employment among people with disabilities in most low- and middle-income settings is still a issue of concern, which has structural violence and institutional ableism as its deep rooted components ([Shaw et al., 2022](#)). The labor market statistics show that there is a huge gap between employed (27%) and non-employed (56%) people with disabilities across the world ([UNDESA, 2024](#)). In the case of women, these inequalities are even more acute. WWD receive about around 17% - 20% lower compensation compared to disabled men, only a third of these women are hired as policy makers or senior managers in the world ([UNDESA, 2024](#); [UNICEF, 2025](#)). As a result, entrepreneurship becomes a key survival mechanism, and an avenue to economic/social emancipation out of the exclusionary and discriminatory labor markets. To a significant number of WWD, it is a chance not only to develop professionally, but also to manifest the neoliberal desire, going beyond the expansion of the business ([Habib & Cooney, 2025](#); [Yousfzai et al., 2025](#)).

Even the entrepreneurial ecosystem is certainly not a playing field of meritocracy or a neutral field. It is often built around a type of the heroic male entrepreneur, favors non disable status, autonomy, and hegemonic masculinity ([Bruin & Swail, 2024](#); [Williams & Patterson, 2019](#)). This prevailing myth of the entrepreneur being an autonomous agent of a “creative destruction” is likely to undervalue social and economic infrastructures as constitutive and not conditions ([Ashalatha et al., 2024](#); [Hidegh et al., 2022](#)). In the case of WWD, it is a triple layered gendered expectation in which the perfect occupation of a man is one that is male, physically fit, and does not have to take care of children ([Bruin & Swail, 2024](#); [Keim et al., 2024](#)). The resultant institutional gaps compel women with disabilities (WWD) to have to compel systemic financial exclusion. Venture capital typically takes a preventative based assessment strategy that predominately values perceived risk rather than potential, and tends to view disability as an inalienable economic liability ([Driscoll et al., 2025](#); [Koch et al., 2025](#)).

In addition to the structural barriers, women with disabilities also affected by deep structural and digital barriers. Physical inaccessibility, including the inaccessibility of ATMs, transportation networks, and business premises, carries out daily spatial exclusion acts ([Bigler et al., 2025](#); [Yousfzai et al., 2025](#)). Simultaneously, there are the challenges of the digital divide

of equal significance. Although technology can be a digital safety net, 64% of women with disabilities do not have access to essential assistive technologies, and 98% of regular websites are not designed to meet international accessibility criteria which effectively lock them out of the booming online economy ([James et al., 2025](#); [Jetha et al., 2023](#); [UNDESA, 2024](#)).

These external limitations are further amplified by inner psychological limitations and identity related difficulties. Consecutive external examination of ability can readily cause women with disabilities to internalize systematic prejudice as personal inadequacy. This presents itself as an “imposter syndrome” and leads to serious degrees of entrepreneur burnout ([Driscoll et al., 2025](#); [Holland et al., 2025](#)). Ironically, though high self-efficacy has been commonly linked to entrepreneurial success, it can also serve as a demotivational factor to the disabled entrepreneur, where the increased awareness of systemic limitations can increase perceptions of threat and challenge ([Meng & Kim, 2025](#)). The present study makes a contribution to the entrepreneurship literature through the application of Intersectionality Theory and the Social Model of Disability to a multi-level analysis of such challenges ([Klangboonkrong & Baines, 2022](#)). It re-positioning entrepreneurship by going beyond growth focused and economically diminutive measures of success, and transforms entrepreneurship into a place of survival, resistance, and identity work ([Hidegh et al., 2023](#)). This kind of perspective not just highlights long-standing policy practice disconnect but also makes the urgency of qualitative research within which it is possible to prospect through lived experience and non-monetary kinds of entrepreneurial value, including social integration, personal autonomy, and the deconstruction of dependency scripts ([Klangboonkrong & Baines, 2022](#); [Widiastuti et al., 2024](#)). Finally, the paper aims to elevate the voices of women with disabilities and make them more authentic, which will contribute to the building of a more inclusive and equal entrepreneurial ecosystem ([Habib & Cooney, 2025](#); [Samer Ali A, 2023](#)).

2. Literature review

The PRISMA 2020 guidelines were used to facilitate methodological rigor and transparency in this systematic literature review. The search strategy involved finding out the literature relevant to women entrepreneurs with disabilities that are operating in developing countries. The search was done through various important databases such as Emerald Insight, Taylor and Francis, ScienceDirect, and Wiley Online Library.

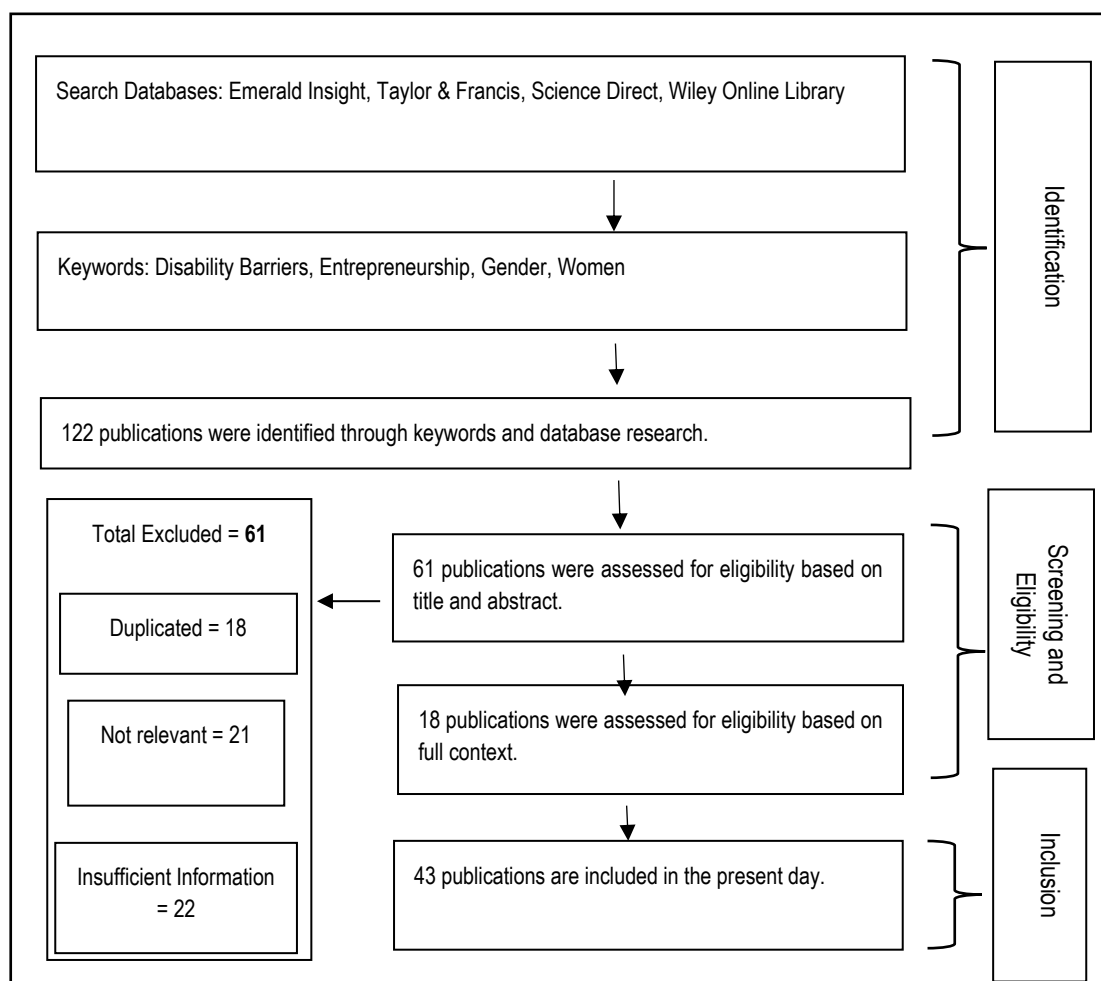


Figure 0.15: PRISMA Model

Source: Author's Illustration

2.1 Structural Barriers Shaping Entrepreneurial Experiences

The world entrepreneurial arena has been marked by great rates of exclusion of approximately 1.3 billion persons with major disabilities that make up about 16% of the world population ([Hai Anh & Vinh, 2024](#); [UNDESA, 2024](#)). The combination of gender bias, disability status, and socio economic marginalization between women entrepreneurs with disabilities creates a special and exaggerated triple differential vulnerability of women entrepreneurs with disabilities, which is a multi-layered structural disadvantage ([Gannon et al., 2022](#); [Hidegh et al., 2023](#)). Women, children, and the disabled remain at the periphery of the mainstream economic development, even when the 2030 Agenda of Sustainable Development recognizes their critical role in economic development, and the importance of not leaving anyone behind, it is clear that they are never considered in the mainstream economic development developments, and are often lumped in the so called architectures of absence, whereby the economic development systems deliberately overlook their needs and lived realities. This study aims to investigate how structural, socio cultural, and psychological barriers overlap with one

another and jointly determine the entrepreneurial decisions of women with disabilities in an interrelation way.

2.2 Exposing Exclusion Within The Entrepreneurial Ideal

The criticism towards modern studies of entrepreneurship is sometimes based on the fact that these studies are interested by the so called heroic person image, which is usually depicted as a single bodied, self-governing, unmarried man who reinforce dominant masculinity ideals. To begin with, the authors demonstrate that the majority of people affected by gender bias experience greater psychological stress and diminished mental well-being. First of all, the authors show that most of the individuals who experience the impacts of gender bias have a higher level of psychological stress and reduce mental health, which implies the consistency of findings throughout the studies. The Schumpeterian perspective of the entrepreneur as a free and independent agent in the process of a creative destruction fails to provide enough description to the proliferative and ubiquitous processes that involve social, political, and economic infrastructures as constitutive processes, not as externalities, not as externalities, which limits its explanatory capacity ([Ashalatha et al., 2024](#); [Welter, 2018](#)).

One of the reasons why women are marginalized is such male centered norm, which is frequently evaluated according to the masculine standards and can either be found to be performing poorly or lacking ([Ahl & Marlow, 2012](#); [Panda, 2018](#)). Institutional ableism is a source of this bias in the case of WWD, in which impairment is perceived as a type of medical inadequacy that needs to be rectified rather than a socially constructed identity based on exclusionary spaces ([Jammaers, 2020](#); [Mota et al., 2020](#)). Consequently, a significant segment of WWD gets into entrepreneurship as a development but as a necessary survival decision and as an economic and social emancipation initiative in terms of labor markets where industrial relations are defined by structural violence and systematic lockout, which indicates that entrepreneurship is a necessity as well as a resistance ([Habib & Cooney, 2025](#); [Shaw et al., 2022](#); [Yousfzai et al., 2025](#)).

2.3 The Intersectional Politics of Entrepreneurial Participation.

The intersectionality of genders and disabilities is one of the least developed areas of entrepreneurship literature, and many of the studies are, to a large degree, afflicted by an issue known as lazy intersectionality, in which identities are treated as isolated objects rather than constitutive of each other, thereby restricting an in depth understanding ([Swartz, 2023](#); [Williams & Patterson, 2019](#)). There is a tendency of the modern literature to assume that women can be able bodied entrepreneurs and that disabled individuals are men, giving women with disabilities no space to conceptualize ([Rau & Baykara-Krumme, 2024](#); [Williams & Patterson, 2019](#)). The models of neoliberalism are more proximate to personal responsibility and are therefore most appropriate in explaining the pay gap and barriers to women in general as stipulated by the law, but they fall short of explaining structural inequalities ([Ahl & Marlow, 2012](#); [Ejaz et al., 2023](#)).

In practice, WWD experience a triple gendered expectation, according to which the ideal professional is a man, strong, and independent ([Bruin & Swail, 2024](#); [Keim et al., 2024](#)). The

global data assists in highlighting the degree of such marginalization, the percentage of employment of persons with disabilities is half as low as the rest of the world, 27% compared to 56% of those without disabilities ([UNDESA, 2024](#)). The earning of WWD is approximately 17% - 20% lower than that of men ([UNDESA, 2024](#)). WWD are only holding 3% of the leadership positions such as legislators, high level officials, and executives in all nations of the world ([UNICEF, 2025](#)). The fact that the policy performance is imbalanced with the so called symbolical promises regarding inclusion failing to give way to the inclusion of fiscal or educational resources also worsens the state of these inequalities, which is another sign of a serious policy-practice gap ([Colombi Evangelista et al., 2025](#)).

2.4 External Structural Barriers: Bridging Institutional Void.

WWD operate in the condition of institutional vacuums, which is characterized by institutional neglect ([Ejaz et al., 2023](#)). Financial Exclusion remains the largest roadblock when it comes to access to capital, specifically in formal financial systems. Disability is perceived by financial institutions and venture capitalists as an inherent expense in the economy and concentrates their prevention based queries to the female population which emphasizes risk reduction instead of economic growth, which supports their exclusionary financialization ([Driscoll et al., 2025](#); [Koch et al., 2025](#)). The so called benefit traps also increase financial invisibility, as it is evident that a business owner fears losing the necessary government assistance, in case their businesses end up being successful enough, which discourages the growth of entrepreneurship ([Holland et al., 2025](#); [Shah et al., 2024](#)).

Digital tools can be viewed as so called Digital Safety Nets to bypass the physical mobility restrictions and a significant number of WWD lack access to high-speed internet, assistive technologies, and comprehensive digital skills education ([James et al., 2025](#); [Jetha et al., 2023](#)). 64% of WWD lack the aids to easier work, and 98% of traditional sites do not correspond to the international accessibility standards, which basically excludes them off the online boom economy ([UNDESA, 2024](#); [UNICEF, 2025](#)). Environments represent a barrier to planning, which able bodied peers would not suffer as a result of the lack of ramps, accessible transportation, and suitable premises due to barriers, restrict equal participation ([Smith et al., 2021](#); [Yousfzai et al., 2025](#)).

2.5 Internal Barriers: Psychological Negotiation and Identity Work.

Structural exclusion has a dramatically psychological effect, creating accumulated entrepreneurial exhaustion and the need to negotiate the ontological labor as example effort to prove the productivity and validity, within the society where disability is equated to helplessness, aggravating identity struggles ([Holland et al., 2025](#); [Yousfzai et al., 2025](#)). After constant outside scrutiny, most WWD develop a systemic bias into personal weakness, which comes to form as an Imposter Syndrome, as personalized stigma ([Driscoll et al., 2025](#); [Hidegh et al., 2023](#)). To achieve legitimacy, WWD resort to significant emotional work in order to become normal to avoid ableist generalizations ([Hidegh et al., 2023](#); [Kašperová, 2021](#)).

As the entrepreneurial self-efficacy (ESE) is a way to success, it can also be the source of discouragement in the case of disabled entrepreneurs because they develop the more pronounced sense of the impossibility of the situation and fear of failures, which makes it a paradox of motivation ([Meng & Kim, 2025](#)). On the other hand, adversity may become a stimulus towards a so called challenge-based entrepreneurship, where WWD use the experience of adversity to create innovative products in the disability market, thus turning impairment into a type of symbolic capital, proving resilience and innovation ([Ashalatha et al., 2024](#); [Kašperová, 2021](#)).

2.6 The Social Support and Networks.

The success of entrepreneurs is highly dependent on the presence of empowering social networks. But the facts show that the marginal groups are often disconnected to high status formal networks that will bring them the access to capital and legitimacy, which accentuates the structural exclusion of the economic opportunity ([David et al., 2025](#); [Ejaz et al., 2023](#)). WWD tend to seek emotional support and mentoring through informal networks and collective support based on gender, but these networks do not in most cases offer specific financial or institutional advantages ([Habib & Cooney, 2025](#); [Wasserman & Baikovich, 2023](#)). Support by the family is crucial to the maturation of the relational autonomy, but the overprotecting family members can unintentionally undermine the self-determination and mobility by the substituted decision-making mechanisms, which are indicative of unintended barriers to personal agency ([Csillag et al., 2019](#); [Smith et al., 2021](#); [UNDESA, 2024](#)). In some situations, disability service organizations can turn into the place of corruption or intimidation, isolating even more the very women they aim to assist, with the weakness of institutional support ([Bigler et al., 2025](#); [Holland et al., 2025](#)).

2.7 Gap in Methodology and Success Reduced.

One of the major shortcomings of existing literature is the fact that measurement bias is largely used to assess the success of entrepreneurs mainly based on the economic benefits such as profit and growth, ignoring the social, personal, and identity-based outcomes ([Klangboonkrong & Baines, 2022](#); [Orser et al., 2025](#)). In the case of WWD, entrepreneurship is a place of survival and resistance, thus, success should be redefined to reflect non-monetary outcomes, such as social integration, personal autonomy, and dependency narratives disruption, focusing on the qualitative aspects of the entrepreneurial value ([Habib & Cooney, 2025](#); [Widiastuti et al., 2024](#); [Yousfzai et al., 2025](#)).

A vast majority of the existing studies are incomplete, duplicating the individual results about gender or disability but failing to conduct them within a single intersectional framework, which restricts the insight into the compounded disadvantages ([Csillag et al., 2019](#); [Williams & Patterson, 2019](#)). Longitudinal and qualitative data, that loss the processual trajectory of well-being and the identity work needed to make a business survive over time, is deficient, and under researched is the lived experience of WWD ([Almeida et al., 2026](#); [Yousfzai et al., 2025](#)). Moreover, it is biased in the Western sense, often neglecting the institutional emptiness and structural violence faced by WWD in the Global South, where 80% of the world disabled

population lives, making context-sensitive research significant ([Bigler et al., 2025](#); [UNDESA, 2024](#)).

2.8 Conclusion: Introduction to an Emancipatory Research Agenda.

This review highlights that WWD are not victims of assistance but agents of change who maneuver, juggle, and deal with multiple mechanisms of oppression, which exhibit agency, resilience, and innovation ([Habib & Cooney, 2025](#); [Mota et al., 2020](#)). With a medicalized discourse switching to a right based and intersectional framework, scholarship has a better chance of tackling systemic inequities and barriers. The scholarship can start paying attention to the serial inequities that limit the agency and dignity of WWD ([Holland et al., 2025](#); [Shaw et al., 2022](#)). A policy practice disconnect is only overcome by a fundamental re-politicization of entrepreneurship as a means of social justice and personal liberty, by redefining entrepreneurship outside of economic indicators ([Hidegh et al., 2022](#); [Klangboonkrong & Baines, 2022](#)). Finally, we should build a more open ecosystem, the one that takes into consideration the humanity and innovative power of systematically marginalized people, and allows their inclusion, empowerment, and sustainable involvement ([Yousfzai et al., 2025](#)).

3. Methodology

3.1 Qualitative Meta-Synthesis Design.

The paper uses a qualitative meta-synthesis to explore the lived experiences of WWD in the world of entrepreneurship. A meta synthesis is an interpretive approach that allows the compilation of findings of various qualitative studies systematically to create new theoretical contributions and conceptual knowledge ([Colombi Evangelista et al., 2025](#)). In contrast to traditional narrative reviews, the meta synthesis is more effective to discover particular patterns, cause and effect relationships, and systemic pressures in heterogeneous institutional and geographical contexts and clarify the structural and social processes, which influence the entrepreneurial path of WWD ([O'Brien & Cooney, 2024](#)). The latter methodological approach is especially adequate when it comes to study the feminization of disability along with the strategies deployed by women in resource-limited settings to balance between caregiving and entrepreneurial endeavors ([Bigler et al., 2025](#); [Habib & Cooney, 2025](#)). The meta synthesis previews lived experiences, agency, and intersectional barriers to sum up the difficulties that WWD go through and the adaptive strategies that they use.

3.2 Interpretative Framework and Standards.

The paper follows a five-step interpretive model in order to guarantee methodological transparency and scholarly rigor ([Colombi Evangelista et al., 2025](#)). The analysis predicts the lived experience of WWD, considering the structural absenteeism in which they exist ([Yousfzai et al., 2025](#)). The inclusion criteria were studies that utilized qualitative methods such as semi-structured interviews, ethnography, and culture based research to describe the subjective realities, identity work and processes of negotiation of participants ([Hidegh et al., 2023](#); [Orser](#)

[et al., 2025](#)). Available studies that were chosen covered the nexus between disability and entrepreneurship. Going beyond traditional Social Models of Disability, this synthesis includes physical, sensory, cognitive, and mental health-related conditions and, therefore, provides a more comprehensive view of the experiences of WWD ([Klangboonkrong & Baines, 2022](#); [Shaw et al., 2022](#)).

3.3 PRISMA-Style Flow and Sample Consistency of Screening.

The process of screening was increased in terms of transparency and methodological rigor with the help of PRISMA. The search in Emerald Insight, Taylor and Francis, ScienceDirect, and Wiley Online Library provided 122 publications. After the removal of duplicates and ineligible records, 61 studies were screened, 43 included following full-text review and snowballing. This procedural approach gave thematic saturation, and provided a complete coverage of intersectional barriers against women with disabilities ([Bigler et al., 2025](#); [Klangboonkrong & Baines, 2022](#); [Somià, 2025](#)).

3.4 Thematic Synthesis and Data Extraction.

To enable systematic coding by interpretation and the discovery of systemic patterns and relationships, Thematic Analysis and Grounded Theory were used consecutively ([Mota et al., 2020](#); [Yousfzai et al., 2025](#)). The open coding step was used to identify the main issues, such as capitals scarcity, the responsibility of caring, and market unreachability. The stage of axial coding demonstrated that structural barriers like inaccessible infrastructure and spatial exclusion were found to be connected, which offered a clue to the fact that obstacles affecting WWD are interdependent ([Yousfzai et al., 2025](#)).

The codes have been grouped together into high level thematic domains. Structural and Institutional Barriers and Psychological Well-being Negotiation ([Colombi Evangelista et al., 2025](#)). NVivo software was used to handle the code density, make the auditability and integrate theoretical frameworks and empirical findings systematically ([Hidegh et al., 2023](#); [O'Brien & Cooney, 2024](#)).

3.5 Research Impact and Methodological Rigor.

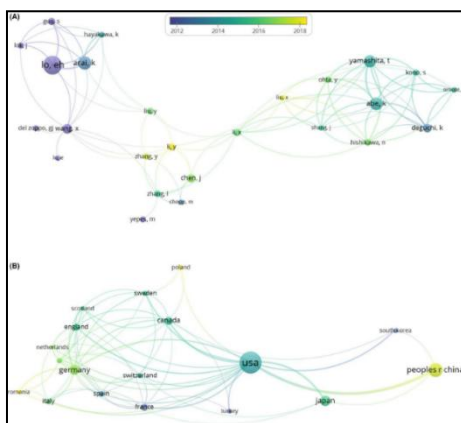
It is a subjective methodology, whereby it stresses the experiences of people regarding their lives as the experts of their own story and overturns the normative and ableist paradigms of studying disabilities ([Bigler et al., 2025](#); [Habib & Cooney, 2025](#)). The research aims to generate descriptive and transformative outcomes by foregrounding lived experience, identity negotiation, and coping strategies to fill the gap between the abstract theorization and the actionable policy ([Hess et al., 2025](#)). The study advances an emancipatory approach to study entrepreneurship that brings to the fore agency, creativity, and the social value of historically marginalized women and hence advocates inclusive entrepreneurial ecosystems ([Habib & Cooney, 2025](#); [Klangboonkrong & Baines, 2022](#); [Yousfzai et al., 2025](#)).

3.6 Data Extraction and Analysis

Data of the selected studies were tabulated based on a standardized extraction form which contained the information of authors, year of publication, country, research design, sample variables, major findings of the study, and policy implications. A bibliometric review of VOS Viewer mapped co-authorship networks, keyword co-occurrence and geographical knowledge gaps that provided information about research centers, collaboration nativities and research gaps.

Analysis in the VOS viewer created three major visualizations:

Country Collaboration Map (Figure 3.1): The map shows the trends of research cooperation between countries, which indicates the presence of a research network in a certain region, and which determines the countries with the least research output.

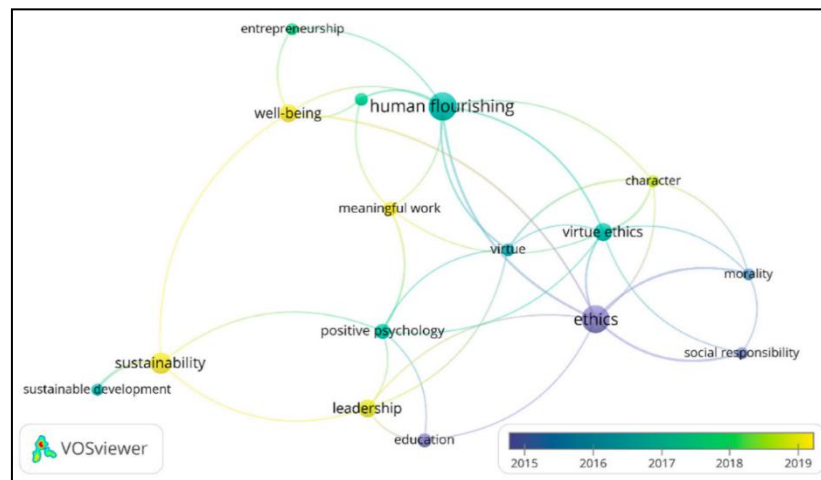


Source: Author's Illustration

Figure 0.16: Country collaboration map showing research networks on women entrepreneurs with disabilities.

The figure outlines the trends of international cooperation and co-authorship with the help of VOS Viewer. Panel (A) shows author level networks with important scholars and the quality of their relationships. The country interactions are represented in panel (B), with the size of the node showing the volume of publications and the connections between the nodes showing the level of cooperation. The visualization defines the key participants, involvement of the country, and international research networks to produce knowledge.

Geographical Distribution Map (Figure 3.2): This visualization displays the concentration of research across different regions, revealing geographical imbalances in the literature.



Source: Author's Illustration

Figure 0.17: Geographical distribution of research on women entrepreneurs with

The figure shows a map of co-occurrence of keywords created with the help of VOS Viewer, which shows the correlation of human flourishing, ethics, virtue ethics, well-being, and sustainability. The size of the node is a frequency of the key words, and the colour is an indication of the average year of publication. The map also shows thematic clusters and can show how scholarly discourse has changed, especially in such areas as positive psychology, leadership, and meaningful work.

4. Results

4.1 Experiences in Entrepreneurship.

The findings indicate that entrepreneurship is a major challenge to women with disabilities (WWD), as they encounter financial barriers, problems accessing the market, caregiving effects, and structural inaccessibility.

4.2 Difficult Business Entrance and Survival.

The entrepreneurs experienced financial and operational problems during the initial phases of their business. Low startup capital, low initial sales, and problems of accessing markets all formed a de facto situation. Initial manufacturing usually relied on experimentation which could not always be successful, causing unsuccessful products and slow revenue. One respondent said, “I did not receive proper orders during the first three or four months. To survive, one had to be persistent, adaptable, and learn gradually, which brings out the dynamic aspect of early-stage entrepreneurship.

4.3 Entrepreneurial Emotional Ambivalence.

Respondents felt a combination of stress and empowerment as they felt both nervous about financial uncertainty and pride, self-reliance, and a sense of accomplishment. The interrelation

of challenge and personal development was described by one entrepreneur who said that he felt both stressed and excited at the same time.

4.4 Adaptive Learning and Skill Development.

Learning and education were mostly self-guided with the help of online sources and learning by trial. Respondents explained the process of trial and error of developing and refining skills to overcome technical discontinuities. One of the respondents declared that he had learned primarily via YouTube and by experimenting. The development of competence and confidence was based on constant adaptive learning.

4.5 The Technology as an Inclusion Enabler.

Technology, social media, WhatsApp, and AI increased the productivity of operations and decreased the mobility requirements. Market access and communication were also possible through online platforms, making inclusion possible to the mobility challenged.

4.6 Family-Entrenched Entrepreneurial Practice.

Families contributed to work, advice, and decision making, which emphasize family-related aspects of entrepreneurship and the role of household networks to business continuity.

4.7 Internal and External Barriers.

The internal barriers, which include physical restrictions, mental pressures, health matters and caregiving pressures were also witnessed by the participants. Structural inaccessibility, financial limitation, poor institutional support, market problems, and social stigma were considered as external barriers. Relation and systemic boundaries were upheld by subtle discrimination such as being marginalized in relations at work. All in all, these internal and external issues reveal that there is a multifaceted interaction of personal, social, and structural factors in the WWD entrepreneurial experiences.

5. Conclusion

The psychological and physical intersectionality that women with disabilities experience make entrepreneurship a survival and identity making action to opportunity instead of opportunity. Despite the limitations, they are incredibly powerful and innovative. This paper recommends the necessity to redefine entrepreneurial success to enable and embrace well-being, and intersectional policies and equitable access to resources to enable entrepreneurial ecosystems to be more inclusive.

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FROM COMPENSATION PERCEPTIONS TO JOB-HOPPING INTENTIONS: A STUDY BASED ON APPAREL INDUSTRY EMPLOYEES IN SRI LANKA

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Abstract

Purpose: Businesses are crucial to the success of the global economy. A business organization is a group of individuals who collaborate to accomplish shared objectives. The most valuable resource in a company is its human capital. The purpose of this study was to identify the factors influencing the job-hopping attitudes of managerial employees in the apparel industry, with special reference to the Katunayake Export Processing Zone. Market-competitive pay, monetary benefits, and performance incentives were considered independent variables, while employees' job-hopping attitudes were treated as the dependent variable.

Design/methodology/approach: Five garment factories were selected as the sample for this study, and a simple random sampling method was used to select 132 managerial employees. A self-administered, close-ended questionnaire was used for data collection, and the data were analyzed using SPSS. Multiple regression analysis was applied to evaluate the hypotheses.

Findings: The results of the regression analysis indicated that market-competitive pay, monetary benefits, and performance incentives have a positive and significant impact on employees' job-hopping attitudes in this sector. Specifically, the regression coefficient ($B = 0.848$) suggests a strong positive relationship between the independent variables and the dependent variable (job-hopping attitudes). The p-value ($p = 0.000$) confirms that this effect is statistically significant at conventional levels. Furthermore, there were positive and significant relationships between market-competitive pay, monetary benefits, and performance incentives and job-hopping attitudes.

Research limitations/implications: A key component of HRM is finding and keeping the best and most qualified employees. The achievement of organizational goals and objectives depends on the company's ability to attract and retain competent employees over the long term. However, in any organization, finding and retaining top talent is a significant challenge.

Originality/value: The overarching goal of Human Resource Management (HRM) is to recruit and retain qualified employees who are satisfied with their work and can make the greatest personal contributions to the company. Another objective of the study was to identify the most significant factors influencing job-hopping attitudes in the apparel industry. Descriptive analysis showed that monetary benefits and performance incentives had high mean values, indicating they are the most influential factors affecting job-hopping attitudes among managerial employees in the apparel industry.

Keywords: Advancement Motives; Compensation; Escape Motives; Job Hopping Attitudes; Market Competitive Pay; Monetary Benefits; Performance Incentives

1. Introduction

In the present context, working environment differs different from earlier days of increasing complexity, rapid change, and highest competitiveness. The working environment is no longer stable and become turbulent. The human workforce is one of the most important and the biggest resource of an organization. Without them, organizations cannot achieve the results they need to stay competitive. An organization's ability to recruit and maintain a good workforce is the bottleneck for success and so human resource management is one of the most important key elements in an organization. Nowadays working environment is different from earlier days of increasing complexity, rapid change, and highest competitiveness. The working environment is no longer stable and become turbulent.

Conversantly, traditionally, employees would have a lifelong career at one or maybe two firms, progressing vertically throughout that same company. Today, in competitive business environment employees with better skill and experience, are being offered and lured by employers which result in the mobility of employees from one organization to another. Traditional employment relationships and human resource management are no longer suitable as employee turnover with less organization loyalty are increased. Accordingly, the environment of human resource management, workforce trends, technological trends, people working behavior trends, and economic and globalization trends are changing, and therefore human resource management tasks are changing. The nature of work is also changing; companies are now open to part-time, contract work, outsourced work, and returning parents from maternity leave, which makes the traditional loyal employee rare. Such workplace changes also have altered our perception of job-hopping, resulting in lesser stigmata for job-hopping.

However, employees leave companies for a variety of causes, many of which are costly to their employers and unknown to them. It costs nearly three times an employee's salary to replace someone, which includes recruitment, severance, lost productivity, and lost opportunities (Tracey & Hinkin, 2008). Thus, it is important to identify the motives of departing workers and devise an effective retention strategy. To reduce the turn rates, organizations must first understand the main reasons employees leave for other positions. Arokiasamy (2013) proposed that employee satisfaction can be considered a crucial success factor for organizations. According to Suyanto (2017), compensation is a network of many sub-processes used to pay people for doing their jobs and encourage them to reach the desired level of success. According to Gaol & Jimmy, (2014), compensation is everything that employees receive in exchange for their efforts (also known as employee contributions), whether it comes in the form of money or not.

1.1. Background

The apparel industry is playing a vital role in the Sri Lanka economy and identified as a high contribution sector to the economic development of the country. The apparel sector offers more jobs than any other industry in the nation. According to Ministry of Industries (2021), to support this workforce, the industry employs 350,000 people directly and another 350,000 people (approximately) indirectly. 15% of the total industrial workforce in the nation is made up of workers who work in the apparel industry. Women's empowerment is also promoted in the Sri Lankan apparel industry. Almost every woman working in the local industry is financially independent because they are paid well for their work (Export Development Board, 2023). Companies provide compensation to entice and retain workers, as well as to boost teamwork and improve job performance. Organizations that pay their employees well and encourage personal growth at the expense of the business are better able to retain educated staff. Hence, businesses ought to dependably guarantee that their association is seen as an incredible work environment and a place people need to work. Contends that associations ought to give an alluring and aggressive aggregate compensation bundle that both draws in and holds astounding employees. This can make a more positive disposition from employees towards forwardness hence retaining employees who work for the interests of the company (Mwangi, 2017).

Job hopping refers to the pattern of changing organizations more frequently on own willingness rather than in case of downsizing or the company ceasing to operate a business. Job hopping has become a very common trend in the workplace. In the past three years, stories on job hopping have appeared in Fortune, Forbes, Fast Company, Entrepreneur, CNN Money, CNBC, New York Times, and the Los Angeles Times, incorporating 7 articles from the Wall Street Journal since 2014 (Lake et al., 2018). Employees are seen as an asset by today's firms under the dynamic human resource management paradigm. Monitoring and considering people as a potential resource rather than just a variable expense requires a long-term perspective (Armstrong, 2011). Organizations' prosperity is subject to their ability to fascinate, develop and preserve competent employees (Sims & Sims, 2007). However, employee turnover, particularly intentional turnover, has been increasingly making it difficult for organizations to hold onto their brilliant staff (Griffeth et al., 2012). With plenty of opportunities for advancement in the workplace, people switch jobs frequently (Job hopping) depending on many factors. To further study this issue, it is crucial to understand the factors that affect job hopping from the perspective of employers. To instill the desired level of inspiration in the workforce, it's crucial to have a well-established structure for rewards and thanks. In the Sri Lankan context, particularly within the apparel sector, very limited empirical research has examined the relationship between employees' compensation perceptions and their job-hopping attitudes. Hence there are unexplored areas in this context. The researcher aims to evaluate The Impact of Employees' Perceptions towards Compensation on their Job-Hopping attitudes in the apparel sector of Katunayake export processing zone employees in Sri Lanka.

1.2. Research problem

The apparel manufacturing industry in Sri Lanka which has the most significant and dynamic contribution to the country's economy is facing the challenge of retaining employees (Kumar et al., 2021). Job hopping would make employers come across the hazards of information spillover for some businesses & increase the expenses of training and developing new hires to replace skillful employees. A common occurrence in the modern age is the intention to switch jobs frequently. When the expert and skilled employees resign, employers have to expend money on replacement/substitution, for example, advertising, interviewing, training & developing new hires (Cloutier et al., 2015). The rising problem of job hopping is not only being observed in entry-level employees but the managerial level employees also. Some management-level job-hoppers had no actual commitment to raising firms' productivity and profitability (Witt, 2011). "A significant rate of job-hopping behavior has been noted among personnel working in many industries, which disrupts any organization's workflow and produces confusion. This behavior won't only affect the organization reputation but have an impact on an employee's profile also in the long run (Aguinis & Glavas, 2012). Apparel companies are providing attractive compensation, transport facilities, quality workplaces, performance-based allowances, etc., to their employees. Employees that are actively involved in organizational activities are more productive and remain with the company longer. However, due to various causes, employee retention is very low in the apparel sector in Sri Lanka (Jayarathna & Sutha, 2019). Day by day it's becoming a challenge for managers to retain their employees. Even though the effect of certain employee compensation has been studied regarding job hopping attitudes in the apparel sector, the majority of effects are yet to be analyzed and found concerning the Sri Lankan context. Therefore, this research will study the problem as follows,

What is the impact of Employees' Perception of Compensation on their Job-Hopping attitudes?

1.3. Objectives,

- To explore the impact of Employees' Perceptions of Market Competitive Pay on their Job-Hopping attitudes.
- To explore the impact of Employees' Perceptions of monetary benefits on their Job-Hopping attitudes.
- To explore the impact of Employees' Perceptions of Performance Incentives on their Job-Hopping attitudes

1.4. Significance of the study

This research will help to add new knowledge to the employees' perception toward compensation and job-hopping attitudes that are lacking in research-related knowledge in the Sri Lankan apparel sector. It will be useful to future researchers as it can be used as a reference guide for future researchers who wish to conduct future research on the organization

employees' perception toward compensation and job-hopping attitudes. This study shows the impact of Employees' Perceptions of Compensation on their Job-Hopping attitudes. Accordingly, this study will help managers to gain a better understanding of how Employees' Perceptions of Compensation on their Job-Hopping attitudes in the apparel sector. Thus, the findings of this study will help policymakers and decision-makers to make decisions and formulate organizational policies. This study will help to identify and bridge the gap between Employees' Perceptions of Compensation on their Job-Hopping attitudes.

2. Literature Review

2.1 Employees' Perception towards Compensation

Everything an employee receives from the company in exchange for rendered services is referred to as compensation. The Human Resources Department may find success in doing this to improve employee productivity, drive, and job satisfaction. Paying employees is a way for employers to show their gratitude for the contributions that staff members make to the business. The main incentive for employees to work for a company is the compensation (Tj et al., 2021). Compensation is the company's strategy to empower the workforce and can serve as a competitive advantage. The amount of compensation or remuneration has been determined and known in advance, so employees will definitely know the amount remuneration or compensation that will be received by the employee. Fair pay is more desirable for training, inspiring, and retaining qualified and competent workers. Organizations can improve employee retention by giving workers fair pay. If management doesn't create and implement an effective compensation policy, then employees are more likely to quit their jobs if they discover a better offer elsewhere.

2.1.1. Market competitive pay - salaries and wages

As this element includes people's judgment of their interaction with the business, the researcher in this study focused on workers' perceptions of fair market competitive compensation. Equity theory has largely been accepted to explain these transactions, specifically about rewarding and recognition programs (Saif & Siddiqui, 2019). Few academics have, however, empirically examined this association. When asked why they work, employees frequently cite money as a motivation (Jurgensen, 1978). According to Dries et al., (2008), market-competitive pay/salary is still a key factor in the workplace that determines career success across generations.

2.1.2. Performance incentive

A compensation package consists of financial perks including compensation and benefits. Employees of Generation Y will prefer to stay with a company that offers a great wage and other advantages (Saif & Siddiqui, 2019). A positive association between pay for performance and millennial retention has been found by earlier researchers (Brown et al., 2015). Pay for performance rewards employees for achieving greater performance goals with better pay (Kilber et al., 2014). According to Vroom's Expectancy Theory, an employee's performance depends on several different factors. For instance, even if an employee may have different

goals, they may be persuaded if: There is a positive link between performance and efforts. Higher performance will result from the desired reward (Ricken, 1981).

2.1.3. Monetary benefits - employee benefits

The work of psychologists like Abraham Maslow, David McClelland, and others is embraced by content theory. The content theory is particularly connected to monetary compensation, tangible benefits like bonuses, and things that will improve employees' physiological circumstances. Job Employees are blamed for hopping jobs because they place a high value on financial rewards. One reason for Generation Y's job-hopping tendency is its materialistic nature (Saif & Siddiqui, 2019). According to Yuen, (2016), employees would leave their current workplace when other companies offered superior financial benefits including bonuses, commissions, profit sharing, stock options, etc.

2.2 Job hopping attitudes

Ghiselli, (1974) used the term "hobo syndrome" to describe the propensity of workers to switch jobs frequently they period dic want to transfer from one job to another in a different location. According to Punchi et al., (2020), job-hopping is an attitude or conduct in which employees change jobs frequently without regard for better alternatives or other ostensibly legitimate reasons. It may result from either personal traits (like an itch for impulsivity) or social forces (such as turnover culture). The idea of a turnover culture has been advanced by earlier scholars to explain a tendency for job-hopping. For instance, Iverson and Deery (1997) described turnover culture as the acceptance of turnover as the norm within the workgroup and the normative belief held by employees that turnover behavior is perfectly reasonable. An employee may experience increased pressure to change jobs if they haven't done so for a while due to social pressures. To locate the best work, those who regularly switch employment or move between companies are said to be "job hopping." Particularly among millennial, frequent job-hopping is evident (Larasati & Aryanto, 2020).

Further job-hopping is the practice of changing jobs repeatedly, often in an effort professionally earn more money quickly. According to researchers, there are two sorts of job-hopping. The first type is related to a desire for novel experiences since some individuals believe they can produce novel encounters. The other kind of job-hopping is connected to a culture of turnover. Some people "job-hop" because other people are also doing it (Saleem et al., 2016) described job hoppers as persons who often switch occupations while looking for new employment. Job hopping is the practice of leaving employers more frequently than in the event of downsizing or a firm discontinuing operationalization are finding it harder to find employees and have them reside in their firms as a result of this trend.

According to some academics, job-hopping involves frequently changing occupations. Job-hoppers are typically thought of as persons who can't commit to working for a company for an extended period or as a period who devote a limited amount of time and attention to their jobs. Uncertainty at work, annoyance, and downsizing are a few causes of voluntary turnover. Other organizational elements including inadequate training, a lack of difficult tasks offered by the

employer, unfair treatment, and leadership issues may contribute to extreme job hopping. According to some experts, job hopping is only a strategy for job-hopping employees to maintain their competitiveness in the job market by working for several firms that suit their needs and expand their talents (Saif & Siddiqui, 2019). Researchers have also discovered certain factors that motivate millennial to start working, including the desire for improved chances, low pay structures, a lack of growth prospects, weak job security, and unfair management treatment (Pandey, 2019). The principles of work, attitude, and conduct, as well as the interpersonal abilities of the many generations, are related in literature. High-commitment employees may be less likely to quit or look for new employment. Particularly job hoppers, who are frequently identified as people who wish to move to work. They put little to fort and commitment into their jobs (Verasamy et al., 2020).

Millennial are more likely than other generations to switch jobs, which is a concern in the global labor market. In addition, a Pakistani study reveals that tangible and intangible incentives are essential for millennial to change jobs. Fair market value compensation, monetary bonuses, and performance, and performance bonuses are ration and estimates, work quality, work-life balance, and future growth and change are examples of intangible benefits. The study discovered a favorable correlation between intangible incentives and millennial job hopping, but a negative correlation between the two. It aids organizations in determining the elements that must be taken into consideration while developing staff retention plans. Sometimes employers recruit the incorrect people for positions because the applicants tell all kinds of lies during the interview, which subsequently reveals that the demands of the employee and the nature of the work are incompatible. As a result, the employee decides to quit and look for another job (Gant, 2021). Maertz and Griffeth have used the terminology to identify reasons for job hopping as motives. Two interrelated academic disciplines have offered two main scholarly perspectives on job location to measure those intentions.

2.2.1 Advancement Motives

The first viewpoint on job-hopping comes from the career standpoint and can be viewed as advancement. Career gurus have long observed that changing jobs might motivate you to advance your career (Hall et al., 2022). According to Lake et al., (2018), the advance motive is the "desire to regularly shift occupations as a way of career development"(p.532). When discussing the advantages of regularly changing occupations, this type of motive seems to be most frequently employed in the media. According to Pelta (n.d.), for instance, persons who change jobs frequently do so to improve their careers, to become more engaged at their jobs after becoming proficient at them, and/or to acquire new abilities. It has long been believed that tangible rewards for both individuals and/or organizations cause turnover (March & Simon, 1958). For instance, (Barbara et al., 2005) discovered that workers who believed their company offered more career options tended to have fewer intents to leave, and (Hall et al., 2022) discovered that incremental wage increases and job status were adversely connected to turnover.

According to Lake et al., (2018), the advanced motive displays "personal drive advanced active, and ambition" (p. 532) and could lead some individuals to leave their positions to progress their careers. This may be found in the writings of London (1983), who claimed that one aspect of career motivation is the demand for upward mobility, which includes the "need for advancement, recognition, domination, money, and the ability to delay satisfaction" (p. 621). The progress motive is positively correlated with perseverance, self-directed career management, protean career values, the boundary attitude, and a kaleidoscopic career, access to Lake et al., (2018); it is adversely correlated with impulsivity and normative organizational commitment (Lake et al., 2018). From our reading, it seems that this motive is probably connected to Maertz and Campion's (2004) comparison and satisficing quitters, who typically have another job available before deciding to leave their current job and tend to quit their jobs to advance their careers and/or receive, therefore, we predict that persons who score well on the advance motivation compared to the escape motive do not necessarily participate in genuine job-hopping activities, as was discovered by (Hall et al., 2022). Instead, it appears that what drives turnover behavior is the interaction between this purpose and pertinent need-fulfilling environmental variables (e.g. Holland, 1997).

2.3.2 Escape Motives

Escape is the second justification for job hopping, and it comes from the perspective of organizational turnover. The escape motive, which resembles Ghiselli's (1974) so-called hobo syndrome, is defined by Lake et al. (2018) as a job-desire hopper often changed often often changes employment to order to swiftly leave unfavorable work circumstances. Ghiselli (1974) noticed that some persons, regardless of the type of employment, have an irrational and/or chaotic inclination to shift from job to job and that this tendency may be connected to frequent job changes. The hobo syndrome was confirmed by Judge and Watanabe (1995), who hypothesized that it could be influenced by negative affectivity (such as neuroticism), personality traits, and/or environmental factors. Research has shown that those who score higher on neuroticism tend to view themselves and the world more negatively (e.g. Thomson, 2016) and tend to more frequently generate negative thoughts about events (Perkins, Arnone, Smallwood, & Mobbs, 2015), suggesting that negative affectivity and the escape motive are closely related. These unfavorable impressions could then raise a person's likelihood of quitting their job (Woo, 2011; Zimmerman, 2008). Nevertheless, it is important to remember that motives are typically context-, time-, and role-bound (i.e., state-like), and are not the same as personality (McAdams, 1995).

According to Lake et al., (2018) the escape motive had a negative correlation with persistence, job participation, the time it took to decide to leave your job, and career self-efficacy, while it had a positive correlation with impulsivity and negative affect. In contrast, Woo (2011) discovered that the hobo syndrome (and hence the escape motive) was not directly connected to impulsivity. Instead, it seems that persons who are labeled as hobo tend to score higher on the alternative, behavioral, contractual, and constituent turnover motives and lower on Maertz and Griffiths's affective turnover motive or force. The aforementioned reasons for quitting

seem to fit the impulsive and conditional quitter profiles created by Maertz and Campion (2004), which are characterized by a greater negative impact on the organization and can result in quitting a job without an available replacement offer (Maertz & Kmitta, 2012).

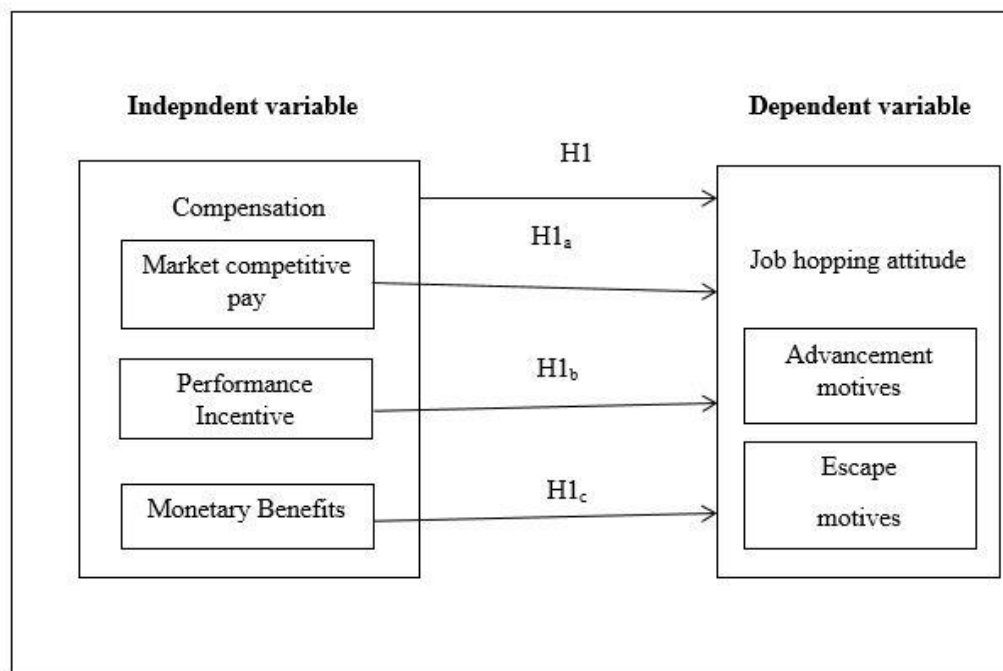
2.3 Theoretical aspects

There are several explanations given for why someone would switch jobs frequently, and these varied explanations can be summed up as being influenced by people's attitudes (such as their value of extrinsic rewards), conventions (such as the culture of turnover), or perceptions of control (e.g., job availability). Therefore, a good foundation for a more methodical prediction of job-hopping behavior is provided by the theory of planned behavior (TPB) (Ajzen, 1991). In the early stages of attitude research, the majority of researchers unquestioningly agreed that social attitudes influence human behavior. Watson (1925) established the area of social psychology as the scientific study of attitudes since it was believed that attitudes were the key to understanding human behavior. The theory of planned conduct, developed in 1980, builds on the theory of reasoned action to forecast a person's purpose to behave in a particular way at a particular time and location. The idea was developed to account for all actions that humans can influence. The most important factor is behavioral intentions, which are impacted by attitudes toward the likelihood that actions will have the desired results and a subjective assessment of the advantages and disadvantages of those results.

The theory of planned behavior (Ajzen, 1991) offers a helpful foundation for a more methodical prediction of particular conduct. The TPB discusses how people's intentions to engage in a certain activity are influenced by their attitudes about the conduct, subjective norms, and perceived behavioral control. Behavioral belief, normative belief, and control belief are the three prominent beliefs from which these three determinants are derived. According to Ajzen (1991), a person's intentions to engage in a certain action are influenced by three key determinants: attitude toward the behavior, subjective norms, and perceived behavioral control. Based on whether we view such behavior favorably or unfavorably, our attitudes concerning it are subsequently established. In this sense, people are more likely to engage in particular conduct when they anticipate positive results and vice versa. As was already established, job hoppers frequently switch employment to receive acceptable extrinsic benefits (Yuen, 2016). To put it another way, individuals behave in a job-hopping manner because they think switching jobs would result in better compensation. Positivity toward changing employment may increase someone's propensity to do so (Dewi & Ekowat, 2025).

2.4 Conceptual framework

Based on the above thorough literature review, the conceptual framework summarized the relationship between employees' perception towards compensation on their job-hopping attitudes used as the fundamental basis for the study.



Source: Survey Data

Figure 1: Conceptual framework

The researcher developed hypotheses as follows.

H1; There is an impact of Employees' Perception towards Compensation on their Job- Hopping attitudes.

H1a; There is an impact of Employees' Perception of Market Competitive Pay on their Job- Hopping attitudes.

H1b; There is an impact of Employees' Perception of monetary benefits on their Job-Hopping attitudes.

H1c; There is an impact of Employees' Perception of Performance Incentives on their Job- Hopping attitudes.

3. Methodology

Research approaches are used for drawing conclusions and establishing what is true or false. The most common research approaches are inductive and deductive. The deductive approach draws conclusions from known premises, whereas the inductive approach establishes a general proposition from specific facts. Deductive derives likely conclusions from an incomplete set

of observations (DeLone & McLean, 2003). The research approach which is adopted for this study was the deductive approach. The deductive approach helps out in developing a hypothesis by using existing theory and the selection of data is composed to accept or eliminate a hypothesis to solve the problem (Johnson & Gill, 2010). The research method used to test our hypotheses is quantitative for two main reasons. First, quantitative research highlights quantification in the collection and analysis of data (Bryman, 2003) and relies on quantitative information (i.e., numbers and figures) (Blumberg et al., 2014). Second, quantitative research is the most appropriate for testing hypotheses and analyzing how one variable affects another (Blumberg et al., 2014). Thus, the research is used to generate numerical data that can be converted into useful statistics in order to quantify the problem. The quantitative approach is more effective for researchers which can use countable indicators to analyze selected variables. A further survey is conducted to understand the relationship between Employees' Perceptions towards Compensation on their Job-Hopping attitudes.

4. Results and Discussion

The internal consistency reliability is measured through Cronbach's alpha. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. It is the rule of thumb that if the Cronbach's Alpha value is greater than 0.7 then the reliability is satisfied. Cronbach's alpha was used to determine the internal reliability and the consistency of the Multiple Likert scales that comprised the questionnaire. Table 1 illustrates the reliability value for the Employees' Perceptions towards Compensation and their Job-Hopping attitudes.

Table 1: Reliability Table

Variables	No.of Items	Cronbach's Alpha
Market competitive pay	03	.655
Monetary benefits	03	.678
Performance incentive	03	.691
Job hopping attitude	19	.919

In order to analyze the reliability of the survey questionnaire, the Cronbach's Alpha test was adopted by the researcher. According to the reliability test of the questionnaire, Cronbach's alpha value was higher than 0.65. Therefore, the entire questionnaire was correct and reliable.

Table 2: Validity Table

Perception Towards Compensation		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.680
Bartlett's Test of Sphericity	Approx. Chi-Square	119.764
	df	3
	Sig.	.000

Job Hopping Attitude

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.641
Bartlett's Test of Sphericity	Approx. Chi-Square	247.911
	df	3
	Sig.	.000

According to the above information (table 02), the KMO value of this research is .680, and .641 respectively. That is, it is higher than 0.5. The sig value of Bartlett's Test of Sphericity in all the variables is less than 0.05. That is, it is clear from the above information that there is no problem regarding the validity of this.

Table 3.1: Model summary (Multiple)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	.888 ^a	.789	.784	.217

a. Predictors: (Constant), Performance_Incentives, Market_Competitive_Pay, Monetary_Benefits
(Source: Survey Data, 2023)

As per the table 3.1, R square value was 0.789 which depicted 78% of the dependent variable: Job hopping attitudes were explained by independent variables: market competitive pay, monetary benefits, and performance incentives. In contrast, 22% of compensation was not explained by job hopping attitudes was explained by independent variables: market competitive pay, monetary benefits, and performance incentives.

Table 3.2: Validity Table

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.588	.143		4.100	.000
Market_Competitive_Pay	.307	.041	.372	7.481	.000
Monetary_Benefits	.283	.048	.342	5.885	.000
Performance_Incentives	.262	.042	.345	6.213	.000

a. Dependent Variable: JHA

(Source: Survey Data, 2023)

Thus, the overall regression model for these three predictors has significantly explained the variation in compensation. The regression coefficient of market competitive pay, monetary benefits, and performance incentives indicates that it has a significant positive impact on job-hopping attitudes.

Table 4: Hypothesis Testing

Research objectives	H	Variables	Data type	Test	Results	Interpretation
Relationship	H1	DV – Job hopping attitudes IV – perception toward compensation	Scale	Correlation	PC = 0.888 P = 0.000	A significant relationship between perception towards compensation and job hopping attitudes

Impact	H1	DV – Job hopping attitudes			B = 0.848	Significant
			Scale	Logistic Regression	P = 0.000	The high impact between perception towards compensation and job hopping attitudes
		IV – perception toward compensation				

The regression model can be built as follows.

$$Y = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + \varepsilon$$

Where,

Y = Job hopping attitudes

β_0 = Constant (The intercept of Y)

X1 = Market competitive pay

X2 = Monetary benefits

X3 = Performance incentive

ε = Error in the model

As per the above-stated theoretical foundation, the regression equation of this study can be built as follows.

$$\text{Job hopping attitudes} = 0.588(\text{constant}) + 0.307(\text{Market competitive pay}) + 0.283(\text{Monetary benefits}) + 0.262(\text{Performance incentives})$$

H1; There is an impact of Employees' Perception towards Compensation on their Job-Hopping attitudes.

As the multiple regression table B coefficient for compensation is 0.848 indicate that increasing 1 unit of compensation causes to increase Job hopping attitudes in 0. 848 units while other independent variables remain constant. This conclusion can be done with a 100% confident interval since the significant level is 0.000. This is less than 0.05, so it rejects the null hypothesis. Also, there is a positive impact of compensation on Job hopping attitudes.

H1a; There is an impact of Employees' Perception of Market Competitive Pay on their Job-Hopping attitudes.

As the multiple regression table B coefficient for Market competitive pay is 0.307 indicate that increasing 1 unit of Market competitive pay causes to increase Job hopping attitudes in 0. 307

units while other independent variables remain constant. This conclusion can be done with a 100% confident interval since the significant level is 0.000. This is less than 0.05, so it rejects the null hypothesis. Also, there is a positive impact of Market competitive pay on Job hopping attitudes.

H1_b; There is an impact of Employees' Perception of monetary benefits on their Job-Hopping attitudes.

As the multiple regression table B coefficient for monetary benefit is 0.283 indicate that increasing 1 unit of Monetary benefits causes to increase Job hopping attitudes in 0.283 units while other independent variables remain constant. This conclusion can be done with a 100% confident interval since the significant level is 0.000. This is less than 0.05, so it rejects the null hypothesis. Also, there is a positive impact of monetary benefits on Job hopping attitudes.

H1_c; There is an impact of Employees' Perception of Performance Incentives on their Job-Hopping attitudes.

As the multiple regression table B coefficient for Performance incentives is 0.262 indicate that increasing 1 unit of Market competitive pay causes to increase Job hopping attitudes in 0.262 units while other independent variables remain constant. This conclusion can be done with a 100% confident interval since the significant level is 0.000. This is less than 0.05, so it rejects the null hypothesis. Also, there is a positive impact of Performance incentives on Job hopping attitudes.

5. Conclusions and Implications

This study was conducted to find out the factors affecting the Job Hopping Attitude of managerial level employees of the apparel industry in the Katunayaka Export Processing Zone. The research was explanatory type research and the approach used for this study was quantitative in nature. There were selected five garment factories in the Katunayaka Export Processing Zone and the target population of the study was identified as all the managerial level employees were being worked in these companies. The study used the simple random sampling technique to select respondents from the population to the sample. To achieve the objectives of the study data were collected from 132 managerial level employees from selected five garment factories in the Katunayake Exprot Processing Zone by use questionnaire with 36 questions. SPSS version 21 was used to analyze the data. The main objective of the study was to examine the impact of employee's perceptions towards compensation on their job hopping attitudes in the apparel industry. To achieve this objective researcher identified three factors as market competitive pay, monetary benefits and performance incentives based on the extensive literature survey. On the basis of these variables, three hypotheses were established to achieve research objectives.

This study one objective was to identify the impact of independent variables on job hopping attitudes of the apparel industry. According to the results of regression analysis presented three hypotheses of this research were accepted all hypothesis. As well as there were positive significant relationships between market competitive pay, monetary benefits and performance

incentives with job hopping attitudes. As another objective of this study, to identify the most significant factors affect job hopping attitudes in the apparel industry. According to the descriptive analysis presented high mean value for the monetary benefits and performance incentives. Monetary benefits and Performance incentives were identified most significant factors affect Job hopping attitudes in the apparel industry.

Based on the findings it can be concluded that compensation significantly and positively affects the managerial employee's job hopping attitudes in the apparel sector. It is of paramount importance to understand the determinants of employee's job hopping attitudes in an organization. Effective compensation has a direct and significant relationship with employees' job-hopping attitudes. Companies that successfully attract and retain key employees have long-term organizational nourishment. The findings of this study indicate the presence of a significant relationship between market competitive pay, monetary benefits, and performance incentives with managerial employees' job-hopping attitudes in the apparel sector in the Katunayaka export processing zone. Accordingly, it is evident that so far these compensations are being successfully implemented in the organization and it significantly and positively impacts the managerial employees' job-hopping attitudes.

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GENERATIVE AI (LLM) AS STRATEGIC INFORMATION SYSTEMS – OPPORTUNITIES, RISKS, AND GOVERNANCE: A COMPREHENSIVE REVIEW

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Abstract

Purpose: Generative artificial intelligence is transforming organizational decision-making by shifting information systems from passive analytical tools to strategic partners. Large language models enable context-aware, knowledge-integrative outputs that position Generative Strategic Information Systems as co-creators of strategic insights. This study addresses fragmented research, focusing on opportunities, risks, and governance mechanisms of LLM-enabled systems that required to manage them as strategic organizational capabilities.

Design/methodology/approach: A systematic literature review was conducted using peer-reviewed studies published between 2018 and 2025. Data were retrieved from major academic databases, including Scopus, Web of Science, IEEE Xplore, ACM Digital Library, and the AIS Senior Scholars' Basket, supplemented by citation tracking and Google Scholar. Following a structured search strategy, PRISMA-guided screening, and bibliometric mapping, 468 records were identified, of which 20 studies met the inclusion criteria for qualitative synthesis.

Findings: The analysis revealed six key themes: evolution of information systems and analytics, generative AI and LLM capabilities, strategic management and competitive advantage, organizational and socio-technical perspectives, ethics and governance, and research methods and techniques. Findings show that GSIS transforms strategic information systems into collaborative and adaptive actors that enhance reasoning, scenario generation, and decision-making. However, effective deployment requires multi-layered governance integrating oversight, procedural validation, and human-AI collaboration.

Research limitations/implications: The review is limited to peer-reviewed studies published between 2018 and 2025 and focuses on 20 selected studies. Future research should prioritize empirical validation, cross-industry analysis, human-AI interaction dynamics, and adaptive governance models to support responsible and strategic GSIS adoption.

Originality/value: This study contributes by developing a unified conceptual framework linking generative AI, strategic management, and governance. It provides actionable insights for both scholars and practitioners by emphasizing disciplined integration, contextual sensitivity, and continuous human oversight for sustainable competitive advantage.

Keywords: Generative Artificial Intelligence; Governance; Large Language Models; Strategic Information Systems; Systematic Literature Review.

1. Introduction

Information systems have evolved progressively from transaction-processing platforms to decision support systems and AI-enabled analytics (Silvanskaya et al, 2025). Earlier systems primarily supported operational efficiency and structured decision processes, offering limited capacity for strategic cognition, interpretive reasoning, and adaptive strategy formulation. Recent advances in generative artificial intelligence, particularly large language models (LLMs), represent a fundamental shift by enabling context-aware, creative, and strategic output across diverse domains (Gupta & Panigrahi, 2023). These models are increasingly positioned not only as analytical tools but as active participants in strategic processes, transforming traditional information systems into Generative Strategic Information Systems that co-create strategic understanding alongside human decision makers (Gupta & Panigrahi, 2023).

LLMs enhance organizational cognition, agility, innovation, and while improving decision quality. However, they also introduce significant risks including hallucinations, over-reliance, misalignment, and ethical issues (Moenks et al., 2025). Despite rapid adoption, existing research on LLM-enabled strategic information systems remains fragmented and disproportionately focused on technical capabilities rather than strategic transformation, governance, and organizational impact. Existing governance frameworks, while conceptually strong but frequently lack of practical applicability, and traditional IS and strategic management theories inadequately explain the behaviour of autonomous, generative systems. This highlighting a critical theoretical and practical gap in understanding GSIS as strategic organizational capabilities (Sengar et al., 2024).

This study therefore identifies a research problem in the lack of an integrated theoretical and governance-oriented understanding of how generative AI reshapes strategic information systems, organizational decision-making, and enterprise-level strategy formation.

To address these gaps, this study conducts a comprehensive systematic literature review integrating research from information systems, strategic management, and AI governance to develop a unified understanding of how generative AI transforms strategic cognition, organizational capabilities, and governance (Stoykova & Petkova, 2023).

This study aims to systematically synthesize existing literature to conceptualize how LLMs redefine strategic information systems, examine the strategic opportunities and risks of GSIS adoption, and identify governance mechanisms for the responsible integration of generative AI into organizational strategy.

Accordingly, this study is guided by the following research questions:
RQ1: How do large language models redefine the role and scope of strategic information systems?

RQ2: What strategic opportunities and risks emerge from the organizational and ecosystem-level use of large language model-based information systems?

RQ3: What governance mechanisms are required to manage GSIS as strategic organizational capabilities?

The motivation for this study lies in the urgent need to bridge the gap between rapid technological advancement and underdeveloped theoretical and governance frameworks. By consolidating fragmented research and reframing generative AI as an active strategic participant, this study aims to provide a foundation for future research, theory development, empirical investigation, and responsible adoption. The review highlights the strategic potential of GSIS to enhance sensemaking, scenario planning, and decision support, and communication, while offering insights into risk management and governance, addressing limitations in prior literature, and informing both scholars and practitioners (Gupta & Panigrahi, 2023).

2. Literature Review and Conceptual Foundation

2.1. Evolution of Strategic Information Systems

Strategic Information Systems (SIS) have historically been conceptualized as organizational tools designed to support competitive positioning through superior information processing and coordination capabilities. Early SIS implementations focused on efficiency, cost leadership, and differentiation by leveraging structured data and rule-based decision logic. These systems operated primarily within deterministic frameworks, relying on predefined algorithms and formalized business rules to support managerial decision-making (Celebi, 2023).

While such architectures improved operational integration and analytical precision, their strategic value was constrained by limited adaptability and dependence on explicitly programmed knowledge structures. This limitation highlights a key gap in traditional SIS literature; their inability to dynamically interpret unstructured, ambiguous, and rapidly evolving strategic environments.

The emergence of advanced artificial intelligence technologies, particularly large language models (LLMs), represents a significant shift in the conceptualization of strategic information systems. Unlike traditional systems, LLM-enabled architectures demonstrate capabilities that extend beyond structured data processing into contextual interpretation, inferential reasoning, and generative synthesis. These models can process unstructured textual information, simulate scenario-based reasoning, and generate strategic insights dynamically.

Such capabilities reposition strategic information systems from static decision-support mechanisms to adaptive cognitive infrastructures embedded within organizational processes. This transition aligns with contemporary socio-technical perspectives that view AI not merely as a technological artifact but as an integrated component of organizational cognition and knowledge creation (Kudina & de Poel, 2024). Consequently, LLM-enabled systems introduce new possibilities for strategic flexibility, experimentation, and interpretive decision-making.

2.2. Generative Strategic Information Systems (GSIS) Through Strategic Lenses

The conceptualization of Generative Strategic Information Systems (GSIS) can be further understood through established strategic management theories. From a resource-based view (RBV), sustainable competitive advantage arises from resources that are valuable, rare, inimitable, and non-substitutable. LLM-integrated systems may enhance organizational cognitive resources by enabling advanced analytical synthesis, knowledge recombination, and

real-time strategic insight generation. In this sense, GSIS may function as strategic assets that augment decision quality and innovation capabilities (Mahmood et al., 2025). However, a key unresolved issue is whether these capabilities meet the full VRIN (Valuable, Rare, Inimitable, and Non-substitutable) criteria remains subject to empirical validation, particularly given the increasing commoditization of generative AI technologies.

From a dynamic capability perspective, GSIS can be interpreted as mechanisms that strengthen an organization's ability to sense environmental changes, seize emerging opportunities, and reconfigure internal processes accordingly. By facilitating rapid analysis of market signals, regulatory developments, and stakeholder communications, LLM-enabled systems support strategic agility. Their generative capacity further assists in modeling alternative courses of action, thereby enhancing organizational responsiveness in volatile environments. In this regard, GSIS contribute not only to operational optimization but also to strategic renewal.

A socio-technical perspective emphasizes that the strategic effectiveness of GSIS is contingent upon the interaction between human actors and AI systems. Generative models require human oversight, contextual framing, and ethical governance to produce reliable and actionable outcomes. Organizational culture, governance structures, and digital competencies significantly influence the realized value of these systems (Niehaus & Wiese, 2021). Rather than replacing managerial judgment, GSIS operate as collaborative intelligence platforms that augment human cognition. Therefore, sustained competitive advantage depends not solely on technological deployment but on the integration of AI capabilities within broader organizational routines and decision processes.

Despite the theoretical promise of GSIS across these strategic lenses, empirical evidence regarding their long-term contribution to sustained competitive advantage remains limited. Existing research largely conceptualizes opportunities and risks at a theoretical level, highlighting the need for systematic empirical investigation into performance outcomes, governance mechanisms, and contextual contingencies.

3. Methodology

This study conducted a systematic and integrative literature review to examine how generative artificial intelligence (AI), particularly large language models (LLMs), functions as Generative Strategic Information Systems (GSIS) in organizational contexts. The review aimed to synthesize interdisciplinary research on information systems, strategic management, and AI governance to develop a unified conceptual understanding.

a) Research Approach and Scope

The study follows a systematic review design with an integrative synthesis approach. The scope includes peer-reviewed studies published between 2018 and 2025 were examined to capture recent developments in generative AI, LLM capabilities, and strategic information systems. The review included empirical, conceptual, and design-oriented studies published in journals and leading conferences, while technical-only, consumer-focused, pre-2018, non-theoretical, and lacked strategic relevance were excluded to ensure conceptual relevance.

b) Search Strategy and Keywords

A comprehensive search was conducted across five major academic databases: Scopus, Web of Science, IEEE Xplore, ACM Digital Library, and the AIS Senior Scholars' Basket. The

search strategy combined thematic and strategic terms. The search strategy used both strategy and governance-oriented keywords. A representative search string used across databases was: (“generative AI” OR “large language model” OR LLM OR “foundation model”) AND (“information system” OR “decision support system” OR “strategic information system” OR strategy) AND (governance OR ethics OR risk OR accountability OR control). Supplementary citation tracking and targeted searches for high-impact contributions ensured inclusion of influential studies that may not appear in standard database queries.

c) Study Selection

Study selection followed a PRISMA-guided three-stage screening process: identification, screening, and inclusion (PRISMA flow diagram, 2024) (Figure 1). The initial search retrieved 468 records through database searches, citation tracking, targeted searches for influential contributions, and methodological cross-checks. After removing 146 duplicates, 322 unique studies were screened based on titles and abstracts, resulting in the exclusion of 228 studies due to limited strategic relevance or lack of an information systems focus. Full-text assessment of the remaining 94 studies led to the exclusion of 74 articles for insufficient conceptual or analytical contribution. The final qualitative synthesis included 20 studies, each providing substantial theoretical or empirical depth relevant to LLM-enabled strategic information systems (Galli et al., 2025).

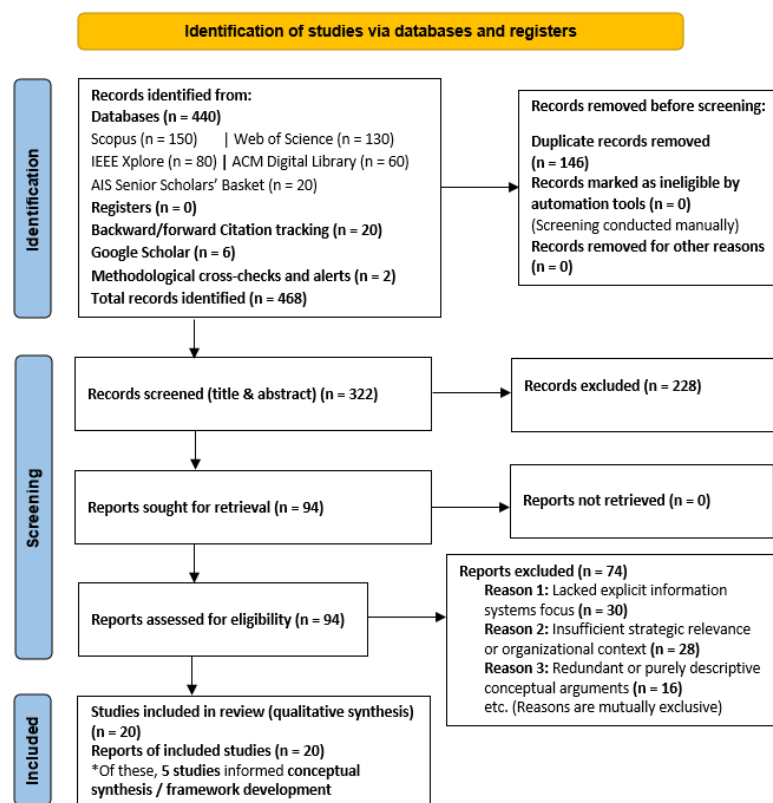


Figure 22 - PRISMA 2020 Flow Diagram

d) Data Extraction

A structured extraction protocol was used to collect the following characteristics for each study including publication details, LLM capabilities and applications, strategic IS roles, outcomes, risks, governance mechanisms, and theoretical lenses (Mahmood et al., 2025), to ensure consistency, transparency, and replicability in capturing relevant data from each study. This ensured systematic comparison across studies.

e) Data Analysis

Analysis combined bibliometric mapping (Pham & Pham, 2024) to assess publication trends, and co-citation networks with thematic synthesis to identify recurring concepts related to strategic roles, value creation, risks, governance mechanisms, and organizational and socio-technical perspectives of LLM-based information systems (Pu et al., 2025) (Table 1).

Table 36 - Thematic Contribution of Papers

Theme	IS, DSS, Analytics Evolution	Generative AI, LLMs	Strategic Management, Competitive Advantage	Organizational & Socio-Technical Views	Ethics, Risk, Governance	Research Methods, Techniques
Papers	(Silvanskaya et al., 2025) (Gupta & Panigrahi, 2023) (Celebi, 2023)	(Patel et al., 2025) (Sengar et al., 2024) (Moenks et al., 2025)	(Silvanskaya et al., 2025) (Stoykova & Petkova, 2023) (Sengar et al., 2024) (Moenks et al., 2025) (Pu et al., 2025) (Mahmood et al., 2025)	(Hofmann et al., 2024) (Silvanskaya et al., 2025) (Sengar et al., 2024) (Moenks et al., 2025) (Niehaus & Wiesche, 2021) (Kudina & de Poel, 2024) (Selgas-Cors, 2025)	(Stoykova & Petkova, 2023) (Patel et al., 2025) (Sengar et al., 2024) (Moenks et al., 2025) (Batool et al., 2025) (Papagiannidis et al., 2025) (Fahimdeh et al., 2022)	(Wei, 2025) (Patel et al., 2025) (Galli et al., 2025) (Pham & Pham, 2024) (PRISMA flow diagram, 2024)

Table 1 summarizes the thematic contribution of the included studies across six core domains: evolution of IS and analytics, generative AI and LLM capabilities, strategic management and competitive advantage, organizational and socio-technical perspectives, ethics and governance, and research methods and techniques.

f) Conceptual Framework Development

Insights from this integrative approach (thematic synthesis and bibliometric analysis) supported both transparency and theory development, enabling the construction of a coherent conceptual framework for Generative Strategic Information Systems (Figure 2).

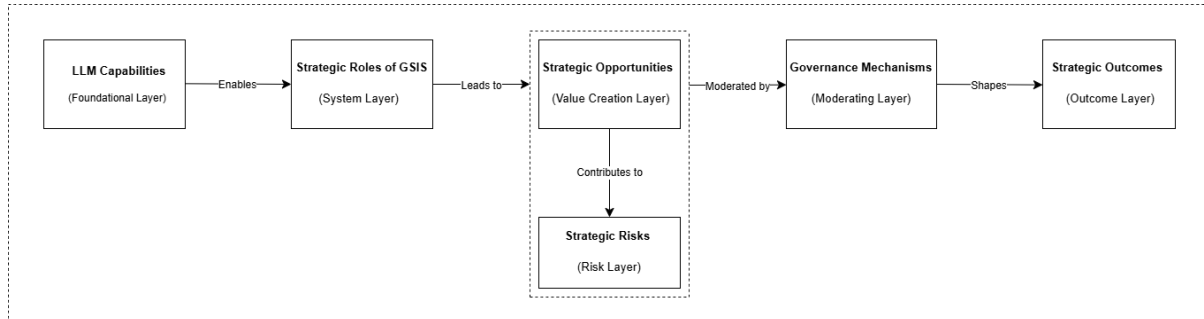


Figure 23 - Conceptual Framework

This framework links generative AI capabilities with strategic roles, organizational outcomes, and governance mechanisms, providing a foundation for future research and practical guidance for implementing LLM enabled strategic information systems.

4. Results and Discussion

This review synthesized 20 peer-reviewed studies published between 2018 and 2025 examining the organizational and strategic applications of large language model (LLM)-enabled Generative Strategic Information Systems (GSIS). The literature is expanding rapidly but remains geographically concentrated in Europe, North America, and Asia. Methodologically, the studies reflect interdisciplinary approaches, including qualitative case studies, experimental simulations, survey-based quantitative designs and mixed-methods approaches. This distribution highlights the diversity of empirical approaches while emphasizing a need for more longitudinal and cross-industry analyses. The diversity of methods strengthens the breadth of perspectives, but it also limits direct comparability and cumulative empirical generalization.

Across these studies, a consistent analytical pattern emerges: GSIS are increasingly positioned not as conventional decision-support tools, but as cognitively augmentative infrastructures embedded within strategic processes, enabling organizations to extend reasoning capabilities, generate strategic alternatives, and support iterative decision-making.

4.1. Taxonomy and Strategic Roles of GSIS

LLM-based Generative Strategic Information Systems are framed as multi-dimensional strategic actors rather than standalone tools. The reviewed studies collectively indicate that GSIS can be categorized along three interrelated dimensions: autonomy, cognitive contribution, and temporal scope. In the reviewed literature, autonomy ranges from supervised recommendation systems to semi-autonomous agents that capable of initiating analytical processes and draft strategic alternatives. Cognitive contribution extends from analytical support functions such as summarization, pattern detection, and scenario modeling to co-

creative strategic reasoning. Temporal scope varies from real-time environmental sensing to long-term strategic formulation, and foresight activities.

Rather than reinforcing hierarchical decision structures, GSIS facilitate distributed strategic alignment across organizational levels, enabling cross-functional collaboration and iterative strategy refinement (Hofmann et al., 2024). In this sense, they transcend traditional top-down information system models by embedding generative cognition within everyday strategic routines. The taxonomy suggests that GSIS best function as multi-dimensional strategic actors rather than as isolated technical tools. Their strategic value depends less on the model itself and more on how organizations define boundaries for autonomy, cognitive depth, temporal integration within governance boundaries, managerial routines, and maintain interpretive control.

4.2.Strategic Opportunities

Across the reviewed literature, GSIS demonstrate significant potential to enhance strategic sensemaking and organizational agility. By synthesizing heterogeneous data sources including structured metrics, textual reports, and external signals; LLM-enabled systems support interpretive integration and the rapid generation of alternative strategic narratives and evaluate options more quickly (Selgas-Cors, 2025). This capability expands the range of strategic options available to decision-makers and accelerates iterative strategy cycles (Silvanskaya et al., 2025). From a resource-based perspective, GSIS may augment cognitive resources that improve decision quality and innovation outcomes. Simultaneously, from a dynamic capability standpoint, they strengthen sensing and seizing capacities by enabling continuous environmental scanning and rapid recombination of knowledge assets. Empirical findings indicate improvements in analytical efficiency, decision quality, productivity, and short-term strategic responsiveness (Mahmood et al., 2025). However, evidence supporting sustained competitive advantage remains limited. Most studies report immediate performance gains rather than longitudinal impacts, underscoring the need for extended empirical assessment of long-term strategic value creation.

4.3.Strategic Risks and Failure Modes

While opportunities are substantial, the literature consistently highlights several systemic risks associated with GSIS deployment. Epistemic risk is the most visible. A primary epistemic concern involves hallucinations and probabilistic inaccuracies inherent in generative models, which may produce plausible yet factually incorrect outputs (Moenks et al., 2025). The synthesis shows that the more serious challenge is not simply technical error; it is the possibility that organizations will treat generated outputs as authoritative strategic knowledge. Such errors can undermine strategic reliability if not adequately validated.

The literature identifies multiple categories of risks significantly including epistemic, organizational, ethical, and systemic vulnerabilities. Epistemic risks arise from hallucinations, probabilistic inaccuracies, where outputs may appear plausible but lack factual validity. More critically, the findings indicate that the primary risk lies not in technical error alone, but in the

organizational tendency to treat generated outputs as authoritative knowledge, potentially undermining strategic reliability.

Organizational risks also emerge in the form of automation bias and cognitive offloading, where decision-makers overly rely on system outputs, potentially diminishing critical evaluation and independent judgment (Niehaus & Wiesche, 2021). Additionally, the widespread adoption of similar generative architectures may contribute to strategic homogenization, as firms converge toward analogous analytical patterns and strategic narratives that limit differentiation across firms (Kudina & de Poel, 2024). Ethical and governance concerns particularly regarding transparency, explainability, and accountability, further intensify these risks (Fahimdeh et al., 2022).

Importantly, these risks are not merely technical malfunctions, but structural and strategic vulnerabilities embedded within socio-technical systems. They affect organizational cognition, competitive differentiation, and institutional legitimacy, positioning GSIS risk management as a core strategic issue rather than an operational afterthought.

4.4. Governance Imperatives

The review underscores governance as a central determinant of GSIS effectiveness. Rather than constraining innovation, governance mechanisms function as strategic enablers that balance value creation with risk mitigation. Effective governance operates across structural, procedural, and relational dimensions. Structurally, organizations are establishing AI oversight committees and cross-functional governance boards to supervise deployment and alignment with strategic objectives (Patel et al., 2025). Procedurally, mechanisms such as validation protocols, audit trails, and continuous performance monitoring are critical for ensuring reliability and accountability (Papagiannidis et al., 2025). Relational mechanisms are equally significant. AI literacy, managerial awareness, and human-in-the-loop collaboration frameworks foster responsible integration and mitigate overreliance. Studies emphasize that sustainable strategic impact emerges when generative systems complement rather than substitute human judgment (Batoool et al., 2025; Selgas-Cors, 2025). Together, these mechanisms reduce the likelihood that GSIS outputs are accepted uncritically or detached from organizational accountability.

The literature therefore supports a governance interpretation in which responsible AI use is not only about compliance but also about maintaining strategic integrity. GSIS create value when governance preserves human judgment while allowing iterative experimentation.

The findings indicate that LLM-enabled GSIS represent transformative yet inherently fragile strategic infrastructures. While they expand the boundaries of strategic information systems by enhancing reasoning, scenario generation, and decision-making capabilities, their long-term value is contingent upon context-sensitive deployment, disciplined governance, and sustained human oversight. The analysis further suggests that sustainable competitive advantage is driven not by technological sophistication alone, but by the organization's ability to effectively integrate, interpret, and govern these systems within strategic processes.

5. Conclusion

5.1 Summary of Findings

This review examined the emergence of Generative Strategic Information Systems (GSIS) enabled by large language models (LLMs) and synthesized current scholarly insights regarding their strategic roles, opportunities, risks, and governance requirements. The findings indicate that generative AI is transforming strategic information systems from predominantly analytical and rule-based infrastructures into collaborative, cognitively augmentative systems that actively participate in strategy formulation, scenario generation, and adaptive decision-making.

GSIS enhance organizational sensemaking and agility by integrating diverse data sources, producing knowledge-integrative outputs, and supporting iterative strategy processes.

At the same time, the review highlights that the strategic value of GSIS is inseparable from their associated epistemic and systemic risks including hallucinations, probabilistic inaccuracies, automation bias, and the potential for strategic homogenization. These vulnerabilities extend beyond technical malfunction to affect organizational cognition, decision quality, and competitive positioning. Ethical, accountability, and transparency concerns further emphasize the need for governance mechanisms that go beyond mere compliance, enabling responsible and strategic deployment.

Successful integration of generative AI into strategic information systems requires a shift from purely technological adoption toward comprehensive socio-technical governance, embedding human judgment, oversight, and adaptive control within organizational routines.

5.2 Recommendations

The review recommends that organizations embed GSIS within formal strategic planning and decision-making structures rather than deploying them as isolated analytical tools. Effective implementation requires multi-layer governance combining structural oversight, procedural validation mechanisms, and relational investments in AI literacy and human-AI collaboration. Governance should not be treated as a restrictive compliance mechanism but as a strategic enabler that sustains trust, reliability, and long-term value creation. Additionally, organizations should adopt context-sensitive deployment practices, maintain interpretive control over AI outputs, and ensure continuous human oversight to maximize the strategic benefits of GSIS while mitigating epistemic and organizational risks.

5.3 Implications

The implications of this review are twofold.

From a theoretical perspective, it advances understanding of how generative AI reconfigures the conceptual boundaries of strategic information systems, positioning GSIS as cognitively augmentative, collaborative actors rather than conventional decision-support tools.

It formalizes the concept of Generative Strategic Information Systems (GSIS) as a distinct evolution within the strategic information systems domain. By integrating perspectives from

strategic management, socio-technical systems theory, and AI governance scholarship, the review synthesizes strategic opportunities and risk dimensions into a unified governance-oriented framework, bridging fragmented discussions across information systems and AI ethics literature. Through this integration, it advances conceptual clarity regarding how generative AI transforms the strategic role of information systems.

From a practical standpoint, the findings emphasize that competitive advantage does not arise automatically from technological sophistication; instead, it depends on disciplined integration, contextual sensitivity, and sustained human oversight. GSIS should be understood as conditional strategic enablers, whose impact relies on contextual fit, governance maturity, and human oversight. Organizations are encouraged to embed GSIS within formal strategic planning cycles, institutionalize AI oversight structures, implement procedural safeguards such as validation protocols and audit mechanisms, and invest in AI literacy and cross-functional integration. Maintaining human-in-the-loop configurations can mitigate systemic risks while preserving innovation potential. These measures provide a structured pathway for aligning generative AI capabilities with strategic accountability, resilience, and long-term value creation. For practitioners, the findings suggest that GSIS should be embedded within formal strategic planning cycles rather than deployed as isolated analytical tools. Investments in AI literacy, cross-functional integration, and adaptive governance structures are essential to realize sustained benefits.

For researchers, the literature reveals significant gaps in longitudinal evidence, limited cross-industry comparison, and insufficient measurement of sustained competitive advantage, signaling clear avenues for future research. Addressing these gaps will enable more robust understanding of GSIS impact over time, across contexts, and in diverse organizational settings.

6. Limitations

Several limitations must be acknowledged. The review is based on 20 peer-reviewed studies; a relatively small but emerging body of literature published between 2018 and 2025, reflecting a field still in conceptual development. Empirical evidence remains geographically concentrated and often short-term in scope, limiting generalizability across industries and institutional environments. Furthermore, many studies emphasize conceptual arguments over longitudinal performance data, constraining definitive conclusions regarding sustained competitive advantage of GSIS.

7. Future Research

The literature reveals several critical gaps that warrant further investigation. Most notably, there is a lack of longitudinal evidence examining whether the observed performance gains of GSIS persist, scale, or decay over time. Future research should therefore prioritize longitudinal empirical studies to validate GSIS impacts on strategic performance and competitive outcomes.

Field-based case studies and cross-industry comparative analyses are needed to assess context-specific governance configurations and organizational integration practices. Additionally,

studies focusing on executive cognition and human-AI collaboration dynamics can deepen understanding of how generative systems influence strategic judgment, organizational learning, and decision-making processes. Developing and empirically testing adaptive governance models tailored to organizational maturity levels represents another critical avenue for investigation. Future inquiry should examine long-term strategic outcomes, cross-industry variation, human-AI interaction dynamics, systemic AI risks, and the role of governance and ethics in strategic decision-making, thereby providing actionable insights for both theory and practice.

In conclusion, LLM-enabled Generative Strategic Information Systems constitute transformative yet high-stakes strategic infrastructures whose long-term value is contingent upon disciplined governance, contextual integration, and effective human-AI collaboration, positioning organizations that adopt them thoughtfully to achieve sustained competitive advantage while mitigating systemic risks.

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IMPACT OF INTERNAL EMPLOYER BRANDING ON EMPLOYEE ENGAGEMENT AMONG MANAGERIAL EMPLOYEES: THE MEDIATING ROLE OF PERCEIVED ORGANIZATIONAL SUPPORT

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Abstract

Purpose: This study examines the impact of internal employer branding on employee engagement among managerial employees in Sri Lanka's logistics industry. It also investigates the mediating role of perceived organizational support. The research addresses the limited empirical evidence on managerial-level engagement within the logistics sector and aims to provide insights into improving organizational performance through strategic internal branding practices.

Design/methodology/approach: This study adopted a positivist research philosophy and a quantitative research approach. Data were collected from 131 managerial employees at ABC Logistics Company, Orugodawatta, Sri Lanka, using a structured online questionnaire. A simple random sampling technique was applied. The study was grounded in social exchange theory, organizational support theory, and social identity theory. An integrated conceptual framework was developed and empirically tested. Statistical analysis techniques, including correlation and mediation analysis, were used to examine relationships between internal employer branding, perceived organizational support, and employee engagement, ensuring the validity and reliability of the research findings and supporting hypothesis testing procedures.

Findings: The findings indicate a significant positive relationship between internal employer branding and employee engagement among managerial employees. Internal employer branding was also found to significantly predict perceived organizational support. Furthermore, perceived organizational support demonstrated a strong positive relationship with employee engagement. Mediation analysis confirmed that perceived organizational support partially mediates the relationship between internal employer branding and employee engagement. These results highlight the importance of internal branding practices in fostering supportive organizational environments. Overall, the study confirms that strengthening internal employer branding enhances engagement both directly and indirectly through increased perceptions of organizational support among managerial staff.

Research limitations/implications: This study is limited to a single organization and a relatively small sample, which may affect generalizability. Future research should include multiple organizations and industries. The study contributes theoretically by integrating key frameworks and offers practical implications for enhancing employee engagement through internal employer branding strategies in similar organizational contexts.

Originality/value: This study provides a novel contribution by focusing on managerial employees in Sri Lanka's logistics industry. It integrates multiple theoretical perspectives and highlights the mediating role of perceived organizational support, offering valuable insights for both academic research and organizational practice in employee engagement.

Keywords: Employee Engagement; Internal Employer Branding; Logistics Industry; Mediation Analysis; Perceived Organizational Support

1. Introduction

1.1 Background of the study

IEB is becoming a major motivator for engagement. IEB focuses on communicating and instilling the employer value proposition and organizational values among existing employees. Good internal branding increases employee identification, motivation, and loyalty, claim Tanwar & Prasad (2022). According to preliminary conversations with ABC Logistics managers, their engagement is positively impacted by the quality of IEB communication, recognition, and career development opportunities.

The degree to which workers believe the company values and supports them is known as perceived organizational support, and it is closely linked to engagement. POS strengthens the connection between internal employer branding and participation while fostering psychological safety and trust. Eisenberger et al. (2021) and Sharma & Prasad (2022) also corroborate this. Additionally, ABC managers stated that when they see organizational support during this proposal's evaluation, they feel emotionally tied to and committed to the organization.

Despite the growing importance of IEB in influencing employee attitudes and behaviors, limited empirical research has examined its impact within Sri Lanka's logistics industry. This study explores the effect of IEB on the employee engagement of lower- and middle-level managerial staff in ABC Logistics company in Orugodawatta, using POS as a mediator, considering low engagement levels. This study focuses on lower- and middle-level categories because the employees' involvement levels in those categories are somewhat lower, even though the phrase "managerial employees" encompasses all three layers. Therefore, this study attempts to address the need for local empirical evidence on the role of IEB in enhancing employee engagement in Sri Lanka's logistics sector, using a sample size of 131 managers out of a population of 271.

1.2 Research problem

Even though engagement is a key factor in productivity, motivation, and strategic alignment, ABC Logistics is experiencing a decline in the level of engagement among its lower and middle-level managerial workforce. Reduced morale, decreased productivity, and increased intention to leave are all signs of diminished involvement.

Informal conversations with the ten managers exposed a lack of career growth opportunities, uneven recognition, and imprecise messaging. Emotional disengagement and a decrease in discretionary effort resulted from sentiments of undervaluation. These factors have all led to an increase in absenteeism, a rise in resignations, and interruptions in important functions. Few studies have examined how internal employer branding and perceived organizational support affect employees' engagement in Sri Lanka's logistics sector, even though engagement has been the subject of much global research. To date, ABC Logistics has not been the subject of any empirical investigation. Therefore, this study investigates these connections to guide the

creation of tactics meant to improve management engagement, retention, and overall organizational success.

1.3 Problem statement

What is the nexus between internal employer branding, perceived organizational support, and employee engagement of Managerial level employees in the ABC Logistics company in Orugodawatta?

1.4 Research objectives

Primary objective

1. To examine the impact of employer branding on employee engagement among managerial level employees in ABC Logistics company in Orugodawatta

Secondary objectives

1. To investigate the impact of employee branding on perceived organizational support of managerial level employees in ABC Logistics company in Orugodawatta.
2. To investigate the impact of perceived organizational support on employee engagement of Managerial level employees in ABC Logistics company in Orugodawatta.
3. To analyze the mediating role of perceived organizational support in the relationship between internal employer branding and employee engagement of Managerial level employees in ABC Logistics company in Orugodawatta.

1.5 Research questions

Primary question

- 1.0 What is the impact of employer branding on employee engagement among managerial level employees in ABC Logistics Company in Orugodawatta?

Secondary questions

- 1.0 What is the impact of employee branding on perceived organizational support among managerial level employees in ABC Logistics Company in Orugodawatta?
- 2.0 What is the impact of perceived organizational support on employee engagement among managerial level employees in ABC Logistics Company in Orugodawatta?
- 3.0 Does perceived organizational support mediate the relationship between internal employer branding and employee engagement of Managerial Level Employees of ABC Logistics Company in Orugodawatta?

2. Literature review

2.1 Internal employer branding

Employer branding is defined as a collection of the company's internal and external advertising and promotion initiatives that create a favorable perception of the business as an employer. According to Alonderienė & Urbelė (2024), IEB is an internal marketing strategy that creates a distinctive workforce that cannot be replicated because of the company's value proposition, which addresses exclusive work culture, goals, and values.

IEB is the unique set of attributes that allows an employer to set itself apart from rivals. Additionally, it is one of the most recent themes in organization management, and businesses use it as a tactical tool to gain a sustained competitive edge (Goyal & Kaur, 2023).

Internal Employer branding is positively impacted by work-life balance. Organizations that offer recreational facilities and support services are valued by employees. As a result, satisfaction rises and turnover declines. Brand perception and employee well-being are improved when personal identity is plotted against job identity. Workers respect companies that prioritize professional advancement. The formulation of a strategic career plan, training, and psychological support from management all increase the employer's perceived value. Personal objectives that are in line with professional growth increase employee loyalty, which improves brand perception. (Raunaq Dhar, 2018).

Internal branding fosters loyalty and a sense of community. People who are committed to the business's internal values and culture are more likely to stick around, support long-term objectives, and act in ways that demonstrate a strong bond with the organization. Workers who are associated with a company's internal brand are less inclined to quit and look for work elsewhere. Because a strong internal brand promotes trust, contentment, and organizational commitment, which improves labor stability and lowers recruitment costs, it will deter voluntary turnover

Internal employer branding is a very important factor in influencing employees' attitudes and perceptions of their organization, according to previous research studies. When employees are able to understand the values, culture, and employee value proposition of the organization, they are likely to feel supported and valued. This will lead to increased employees' identification with the organization and their perception of support from the organization, which will eventually lead to increased employee engagement.

2.2 Employee engagement

The degree of enthusiasm and commitment that an employee has for their work is known as employee engagement. Workers that are motivated are concerned about their work, the company's success, and the impact of their efforts. An engaged employee is crucial to the success of their organization because they are motivated by more than just a paycheck and believe that their performance is correlated with their well-being. (Smith, 2024)

Research indicates that workers' work engagement is positively impacted by the internal corporate brand. Strong internal branding improves commitment, emotional and professional involvement, and workers' perception of the company. Employee engagement is increased because they believe their organization is a good place to work, which strengthens both internal culture and external reputation. (Wardani & Meiliyandrie, 2020)

Employee engagement rises when there is a pleasant or favorable work environment. When workers at a company with a service-oriented culture feel valued and engaged, they are more likely to produce high-quality work, which lowers organizational turnover and disengagement. Employees in these businesses are encouraged to foster open communication, be carefully supervised, receive training, and perform at their best. (Špoljarić & Tkalac Verčič, 2022).

Thus, employee engagement can be considered an important outcome of effective internal organizational practices like Internal Employer Branding and Perceived Organizational Support, which impact the emotional and psychological association of employees with the organization.

2.3 Perceived organizational support

The degree to which workers feel their company appreciates their contributions and is concerned about their welfare is known as perceived organizational support, or POS. (Rhoades & Eisenberger, 2002). Internal Employer Branding (IEB) is built on effective internal communication, which also builds trust and strengthens POS.

Acknowledging employees' achievements and efforts, particularly at the managerial level, sends a strong message and boosts their confidence that the company appreciates their work. POS increases employee engagement, which is defined by zeal, dedication, and focus on work. Positive work environments increase employee engagement and productivity. Job satisfaction is higher among employees who sense organizational support. This is due to their perception that their efforts are appreciated and that their welfare is taken care of (Rhoades & Eisenberger, 2002).

Affective attachment and involvement with the organization are produced by perceived organizational support. Employees that receive support are more likely to become deeply committed to the company, which lowers their intentions to quit.

With these connections in mind, perceived organizational support can be an important psychological mechanism that links internal employer branding and employee engagement. When internal employer branding practices convey that the organization cares about and supports its employees, employees are likely to have stronger perceptions of organizational support. These perceptions encourage employees to reciprocate by being more engaged and committed to the organization.

2.4 Relevant theories

The conceptual framework of this study is founded on three major theories: Social Exchange Theory (SET), Organizational Support Theory (OST), and Social Identity Theory (SIT). These theories describe the manner in which Internal Employer Branding (IEB) affects Employee Engagement (EE) via Perceived Organizational Support (POS).

Social Exchange Theory (SET) argues that the relationship between employees and organizations is founded on social exchanges (Blau, 1964). As organizations engage in internal employer branding activities such as recognition, career opportunities, and supportive work environments, employees recognize these as investments in their well-being and respond with increased levels of engagement. Therefore, SET confirms the relationship between IEB and EE (H1) and the mediating effect of POS (H4).

Organizational Support Theory (OST) argues that employees have perceptions about the degree to which their organization values their contributions and cares about their well-being (Eisenberger et al., 1986). Internal employer branding activities communicate organizational support to employees, thereby increasing Perceived Organizational Support. Therefore, OST confirms the relationship between IEB and POS (H2).

Social Identity Theory (SIT) argues that people acquire part of their identity from the organizations they belong to (Tajfel & Turner, 1979). As employees strongly identify with their organization through internal employer branding and shared values, they experience a sense of belonging, which in turn increases their engagement. Therefore, SIT confirms the relationship between POS and EE (H3).

These theories collectively form the theoretical underpinning of the proposed mediation model, which suggests that Internal Employer Branding positively affects Employee Engagement directly and indirectly via Perceived Organizational Support.

2.5 Gaps identified in the study

The present study attempts to bridge the gaps, which are theoretical, empirical, population-based, and knowledge-based, with regard to the interconnectedness of internal employer branding, employee engagement, and perceived organizational support. Theoretically, previous studies on these topics relied on separate theoretical frameworks, namely Social Identity Theory, Organizational Support Theory, and Social Exchange Theory, but did not synthesize these theories into one framework to show how they jointly influence employee engagement through perceived organizational support. The present study attempts to bridge this theoretical gap by integrating these theories into one framework.

Empirically, most studies on these topics were conducted in Asia, especially in India, which accounted for 23.6% of the total studies globally and 46.4% of the studies in Asia. In contrast, Europe and North America mostly focused on different industries, ignoring the logistics industry, which is relatively underresearched in these parts of the world. Population gap is the

lack of studies on managerial employees in general, with very few studies on the logistics industry in developing countries such as Sri Lanka.

The knowledge-based gap is the lack of integrated understanding of the interconnectedness of internal employer branding, employee engagement, and perceived organizational support, which is addressed by this study by focusing on managerial employees in a logistics industry in Sri Lanka.

2.6 Hypothesis development

Relationship Between Internal Employer Branding and Employee Engagement

Moreover, through an enhanced perception of identification with and belongingness in an organization, internal company branding has an impact that is positive in nature on worker engagement. To enhance worker engagement along with an employer brand, it is important that effective internal communication is established in an organization. Another factor is that an enhanced level of an internal employer brand is what can motivate employees to synchronize their beliefs with what is offered by an organization, along with putting in extra effort in their work life (Wang & Wang, 2024). Furthermore, company branding is important to enhance worker commitment, thus increasing worker engagement along with consumer loyalty in an organization itself. (Eisenberger et al., 1986). Based on the above literature, the first hypothesis is as follows.

H1- Internal employer branding has a significant impact on employee engagement.

Relationship Between Internal Employer Branding and Perceived Organizational Support

By fostering an atmosphere where workers feel appreciated and cared for, internal employer branding improves perceived organizational support. According to Staniec and Kalińska-Kula (2021), internal branding initiatives strengthen employee value propositions and boost the organization's perceived support. (Bonaiuto et al., 2022) further corroborated this by demonstrating how psychosocial factors associated with employer branding, which have an impact on workers' emotional connection and engagement at work, greatly influence perceived organizational support. Additionally, employees feel valued and cared for when an organization's brand and values are properly communicated inside. As a result, there is a stronger sense of organizational support. (Aanchal & Atwal, 2023; Wang & Wang, 2024). Based on the above literature, the second hypothesis is as follows.

H2- Internal employer branding influences perceived organizational support by fostering a supportive and value-driven environment.

Relationship Between Perceived Organizational Support and Employee Engagement

Perceived organizational support and employee engagement are strongly related since motivated individuals are more inclined to put in extra effort. (Biswas & Bhatnagar, 2013) discovered that the association between organizational fit and engagement outcomes is

favorably mediated by perceived organizational support. (Tran & Nguyen, 2021) The importance of perceived support in maintaining high employee engagement levels during difficult times like the COVID-19 epidemic was also emphasized, as it reinforced commitment and trust. Additionally, workers who believe their companies support them show greater dedication and a lower percentage of employee turnover. Based on the above literature, the third hypothesis is as follows.

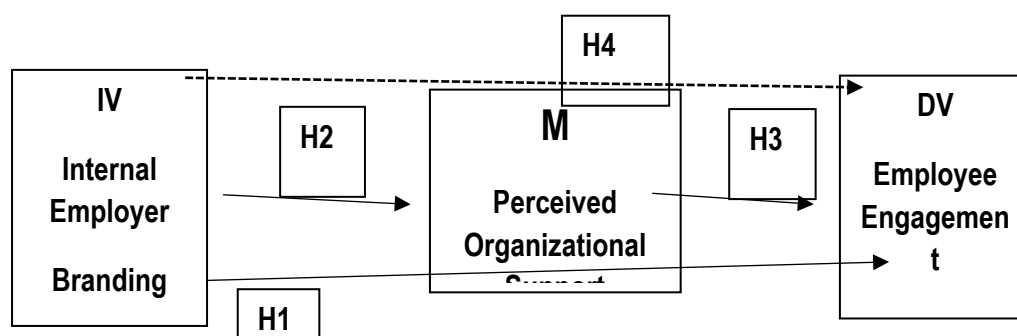
H3- perceived organizational support is positively associated with Employee engagement

Perceived Organizational Support as a Mediator Between Internal Employer Branding and Employee Engagement.

It was discovered that perceived organizational support significantly mediates how internal employer branding influences engagement, highlighting the significance of supportive workplace environments. Perceived organizational support mediates internal employer branding and employee engagement by translating branding efforts into concrete feelings of care and support. (John & Jagathy Raj, 2020) further demonstrated that increased employee engagement results from the social exchange process included into employer branding, especially when workers sense strong organizational support. This mediation demonstrates that employees perceive internal branding signals as genuine organizational support, fostering their emotional connection and discretionary effort and raising engagement levels (Sharma et al., 2024). Based on the above literature, the fourth hypothesis is as follows.

H4- Perceived organizational support will mediate the relationship between internal employer branding and employee engagement.

Conceptual framework with three theories



H1- Social Exchange Theory

H2 -Organizational Support Theory

H3 -Social Identity Theory

Figure 1: Conceptual Framework

3. Methodology

To interact with many respondents and generalize, this explanatory research study uses quantitative data. A quantitative approach was considered appropriate because the study aims to test the relationships between internal employer branding, perceived organizational support, and employee engagement using statistical analysis. The research philosophy, theory testing methodology, research plan, time horizon, demographics, and study sample are all described in the first part. The sampling strategy, data gathering, and survey pilot test are then covered. The chapter concludes with a summary, methodology, and ethical considerations. According to Park (2020), this study employs a positivist research theory, which basically maintains the significance of objective measurement, gathering observable facts, and drawing conclusions using empirical evidence.

According to Saunders et al. (2019), positivism has a greater influence on the deductive approach, which develops hypotheses and organizes research techniques to test them. The deductive approach was considered appropriate for this study because it allows the researcher to test the proposed hypotheses derived from Social Exchange Theory, Organizational Support Theory, and Social Identity Theory. Saunders et al. (2019) state that the survey approach is appropriate for collecting data from a reasonably large number of people using self-completed questionnaires and for quantitatively analyzing the data using readily available software and descriptive and inferential statistics. A cross-sectional study gathers information simultaneously from numerous people. A cross-sectional study looks at variables without trying to alter them. The researcher for the study is impartial, external, and keeps an eye on numerous variables without making any changes. Research for academic courses usually takes a short amount of time.

The 271 lower-level and mid-level managerial employees of ABC Logistics Company in Sri Lanka are the study's target population. Because they actively participate in operational decision-making, team supervision, and the implementation of organizational policies that may have a direct impact on employee engagement, this specific group was selected.

Though a minimum sample size of 119 respondents was statistically established to be adequate through a sample size calculator, a total of 131 responses were collected and analysed to increase the statistical power of this study and make the findings even more reliable. As every individual in the population has an equal chance of being selected, simple random sampling was considered most suitable as it helps minimize biases in selecting the sample, making it representative of the whole population (Sekaran & Bougie, 2016). A complete list of lower-level and middle-level managerial employees was obtained from the company's human resource department, which enabled the researcher to apply true random selection when distributing the questionnaire. In addition, it would be easier to apply simple random sampling in one organization because of its accessibility, as well as making it easier to generalize conclusions drawn because of the ability of any statistical test performed on it to reflect the attitudes of the population.

The primary tool used to collect data for this study was a self-administered web-based questionnaire. Standardized questions are used, like those used by Saunders et al. (2018), to guarantee that respondents would respond to the questions in the same manner that they understand them. Following the operationalization of the variables, the questionnaire used internal employer branding, perceived organizational support, employee engagement, and standardized scales for measurement that were taken from the literature.

3.1 Operationalization of the Variables

IEB, EE, and POS were measured by using standardized scales from previous research. IEB, as the independent variable, is a one-dimensional construct capturing views on organizational reputation, fairness, diversity, and rewards, measured by nine items using Backhaus & Tikoo (2004) and Goyal & Kaur (2023). EE, the dependent variable, is a positive work-related condition entailing vigor, dedication, and absorption, measured by nine items capturing views on enthusiasm and engagement, as per Schaufeli et al. (2002). POS, the mediating variable, captures the degree to which employees feel valued by the organization, measured by ten items tapping recognition and support, as per Eisenberger et al. (1986). All the constructs were measured by using a five-point Likert scale for precise perception projection.

4. Data presentation & analysis

In this section, the data collection process and sample characteristics are outlined, focusing on data analysis using SPSS version 27.0. An online survey was conducted to gather data on employee engagement, organizational support, and brand perception. Out of 170 distributed questionnaires, 165 remained after screening. However, 29 responses were dismissed due to contradictions, resulting in 131 valid questionnaires after removing 5 outliers, for the study with a 77% response rate.

Sample description

Table 37: Demographic data

Variable	Category	Frequency	Percentage (%)
Gender	Male	76	58.0
	Female	55	42.0
Age (years)	Below 20	3	2.3
	20–35	77	58.8
	35–50	41	31.3
	Above 50	10	7.6
Level of Management	Lower Level	53	40.5
	Middle Level	78	59.5

Variable	Category	Frequency	Percentage (%)
Department	Finance	16	12.2
	Marketing	23	17.6
	Accounting	15	11.5
	Administration	7	5.3
	Sea Freight	13	9.9
	Air Freight	8	6.1
	Operations	27	20.6
	Procurement	9	6.9
	IT/Systems	13	9.9
Total Respondents		131	100.0

Preliminary analysis

Preliminary analyses precede hypothesis testing in the research study. The procedure is intended for screening data to make the main constructs of the research study reliable and valid.

Data Screening

According to Meyers, Gamst, and Guarino (2013), data screening makes a dataset ready for conventional statistical analysis necessary for hypothesis testing.

Entry Accuracy

Accuracy of data entry was ensured through illegitimate code checking. Every questionnaire contained a special code number, and random checks were conducted to double-check that all data were properly entered. Also, the range of all variable items and demographics was reviewed for the sake of confirming accuracy of entry.

Missing Data Analysis

According to Hair, Sarstedt, Ringle, & Mena (2012), missing data must be analyzed in order to determine suitable solutions. Since there were no missing values in the dataset for this study, all the variables had complete responses. The missing data did not need to be handled any further.

Normality

Normality was tested before hypothesis testing. With the size of the data ($N = 131$) being sufficiently large, slight violations of normality were deemed acceptable (Field, 2009). Normality of the variables Internal Employer Branding (IEB), Perceived Organizational Support (POS), and Employee Engagement (EE) were tested using univariate normality tests

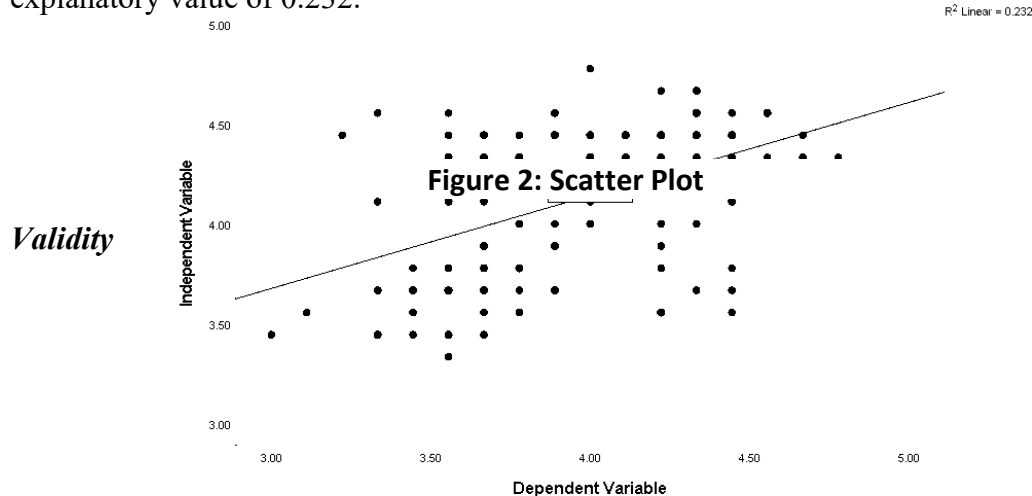
through skewness and kurtosis tests. The results of the tests are presented in Table 2. All variables had skewness within ± 3 and kurtosis within ± 10 , which are acceptable levels of normality (Kline, 2005). There were no extreme outliers in the data. Thus, normality was established.

Table 2: Skewness & Kurtosis values for 3 Variables

Variable	Skewness	Kurtosis
IEB	-0.425	-1.216
POS	-0.176	-0.462
EE	-0.001	-0.948

Linearity

A scatterplot was used to visually confirm the straight-line association between the Independent Variable (IV) and the Dependent Variable (DV). The regression equation $\{Y = 2.28 + 0.47X\}$ best describes the straight-line trend that the confirmation produced. The linearity assumption held for this significant path, as evidenced by the linear model's moderate explanatory value of 0.232.



Exploratory factor analysis was carried out to check the construct validity and adequacy of the sample for Internal Employer Branding (IEB), Perceived Organizational Support (POS), and Employee Engagement (EE). The values of Kaiser-Meyer-Olkin (KMO) ranged from 0.701 to 0.765, all of which were higher than the minimum requirement of 0.50 (Hair et al., 2010). Moreover, Bartlett's Test of Sphericity was significant for all the constructs at $p < .001$. This ensures the adequacy of the sample for factor analysis. Also, the extraction of the sum of squared loadings for all the constructs was higher than 50%.

These findings show that the measurement items for Internal Employer Branding, Perceived Organizational Support, and Employee Engagement have acceptable construct validity and accurately reflect their respective constructs.

Table 3: KMO & Bartlett's values for 3 variables

Construct	KMO	Bartlett value	df	Sig.
IEB	.701	248.741	36	.000
POS	.763	249.063	45	.000
EE	.765	205.839	36	.000

Reliability

Table 4 below shows the Cronbach's alpha results for each measure. It is assumed that all measures are reliable and that all coefficients of measurement are greater than 0.70. The Cronbach's alphas for Internal Employer Branding (0.747), Employee Engagement (0.751), and Perceived Organizational Support (0.773) exceed the recommended level. Furthermore, no items needed to be eliminated, according to the reliability analysis (the "highest scale if item deleted" output). Because responders were given clear instructions and sufficient high-quality items were used to measure each construct, the measures have reasonable to high levels of dependability.

Table 4: Reliability values of variables

Measure	Cronbach's Alpha	No of Items
Internal Employer Branding	0.747	9
Employee Engagement	0.751	9
Perceived Organisational Support	0.773	10

Correlation

Table 5 shows the Pearson correlation coefficients between the study variables. Internal Employer Branding (IEB) correlated positively and significantly with Employee Engagement (EE) ($r = .481$, $p < .001$) and Perceived Organizational Support (POS) ($r = .401$, $p < .001$). Furthermore, POS correlated strongly and positively with EE ($r = .714$, $p < .001$). These results offered preliminary support to the proposed relationships between the study variables.

Table 5: Pearson Correlation Statistics

	IEB	EE	POS
IEB		.481**	.401**
EE			.714

Common Method Variance (CMV)

Common methods variance was tested using Harman's single factor test. Exploratory factor analysis, where all items measuring were included as both independent and dependent variables without any rotation, confirmed that the first factor accounted for 21.38% of total variance, which was less than 50% as recommended by Podsakoff et al. (2003). This shows that common methods variance was not a problem here.

Table 6: Harmon's Single Factor Test

Assessment	Procedure	Key Evidence from Output	Conclusion on CMV
Harman's Single-Factor Test	Unrotated EFA on all items	First Factor Explained: 21.381% of Total Variance	Not a Significant Concern

Regression Analysis

The direct relationships outlined in Hypotheses 1, 2, and 3 were analyzed using simple linear regression analysis in SPSS. The technique was chosen because it enables the researcher to analyze the predictive role of the independent variable on the dependent variable while determining the strength and significance of the relationship.

IEB had been found to significantly positively predict EE, with a beta of .481, a t-value of 6.236, and a p-value of less than .001, hence supporting H1. This engagement explained 23.2% of the variance in engagement, with an R-square value of .232. Similarly, IEB significantly predicted POS: beta = .401, t = 4.966, and p < .001 thus supporting H2. Lastly, POs was found to be a strong predictor of EE: beta = .714, t=

11.597, and $p < .001$, thus explaining 51% of variance and supporting

Hypothesis	Path	β	t-value	F-value	R ²	Result	Table 7: <i>Regression Analysis results</i>
H1	IEB → EE	.481	6.236	38.886	.232	Supported	
H2	IEB → POS	.401	4.966	24.658	.160	Supported	
H3	POS → EE	.714	11.597	134.487	.510	Supported	

Assessing The Mediating Effect: Testing H4

Hypothesis 4 was assessed to determine if Perceived Organizational Support (POS) mediates the relationship between Internal Employer Branding (IEB) and Employee Engagement (EE). The mediation effect was assessed using Hayes' (2022) PROCESS Macro (Model 4) in SPSS with 5,000 bootstrap samples. Bootstrapping is seen as a powerful technique for testing mediation because it does not require the normality of the sampling distribution of the indirect effect to be met.

The test showed a significant indirect effect (Effect = .2569, 95% Confidence Interval: [.1484, .3857]). Because the confidence interval does not include zero, it is a significant indirect effect. Moreover, because the test for the direct effect of IEB on EE was also significant even when controlling the effect of POS (Effect = .2398, $p < .001$), POS not only partially mediates this event but also shows a significant effect itself, thus supporting H4.

Table 8: *Mediation Analysis Results*

Effect Type	Effect (Coefficient)	Significance (95% CI Bounds)	Conclusion
Indirect Effect (IEB → POS → EE)	.2569	LLCI: .1484 to ULCI: .3857	Supported
Direct Effect (IEB → EE)	.2398	LLCI: .1085 to ULCI: .3711	Significant

Effect Type	Effect (Coefficient)	Significance (95% CI Bounds)	Conclusion
Total Effect (IEB -> EE)	.4967	LLCI: .3391 to ULCI: .6542	Significant (Partial mediation)

5. Conclusion

Discussion of Findings with Prior Studies

The findings indicate a positive relationship between IEB and EE among managers of ABC Logistics. This is consistent with Social Exchange Theory, which states that employees reciprocate when an organization delivers on internal brand promises by showing more engagement. There is also a positive relationship between IEB and POS, which is consistent with Organisational Support Theory, which states that employees reciprocate when an organisation delivers on internal brand promises by showing more POS.

Contribution of the Study

Theoretical Contributions

The contribution of this research to the Human Resource Management literature is that it combines Internal Employer Branding, Perceived Organizational Support, and Employee Engagement into a conceptual framework. The research helps to understand the psychological process by which internal branding activities affect employee engagement by empirically testing the mediating effect of POS. In addition, the research applies Social Exchange Theory and Organizational Support Theory to the logistics industry in Sri Lanka, which has been underemphasized in the past studies.

Practical Contributions

The results have significant implications for managers and human resource professionals in the logistics field. Organizations can improve employee engagement by focusing on internal employer branding activities such as communication, recognition of employee contributions, and opportunities for career advancement. Moreover, a supportive work environment can improve employees' perceptions of organizational support, which in turn can improve employee engagement and managerial performance.

Limitations of the study

Limitations are that it is cross-sectional in design, it has limited or homogeneous samples, it is quantitatively descriptive in nature, it is subject to response or answer set bias, it has certain

culturally specific issues, it has limited or restricted conceptual foundations, and it is limited in timeliness of reference or collection of data itself.

Directions for future research

Longitudinal, mixed-method, multi-source, and cross-cultural designs should be used in future research to enhance generalizability, deepen insights, and improve causal inference. A more complex understanding of how IEB and POS drive EE worldwide would be possible with the inclusion of managers, the expansion of mediators/moderators, the investigation of digital internal branding, and the analysis of generational disparities.

Recommendations

To enhance Employee Engagement and Perceived Organisational Support, organizations should clearly communicate their employer brand, provide supportive organizational practices, offer opportunities for employee development, and ensure fair organizational reward practices.

Conclusion

This research has reaffirmed that Internal Employer Branding is a significant antecedent of Employee Engagement for managerial employees in the logistics sector. The results have also shown that Perceived Organizational Support partially mediates this relationship, emphasizing the need for supportive organizational practices to improve employee engagement. These results have reaffirmed the applicability of Social Exchange Theory and Organizational Support Theory to explain employee attitudes and behaviors in an organization. In conclusion, improving internal employer branding practices and organizational support can be a crucial step in improving managerial engagement and performance in the logistics industry.

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IMPACT OF MICROFINANCE ON POVERTY ALLEVIATION AMONG RURAL HOUSEHOLDS IN UVA PROVINCE IN SRI LANKA

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Abstract

Purpose: This research examines the impact of microfinance on poverty alleviation among rural households in the Uva Province of Sri Lanka. Poverty remains a major challenge in many rural areas, where limited access to formal financial services often prevents households from investing in productive activities, managing risks, or improving their standard of living. These services include micro-credit, micro-savings facilities, affordable interest rates, and easier access to financial institutions. The main objective of this study is to investigate how these key dimensions of microfinance contribute to reducing poverty among rural households.

Design/methodology/approach: A quantitative research design was adopted, and primary data were collected from 200 beneficiaries of microfinance institutions operating in the Uva Province using a structured questionnaire. The sample consisted of rural households that had directly benefited from microfinance programs. To analyze the data, the study employed descriptive statistics, measurement model validation techniques, and multiple linear regression analysis. Reliability and validity of the measurement instruments were confirmed using Cronbach's alpha, Heterotrait-Monotrait ratio (HTMT), and the Fornell-Larcker criterion. These tests ensured that the constructs used in the study were both consistent and statistically sound.

Findings: The regression results indicate that the model explains approximately 78.8% of the variation in poverty alleviation, demonstrating a strong relationship between microfinance services and improvements in household welfare. Among the variables studied, micro-credit was identified as the most significant contributor to poverty reduction. Access to credit enabled households to start small businesses, invest in agriculture, increase income-generating opportunities, and better manage household expenses. In addition, savings facilities encouraged financial discipline and security, while reasonable interest rates and improved access to services enhanced participation in financial activities.

Research limitations/implications: The study is limited to beneficiaries in the Uva Province and may not fully represent other regions. The findings suggest that integrating financial literacy and entrepreneurial training with microfinance services can enhance long-term sustainability and effectiveness.

Originality/value: This study provides empirical evidence on the role of microfinance in rural poverty reduction in Sri Lanka. It highlights the importance of combining financial services with capacity-building initiatives to strengthen rural livelihoods and inform policy decisions.

Keywords: Interest Rate; Microfinance; Microcredit; Poverty Alleviation; Rural Households in Sri Lanka

1. Introduction

Microfinance remains an important feature of development policy because it gives financial access to households that face barriers in traditional banking systems. In Sri Lanka, microfinance operates through a diverse institutional structure that includes government programs, cooperatives, licensed financial companies, and nongovernmental and private lenders. The Microfinance Act No. 6 (2016) introduced a formal licensing and supervisory framework for deposit taking microfinance companies under the Central Bank of Sri Lanka. However, lending activities that do not involve deposit taking are not governed by this regime, leaving segments of the microcredit market outside comprehensive oversight. Policy discussions have consequently raised concerns regarding borrower protection, loan transparency, and interest burdens among economically vulnerable clients (Central Bank of Sri Lanka., 2026; OECD/GWEP, 2025).

Microfinance is positioned as an instrument for women's empowerment, where women represent the primary client base. However, research cautions against treating empowerment as a direct outcome of credit provision. Systematic reviews show that while microfinance participation can be associated with improvements in certain economic and social dimensions, results remain heterogeneous and context dependent (Parwez & Patel, 2022). Empowerment is understood as a process shaped by the interaction between resources, agency, and lived outcomes, rather than only by financial access (Kabeer, 1999).

Literature indicates that expanding microcredit does not reliably generate large or uniform improvements in living standards. Syntheses of randomized evaluations across multiple countries report modest average effects, with limited evidence for transformative poverty reduction or durable consumption gains (Banerjee et al., 2015). Observed impacts vary across borrowers and settings, reinforcing the view that microfinance outcomes are conditioned by program design and contextual factors (Duvendack & Mader, 2020).

These debates acquire particular significance in postwar environments where economic recovery unfolds under structural constraints. In Northern and Eastern Sri Lanka, conflict legacies continue to shape livelihood opportunities through asset erosion, weakened social networks, and care responsibilities that restrict labour market participation. Women headed households have emerged as an important demographic group and are widely recognized as facing layered vulnerabilities that extend beyond income limitations (UNDP-DPPA, 2025; REVIVE, 2025). Further, low female labour force participation further highlights the challenges associated with converting borrowing into stable income generation (Jayasinghe, 2025).

Puthukkudiyiruppu Divisional Secretariat Division represents a locality where these dynamics remain highly visible. As of 2025, administrative records indicate the presence of 2,489 women headed households, including a significant number formed under conflict related circumstances. Many of these households operate with limited assets and unstable earnings, placing women in positions of sustained economic responsibility. Microfinance institutions play an important role in this setting through the provision of microcredit, welfare oriented

support, and livelihood assistance. However, the consequences of these interventions for women's empowerment remain insufficiently examined at the local level. The present study addresses this gap by examining microfinance and women's empowerment in Puthukkudiyiruppu through a component based perspective that distinguishes microcredit, welfare support, and livelihood assistance.

This study, therefore, examines the impact of microfinance on women's empowerment in the Puthukkudiyiruppu Divisional Secretariat Division of Sri Lanka. Specifically, the study aims to assess how different dimensions of microfinance, namely microcredit, welfare support, and livelihood assistance, influence women's economic empowerment, social empowerment, and overall empowerment. In line with these objectives, the study addresses the following research questions.

- 1.0 Does microfinance significantly influence women's economic empowerment?
- 2.0 Does microfinance significantly influence women's social empowerment?
- 3.0 Does microfinance significantly influence overall women's empowerment?

Using survey data from 60 women headed households, the analysis evaluates how these mechanisms are associated with social empowerment, economic empowerment, and overall empowerment through multivariate regression. This disaggregation is analytically important because prior research suggests that empowerment gains are not guaranteed under credit only designs, while complementary services and contextual constraints may shape outcomes.

The remainder of the paper is structured as follows. The next section presents the literature review and theoretical foundation. The methodology section then explains the research design and analytical approach. This is followed by the findings and discussion. The final section presents the conclusion and implications of the study.

2. Literature Review

Microfinance as a development instrument and the evidence shift

Microfinance entered development policy as a pragmatic response to financial exclusion, built on the idea that small scale credit could ease liquidity constraints, support micro enterprise investment, and help households smooth consumption under risk. The early evidence base largely supported this logic, though it relied heavily on observational designs and context specific institutional settings (Tharanga et al., 2023 ; Perera, 2021).

The evidence base became more cautious as rigorous designs tested causal effects and as comparative synthesis work matured. Recent Sri Lankan research continues to describe microfinance as a broad package of services and highlights the expansion of outreach through multiple institutional channels and group based delivery mechanisms. In parallel, the post Covid Sri Lankan evidence shows that microcredit is often only one part of a broader service mix, and empowerment outcomes appear more closely aligned with savings and training than with credit alone, suggesting that the development logic is increasingly framed around capability and resilience rather than credit volume (Tharanga et al., 2023).

At the global level, recent synthesis work has consolidated a more measured conclusion. Microfinance participation can be associated with incremental gains in some settings. However, results are often modest and vary across contexts, borrowers, and product design. A systematic review focused on microfinance led interventions for empowerment highlights improvements in some economic and social dimensions in certain contexts, while repeatedly documenting mixed results and uneven social change. This shift matters because it reframes microfinance from a universal poverty exit pathway to a conditional instrument whose value depends on local opportunity structures and program design choices. (Shrestha, 2024; Abebe & Kegne, 2023).

Heterogeneity has become central rather than incidental. Even when microfinance improves business activity for some clients, other borrowers may experience limited livelihood transformation, especially where markets are thin or where households face binding time and care constraints (Mengstie, 2022). This heterogeneity is especially relevant in post conflict settings because conflict disrupts labour markets, supply chains, and the informal social safety nets that normally help households manage risk (Perera, 2021).

Empowerment as resources, agency, and achievements

A core reason why microfinance findings appear mixed is that empowerment is not a single outcome and cannot be inferred from income change alone. Empowerment is more credibly read as a process that involves resources, agency, and lived achievements, which means that increased access to finance may expand resources without necessarily shifting agency or social standing (Shrestha, 2024). Recent reviews emphasise that microfinance can support some empowerment dimensions, yet impacts are not automatic and depend heavily on context, program design, and the degree to which women can control the use of loans and the returns generated from them (Abebe & Kegne, 2023).

Evidence from Sri Lanka aligns with this multidimensional view. The post Covid pathway study in Kurunegala reports that training and savings show stronger links to empowerment than some other service elements, implying that the route to empowerment includes capability building and household financial stability rather than credit alone (Tharanga et al., 2023). More recent work also highlights the importance of distinguishing economic empowerment from entrepreneurship development. Studies on women's entrepreneurship development show that microfinance services do not always translate into livelihood upgrading for disadvantaged women, suggesting that market constraints and business capability gaps can limit empowerment even when access expands (Abebe & Kegne, 2023). This is important for the study because Puthukkudiyiruppu households operate under postwar constraints that can shape whether credit is used for productive investment or for financial survival.

Mechanisms and why credit and other factors dominates

Program design sits at the centre of the debate because microfinance rarely operates as credit alone in practice. Many providers combine finance with training, savings mobilisation, and advisory support, and the evidence increasingly suggests that these complements shape

whether borrowing translates into durable gains (Duvendack & Mader, 2020). In Sri Lanka, recent empirical work from Kurunegala finds that training has the strongest association with women's empowerment among the measured microfinance components, while microcredit and micro savings also show significant links (Tharanga et al., 2023). Evidence from other settings reaches a similar conclusion. A large sample study reports that the number of training exposures and the credit amount are among the significant predictors of women's economic empowerment, which supports a capability based pathway rather than a credit only pathway (Mengstie, 2022). At the same time, studies also show that microfinance services may not substantially uplift disadvantaged women when local markets remain thin or when service quality and business feasibility are weak, even when financial and nonfinancial services are offered. (Abebe & Kegne, 2023).

From an empowerment perspective, the design argument is reinforced by work that cautions against assuming that group based lending automatically produces empowering social capital. Research shows that group structures can support empowerment, but outcomes depend on the norms, networks, and power relations embedded in groups, and cost saving designs can undermine empowerment aims when inequality is ignored (Mayoux, 2001). This warning is especially relevant in postwar settings where social trust and household security may have been disrupted, which can affect how group dynamics work in practice (UNDP-DPPA, 2025).

Post conflict conditions and why effects can differ

Post conflict environments change both the uses of credit and the risks attached to borrowing. When livelihoods are fragile and opportunities for productive investment are limited, loans can be used for short term coping and cash flow management rather than enterprise expansion, which alters both welfare implications and empowerment meaning (Banerjee et al., 2015; Duvendack & Mader, 2020). Sri Lanka's postwar evidence highlights that impacts vary across groups and locations and that women's engagement and benefits differ by initial poverty level and education, which suggests that the same intervention can produce very different trajectories within the same broad region (Herath, 2018).

Recent field based assessments in Sri Lanka also emphasize layered vulnerability in districts including Mullaitivu, where care burdens, access constraints, and social insecurity interact with livelihood risks (Ceylon Today, 2025). These conditions make it harder to assume that a microenterprise pathway is available to all borrowers, and they strengthen the case for examining mechanisms such as welfare support and livelihood assistance alongside credit (Banerjee et al., 2015; Duvendack & Mader, 2020).

Positioning the current study and the gap

Based on the literature, it can be understood that average microcredit effects tend to be modest and non transformative, while impacts vary across settings and borrower types (Banerjee et al., 2015). Empowerment outcomes remain uneven and depend on whether resources translate into agency and achievements, which often requires more than credit alone (Kabeer, 1999; Duvendack & Mader, 2020). Program design and context, particularly training, capability

support, and local livelihood feasibility, shape outcomes in both global evidence and Sri Lankan studies (Tharanga et al., 2023; Duvendack & Mader, 2020).

What remains under examined in Sri Lanka's postwar setting is how distinct microfinance mechanisms relate to different empowerment dimensions within a specific divisional context where women headed households face both economic and social constraints. The present study focuses on separating microcredit, welfare oriented support, and livelihood assistance, and testing their associations with social empowerment, economic empowerment, and overall empowerment among women headed households in Puthukkudiyiruppu DSD, consistent with the literature's shift toward mechanism based analysis.

Theoretical framework

Women's empowerment is treated as a process rather than a single outcome, where meaningful change depends on the interaction of resources, agency, and achievements rather than any one indicator alone (Kabeer, 1999; Alsop & Heinsohn, 2005; Desai et al., 2022; Cornwall, 2016). This framing matters because access to a loan can expand resources without improving agency when social norms, household bargaining, and market constraints remain binding, so resources do not translate into valued achievements (Duvendack et al., 2025; Glennerster et al., 2018). Evidence from systematic reviews supports this caution by showing that microcredit does not reliably increase women's control over household spending decisions across the available empirical base (Vaessen et al., 2014; Duvendack et al., 2025).

Microfinance is therefore better conceptualised as a mechanism that can shape empowerment through distinct pathways, rather than as a single credit intervention (Duvendack et al., 2025; Brody et al., 2015). Credit can relax liquidity constraints and support working capital and small scale income activities. However, the average impacts documented in rigorous evaluations are modest and heterogeneous, implying effects depend on context and on which borrowers can convert borrowing into productive use (Banerjee et al., 2015; Crépon et al., 2015). Welfare oriented support can stabilise consumption and reduce immediate vulnerability, which can influence wellbeing outcomes that are closer to achievements such as education and health related functioning, particularly when services and supply conditions allow effects to materialize (Bastagli et al., 2016; Bastagli et al., 2019; Hagen-Zanker et al., 2016). Livelihood support, including training and employment facilitation, can strengthen capabilities and market access and can shift both economic capacity and social functioning when capability constraints are binding, with evidence that group based or capability bundled models outperform finance only designs on empowerment dimensions (Duvendack & Mader, 2020; 2025; Brody et al., 2015).

Postwar conditions in Northern Sri Lanka make these distinctions important to analyse, because female headed households are documented as facing multidimensional vulnerability and structural barriers to economic stability, including constrained asset bases, land and livelihood insecurity, and weak labour market opportunities (O'Donnell et al., 2018; United Nations Sri Lanka, 2015). Puthukkudiyiruppu is located within Mullaitivu, a district identified as heavily affected by conflict legacies and with a high concentration of women headed households, which

can shape both the uses of credit and the risks attached to repayment, including debt stress and coercive collection dynamics documented among women borrowers in districts including Mullaitivu (Department of Census and Statistics Sri Lanka, 2025; Arambepola & Romeshun, 2019).

Based on the framework, following hypotheses can be formulated to examine how microfinance participation relates to women's social, economic empowerment and overall empowerment in a postwar community.

H1: Microfinance components are associated with women's empowerment

H1a: Microfinance components are associated with women's economic empowerment

H1ai: Microcredit is associated with women's economic empowerment

H1aii: Welfare support is associated with women's economic empowerment

H1aiii: Livelihood assistance is associated with women's economic empowerment

H1b: Microfinance components are associated with women's social empowerment

H1bi: Microcredit is associated with women's social empowerment

H1bii: Welfare support is associated with women's social empowerment

H1biii: Livelihood assistance is associated with women's social empowerment

3. Methodology

Research design and setting

A quantitative cross sectional survey design is used to measure empowerment outcomes among women headed households and to model their associations with microfinance components. The design reflects common practice in microfinance and empowerment research where standardised indicators are needed for statistical inference. The study setting is Puthukkudiyiruppu Divisional Secretariat Division in Mullaitivu District, where conflict legacies and female headed household vulnerabilities are documented in postwar assessments.

Sample selection and data collection

Cluster based sampling was used across eight Grama Niladhari divisions within the DSD, and data were collected from 60 women headed households. The focus on women headed households is consistent with Northern Province evidence that female headed households constitute a sizeable and vulnerable population group shaped by conflict experiences. The questionnaire consisted of items designed to capture the dimensions of microfinance and women's empowerment based on prior literature. Microfinance was measured through three components, namely microcredit, welfare support, and livelihood assistance. Women's empowerment was assessed using economic empowerment, social empowerment, and overall empowerment indicators. Responses to the relevant items were recorded using a five point Likert scale ranging from 1 for strongly disagree to 5 for strongly agree. Composite scores were then generated for use in the statistical analysis.

Key informant engagement with local administration and microfinance providers was used to triangulate contextual understanding of microfinance presence and delivery arrangements, a practice supported in conflict affected microfinance research that stresses heterogeneity across groups and locations.

Variables and operationalization

Microfinance is measured through three variables which are microcredit, welfare support, and livelihood assistance. Women's empowerment is measured through economic factors and social factors, with overall empowerment constructed as a combined index.

Table 01: Operationalization of Variables

Construct	Dimension	Indicators	Reference
Microfinance	Microcredit	Loan size, interest rate, repayment ability	Banerjee et al., 2015; Crépon et al., 2015
Microfinance	Welfare support	Consumption grant, consultation services	Bastagli et al., 2016; Bastagli et al., 2019; Hagen-Zanker et al., 2016
Microfinance	Livelihood assistance	Employment opportunities, training support	Duvendack & Mader, 2020; 2025; Brody et al., 2015
Empowerment	Economic empowerment	Income, expenditure, savings, assets	Duvendack & Mader, 2020; 2025
Empowerment	Social empowerment	Education, health, basic needs	World Bank, 2024; Alkire & Foster, 2011

Dependent variables

Social empowerment is operationalised using education, health, and basic needs satisfaction indicators. This aligns with an achievements oriented view of empowerment outcomes. Economic empowerment is operationalised using income, expenditure capacity, savings, and asset indicators. Similar constructs are used in empirical studies linking microfinance participation to women's economic empowerment. Overall empowerment is treated as a composite index combining the above dimensions, with interpretation tempered by scale reliability.

Independent variables

Microcredit is captured through loan related characteristics including loan size, interest conditions, and repayment capacity perceptions. Microfinance welfare captures grant and consultation related support. Livelihood assistance captures training and employment facilitation. Evidence from recent studies supports treating training and business support as distinct mechanisms often linked to empowerment outcomes.

4. Data Analysis

Reliability

Table 02: Reliability Statistics

Construct	Items	Cronbach's alpha
Microcredit	3	0.785
Welfare support	2	0.705
Livelihood assistance	2	0.785
Women's empowerment	7	0.687

Alpha values above 0.70 for microcredit, welfare support, and livelihood assistance indicate acceptable internal consistency for the microfinance scales. The empowerment composite alpha of 0.687 suggests that the empowerment indicators may represent more than one underlying dimension, which is consistent with the conceptual separation of economic and social empowerment. For that reason, the analysis uses models for social and economic empowerment.

Descriptive Statistics

Table 03 summarises socio economic conditions and microfinance exposure for the 60 women headed households.

Table 03: Descriptive statistics

Variable	N	Mean	Std dev	Min	Max
Income	60	2.93	1.056	1	5
Expenditure	60	3.9	0.73	3	5
Savings	60	4.05	0.852	2	5
Assets	60	2.87	0.947	1	5
Education	60	2.17	0.847	1	4
Health	60	2.67	0.896	1	4
Basic needs	60	1.68	0.873	1	4

Microcredit	60	2.67	0.784	1	4.33
Welfare support	60	1.99	0.8	1	4.5
Livelihood assistance	60	2.84	0.876	1.5	5

The descriptive profile indicates modest average income alongside relatively higher savings and expenditure. Social domain indicators show more constrained conditions, particularly education and basic needs. Microfinance exposure is moderate across all three mechanisms, with livelihood assistance scoring slightly higher than microcredit and welfare support. The pattern supports treating empowerment as multidimensional and testing whether different microfinance mechanisms relate to different empowerment domains.

Correlations with economic empowerment

Table 04: Correlations with economic empowerment

	Microcredit	Welfare support	Livelihood assistance	Economic empowerment
Microcredit	1			
Welfare support	0.672	1		
Livelihood assistance	0.441	0.645	1	
Economic empowerment	0.516	0.342	0.364	1

Microcredit shows the strongest bivariate association with economic empowerment, while welfare support and livelihood assistance show weaker but positive associations. The microfinance components are themselves moderately correlated, which is substantively plausible because households exposed to one microfinance service are often exposed to others. This also motivates multicollinearity checks in regression.

Correlations with social empowerment

Table 05: Correlations with social empowerment

	Microcredit	Welfare support	Livelihood assistance	Social empowerment
Microcredit	1			
Welfare support	0.672	1		
Livelihood assistance	0.441	0.645	1	

Social empowerment	0.342	0.566	0.618	1

Social empowerment has stronger correlations with welfare support and livelihood assistance than with microcredit. This pattern is consistent with a mechanism argument where stabilisation and capability support align more closely with social functioning outcomes than credit alone. Regression models test whether these associations persist after accounting for overlap among the microfinance mechanisms.

Regression analysis

Regression model for economic empowerment

Table 06: Regression model for economic empowerment

Predictor	B	Std error	Beta	p value
Microcredit	0.388	0.113	0.519	0.001
Welfare support	-0.118	0.13	-0.161	0.369
Livelihood assistance	0.16	0.098	0.239	0.108
Model fit	R ² 0.300	Adj R ² 0.262	F 7.983	p 0.000

Microcredit is positively and significantly associated with economic empowerment, while welfare support and livelihood assistance are not statistically significant in this model. The pattern indicates a more direct link between credit and economic indicators such as income, expenditure capacity, savings, and assets, while social oriented mechanisms do not add explanatory power once microcredit is included.

Regression model for social empowerment

Table 07: Regression model for social empowerment

Predictor	B	Std error	Beta	p value
Microcredit	-0.056	0.101	-0.075	0.582
Welfare support	0.245	0.117	0.336	0.04
Livelihood assistance	0.289	0.088	0.434	0.002
Model fit	R ² 0.433	Adj R ² 0.402	F 14.233	p 0.000

Welfare support and livelihood assistance are positive and statistically significant predictors of social empowerment, while microcredit is not significant. This suggests that services aligned

with consumption stabilisation and capability strengthening have stronger associations with social empowerment outcomes than credit alone in this setting.

Regression model for overall empowerment

Table 08: Regression model for social empowerment

Predictor	B	Std error	Beta	p value
Microcredit	0.198	0.082	0.325	0.02
Welfare support	0.038	0.095	0.063	0.692
Livelihood assistance	0.216	0.072	0.395	0.004
Model fit	R2 0.438	Adj R2 0.408	F 14.574	p 0.000

Overall empowerment is significantly associated with microcredit and livelihood assistance, while welfare support is not significant. Together with the domain models, this indicates that aggregation can mask mechanism specific effects, because welfare support is significant for social empowerment but not for the composite index. This reinforces the decision to interpret social and economic empowerment models as the primary results.

Diagnostics and robustness checks

Variance inflation factors remained below conventional thresholds, indicating that multicollinearity did not materially affect inference. Robust standard errors produced the same significance pattern as conventional estimates, supporting the stability of results.

5. Discussion

Social empowerment responds to stabilisation and capability pathways, not credit alone

The social empowerment model shows that welfare support and livelihood assistance are significant while microcredit is not, which implies that improvements in education, health care access, and basic needs satisfaction are more closely aligned with stabilisation and capability mechanisms than with borrowing in isolation. This pattern is consistent with empowerment being a process in which resources must translate into agency and achievements, and where resource expansion alone may not shift social functioning when norms, bargaining constraints, and feasibility conditions remain binding (Kabeer, 1999). Evidence also support caution in expecting credit to reliably shift social decision related outcomes, including women's control over household spending (Vaessen et al., 2014). The finding also matches the broader conclusion that credit and savings interventions show very small and mixed effects on agency outcomes, and that non financial features such as training and social support may be the key drivers of empowerment gains (Duvendack et al., 2025).

Welfare support is linked to social achievement indicators through reduced vulnerability

The positive association between welfare support and social empowerment is reasonable, because consumption oriented support can improve stability, reduce immediate deprivation, and support spending on education and health related needs that are closer to achievement outcomes. Large scale evidence reviews on cash transfers and social assistance show that

stabilisation interventions can improve household welfare and selected human capital outcomes, and that effects depend on programme design supply side services (Bastagli et al., 2016; 2019). In a post conflict environment where basic needs constraints remain binding, welfare oriented inputs can therefore map more directly to social empowerment indicators than microcredit, which may be diverted toward coping, debt rollover, or smoothing rather than long horizon investments. This supports interpreting welfare support as a stabilisation channel rather than as a substitute for livelihoods (O'Donnell et al., 2018).

Livelihood assistance appears to operationalise the credit plus logic emphasised in the recent literature

Livelihood assistance is the strongest predictor of social empowerment and remains significant in the overall empowerment model, indicating that training support and employment facilitation matter for empowerment outcomes in this setting. This aligns with recent synthesis evidence that credit and savings alone are not a reliable route to women's empowerment, and that non financial components such as skills building, awareness raising, and network strengthening are frequently the drivers of empowerment related outcomes (Duvendack et al., 2025). It is also consistent with evidence from women's economic self effects where group processes and capability elements are present (Brody et al., 2015). Sri Lanka evidence points in the same direction, with training emerging as a strong element within microfinance plus packages in post Covid settings (Tharanga et al., 2023).

Microcredit aligns with economic empowerment, but the literature suggests modest average effects and strong heterogeneity

The economic empowerment model shows that microcredit is positively and significantly associated with income, expenditure capacity, savings, and assets, while welfare support and livelihood assistance are not significant in that model. This fits the basic microfinance logic that credit can relax liquidity constraints and support working capital and small scale income activities (de Aghion & Morduch, 2010). the strongest causal evidence emphasises that average microcredit effects are typically modest and not transformative, and that benefits are heterogeneous and concentrated among those with feasible opportunities and the capacity to convert borrowing into productive use (Angelucci et al., 2015; Kabeer, 1999; Duvendack et al., 2025). Experimental work also shows that rigidity can shape whether borrowers invest in higher return but illiquid activities, which reinforces the importance of programme design for economic empowerment outcomes (Angelucci et al., 2015).

The overall empowerment model shows why aggregation can mask mechanism specific effects

In the overall empowerment model, microcredit and livelihood assistance are significant while welfare support is not, even though welfare support is significant for social empowerment. This suggests that aggregation can dilute effects that operate in a domain specific way, especially when the composite combines indicators that respond to different constraints and pathways. The borderline internal consistency of the composite empowerment scale further supports

interpreting social and economic empowerment separately as primary outcomes and treating the overall index as a summary indicator. The interpretation is consistent with empowerment frameworks that treat resources, agency, and achievements as intertwined yet potentially non synchronous in empirical change (Kabeer, 1999). It is also aligned with the systematic review evidence that highlights measurement inconsistency and empowerment effects appear uneven across studies (Duvendack et al., 2025).

Postwar livelihood constraints and debt risk make mechanism separation especially important in Mullaitivu

The postwar context strengthens the case for separating microfinance into mechanisms because women headed households in Northern Sri Lanka are widely documented as facing multidimensional vulnerability. In such settings, credit may be used for coping and smoothing rather than accumulation, and repayment risk can be heightened by volatile income and limited market opportunities. Evidence from Sri Lanka documents harmful debt dynamics among women microfinance borrowers, including in Mullaitivu, and highlights the need for stronger borrower protection and responsible finance practices (Arambepola & Romeshun, 2019; Gunasekara et al., 2016). The findings therefore support a contextual interpretation. Credit is associated with economic empowerment indicators in the sample, but sustained empowerment is more plausible when microfinance is delivered as credit plus welfare stabilisation and capability support, which is consistent with the current direction of global evidence synthesis (Duvendack et al., 2025).

Practical implications

The findings suggest that microfinance institutions should move beyond a narrow lending orientation and adopt a more integrated service model. Credit programmes may improve women's economic participation, but stronger social empowerment outcomes are more likely when financial services are combined with livelihood assistance, training, and welfare-oriented support. Practitioners working with women headed households should therefore design microfinance interventions that respond to both financial and social vulnerabilities.

Policy implications

From a policy perspective, the findings highlight the need for a more balanced and protective microfinance framework in Sri Lanka. Regulatory attention should not be limited to credit expansion alone, but should also address responsible lending, borrower protection, financial literacy, and the promotion of credit plus development services. In postwar regions, policy interventions should support integrated programmes that strengthen both income generation and social resilience among vulnerable women.

Research implications

The study also offers directions for future research. Since the analysis is based on a relatively small sample from a specific postwar locality, future studies could use larger samples and comparative regional designs to improve generalizability. Further research may also examine

additional dimensions of empowerment, such as psychological and political empowerment, and explore longitudinal effects of microfinance over time.

Limitations

The sample is small and limited to one divisional setting, so generalisation should be cautious. The cross sectional design limits causal inference, and empowerment measures are based on self reports that may reflect reporting bias. Measurement reliability for the combined empowerment scale is borderline, which strengthens the case for interpreting social and economic empowerment separately.

6. Conclusion

Microfinance in Puthukkudiyiruppu shows a differentiated pattern that is consistent with the modern evidence on empowerment as a multidimensional process. Welfare support and livelihood assistance are positively associated with social empowerment, while microcredit is positively associated with economic empowerment. In the overall empowerment model, microcredit and livelihood assistance remain significant, whereas welfare support becomes insignificant, indicating that aggregation can mask mechanism specific relationships. The findings challenge a credit only empowerment narrative in a postwar context and instead support a credit plus interpretation where stabilisation and capability support are central to improving social functioning outcomes, while credit is more closely aligned with economic indicators. For postwar divisional settings, the policy implication is straightforward. Empowerment is more likely when microfinance combines responsible lending with welfare stabilisation and livelihood support, alongside borrower protection practices that reduce debt risk and improve transparency.

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PSYCHOLOGICAL EMPOWERMENT AS A MEDIATOR IN VIRTUAL TEAMS: A CONCEPTUAL REVIEW OF TRANSFORMATIONAL LEADERSHIP AND EMPLOYEE ENGAGEMENT

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Abstract

Purpose: This study aims to examine how transformational leadership influences employee engagement in virtual teams through the mediating role of psychological empowerment. With the rapid expansion of remote work, leadership effectiveness increasingly depends on internal motivational mechanisms rather than direct supervision. The study develops a conceptual framework explaining how empowerment sustains engagement in digitally mediated work environments.

Design/methodology/approach: This study adopts a structured conceptual review approach by synthesizing existing literature on transformational leadership, psychological empowerment, employee engagement, and virtual teams. Relevant peer-reviewed journal articles published between 2000 and 2024 were reviewed using databases including Scopus, Web of Science, and Google Scholar. The review integrates empirical and conceptual studies and is grounded in the Job Demands–Resources model, Social Exchange Theory, and Self-Determination Theory to develop a theoretically supported mediation framework.

Findings: This review highlights psychological empowerment as the critical mediating mechanism in the relationship of transformational leadership with employee engagement but specifically in virtual teams. Enhancing meaning, competence, self-determination and impact strengthens employees intrinsic motivation and work engagement through transformational leadership. Under the autonomous and low-visibility (socially) conditions of virtual environments, leadership influence is more internalized through empowerment perceptions. The quality of communication, technostress, team maturity and cultural context are identified as significant contextual conditions that influence the strength of this relationship.

Research limitations/implications: As a conceptual review, this study does not provide direct empirical validation. Future studies should test the proposed framework using longitudinal and cross-industry research designs. The study contributes to theory by extending leadership and empowerment literature into remote work contexts and provides practical guidance for managing virtual teams.

Originality/value: This study offers a context-sensitive framework explaining how transformational leadership sustains employee engagement in virtual teams through psychological empowerment. It integrates leadership and motivational theories and highlights empowerment as a critical psychological mechanism for remote work effectiveness.

Keywords: Employee Engagement; Psychological Empowerment; Remote Work; Transformational Leadership; Virtual Teams

1. Introduction

Despite being accelerated by the COVID-19 pandemic, remote work has been in existence since as early as 1960's, when the telecommunication networks became available for the people at their residence (Nilles, 1975). Multiple datasets suggest that a considerable amount of these COVID-19 accelerated remote work trends are likely to remain concrete beyond the pandemic creating significant and lasting impact on organizational outcomes (Tahlyan et al., 2024). This is enabled by advanced collaboration platforms, cloud services and asynchronous workflows (B. Wang et al., 2021). Virtual organizations can access more diverse talent pools while reducing real state and travelling costs and they can offer enhanced flexibility and work-life balance for employees (Barrero et al., 2021; Bloom et al., 2015; B. Wang et al., 2021). However, virtual work also introduces managerial and psychological challenges, including professional isolation, reduced team cohesion, blurred work-life boundaries, communication ambiguity, and difficulty sustaining employee engagement due to spatial separation and technology-based interaction (Gallup, 2025; Golden et al., 2008; Hoch & Kozlowski, 2014; B. Wang et al., 2021).

Employee engagement is commonly defined as a positive, fulfilling, work related state characterized by vigor, dedication, and absorption (Schaufeli, Salanova, Gonzalez-Roma, et al., 2002). It is widely regarded as a critical organizational outcome due to its strong association with performance, innovation and retention (Halbesleben, 2010b; Harter et al., 2002). However global evidence presents a complex picture: while fully remote employees may report higher levels of engagement, they also experience increased distress and loneliness, generating a "remote work paradox" where engagement co-exists with negative well-being indicators (Gallup, 2025). This paradox highlights that remote work does not uniformly enhance employee experiences but instead produce divergent outcomes. Some employees benefit from autonomy and flexibility, enhancing intrinsic motivation, while others experience role ambiguity and social isolation (Gallup, 2025; B. Wang et al., 2021).

Leadership plays a critical role in shaping engagement outcomes, particularly within virtual teams. Transformational leadership, characterized by idealized influence, inspirational motivation, intellectual stimulation and individualized consideration has consistently been associated with higher levels of engagement levels in traditional work settings (Bass, 1985; Judge & Piccolo, 2004). Meta- analytic evidence further confirms moderate to strong relationships between positive leadership styles and work engagement across contexts (Decuyper & Schaufeli, 2021).

However, in virtual environments, leadership mechanisms may differ due to spatial and temporal separation. Virtual teams often lack non- verbal cues, informal interactions and immediate feedback, which are features that support charismatic and relational leadership processes traditionally (Hoch & Kozlowski, 2014; Purvanova & Bono, 2009). As a result, the effectiveness of transformational leadership in virtual settings may depend less on observable behaviours and more on how these behaviours are perceived and interpreted by employees.

Existing literature provides mixed but informative findings regarding transformational leadership in virtual context. Some studies suggest that transformational leadership remains effective when leaders leverage digital tools to enhance visibility, provide individualised support and foster team learning (Bartsch et al., 2021; Boccoli et al., 2024). Other studies highlight that its effectiveness is conditional upon factors such as communication quality, team maturity, and technological competence (Bartsch et al., 2021; Hoch & Kozlowski, 2014; Purvanova & Bono, 2009). These inconsistencies indicate a critical gap: prior research has largely focused on leadership behaviours, while insufficient attention has been given to the underlying psychological mechanisms that explain how such behaviours translate into engagement in virtual environments.

Psychological empowerment is an intrinsic motivational state consisting of meaning, competence, self-determination and impact, which offers theoretically robust mechanism to address this gap (Spreitzer, 1995). Transformational leadership behaviors align closely with empowerment dimensions. Articulating a compelling vision generates meaning, Intellectual stimulation generates competence, delegation and trust enhance self-determination and inclusive decision making enhance perceived impact (Seibert et al., 2011; Zhang & Bartol, 2010). However, despite its theoretical relevance, the mediating role of psychological empowerment in explaining the transformational leadership–engagement relationship in fully virtual teams remains insufficiently explored.

Several theoretical perspectives support this mediation logic. Social Exchange Theory suggests that employees reciprocate the leader’s supportive behaviors with psychological investment (Blau, 1964). Additionally, the Job Demands-Resources (J D-R) model also conceptualizes that leadership is a key job resource that generates personal resources and engagement (Bakker & Demerouti, 2017). Self Determination Theory posits that once autonomy and fulfillment needs are fulfilled, it generates intrinsic motivation (Deci & Ryan, 2000). In virtual environments, while autonomy is structurally embedded, relational and motivational cues are often weakened, making psychological empowerment a critical pathway through which leadership influences engagement. In the virtual environment autonomy is structurally available, but relational cues are limited. Hence psychological empowerment may act as the critical pathway through which transformational leadership sustains engagement.

Therefore, this study aims to address this gap by developing a focused conceptual framework that explains how transformational leadership influences employee engagement in virtual teams through the mediating role of psychological empowerment. Specifically, the paper seeks to synthesize existing literature, identify key boundary conditions, and provide directions for future empirical research in remote work contexts.

2. Methodology of the Conceptual Review

This study employs a structured conceptual review approach to integrate the existing body of literature focusing on transformational leadership, psychological empowerment and employee engagement in virtual settings. We performed a targeted literature search through academic databases (such as: Scopus, Web of Science and Google Scholar). Search keywords included

“transformational leadership,” “psychological empowerment,” “employee engagement,” “virtual teams” and “remote work.”

The review was based on peer-reviewed journal articles published from 2000 to 2024 but also integrated foundational seminal works to situate the theoretical underpinnings. Studies were selected based on their relevance to leadership processes, motivational mechanisms and virtual work contexts. It comprised of both empirical and conceptual papers to glossary the constructs, as well as their relationships.

Rather than conducting a purely systematic review, this study follows an integrative approach, aiming to critically analyze, compare, and synthesize existing theories and findings to develop a coherent conceptual framework. This approach allows for the identification of underlying mechanisms and boundary conditions shaping the relationship between transformational leadership and employee engagement in virtual teams.

2.1. Employee Engagement

Employee engagement is one of the key constructs in organizational research mainly due to its strong links with performance, well-being and retention. Kahn (1990) first conceptualized engagement as the harnessing of employee’s physical, cognitive and emotional selves to their work roles. According to Kahn (1990), engagement happens when three psychological conditions are satisfied: meaningfulness, safety, and availability. Meaningfulness reflects perceived value of task; safety means the ability to express oneself without fear of negative consequences; and availability is having sufficient psychological resources to invest in work. With this foundation, Schaufeli et al. (2002) explained engagement from a positive psychological perspective and defined engagement as a “positive, fulfilling, work related state of mind characterized by vigor, dedication and absorption”. Vigor is defined as individuals’ mental resilience and persistence (Schaufeli, Salanova, Bakker, et al., 2002). Dedication is characterised by enthusiasm, pride and sense of meaning (Schaufeli, Salanova, Bakker, et al., 2002). Finally, absorption reflects concentration and immersion to the work (Schaufeli, Salanova, Bakker, et al., 2002). Utrecht Work Engagement Scale (UWES) which is a widely used scale to measure employee engagement has been developed based on this definition by Schaufeli et al.

Literature demonstrates that engagement is linked to critical organizational outcomes. Harter et al. (2002) conducted a meta-analysis which revealed engagement correlates positively with productivity, profitability, and customer satisfaction and reduced turnover. Similarly, Halbesleben (2010) found that engagement is negatively related to burnout and positively associated with performance-related outcomes. These findings placed engagement as a strategic asset rather than merely an attitude.

Various scholars have identified a variety of organizational, interpersonal and individual level factors that influence the engagement. They may range from management practice, work environment (Harter et al., 2002), job control and security (Salanova & Schaufeli, 2008) and job role match (May et al., 2004). Saks (2019) argued that engagement is shaped by social exchange processes. Employees reciprocate organizational support and leadership behaviors

with higher psychological efforts (Saks, 2019). This aligns well with Job Demands- Resources (JD-R) model, which suggests that job resources such as autonomy, feedback and supervisor support stimulate engagement as they fulfill the motivational needs of the employee (Bakker & Demerouti, 2017). In this view engagement is primarily resource-driven.

The relevance of engagement becomes particularly salient in virtual settings. Remote work may enhance autonomy, but it may also heighten professional isolation and blur the work-life boundaries (Golden et al., 2008; B. Wang et al., 2021). These structural changes alter the distribution of job resources and demands, potentially reshaping engagement dynamics. In digitally mediated environments, leadership support becomes a crucial job resource that helps to sustain employee's psychological investment (Decuyper & Schaufeli, 2021). Overall, employee engagement represents a resource which is dependent upon the motivational state and sensitive to contextual and leadership influences in virtual teams.

2.2. Transformational Leadership

Transformational leadership is commonly used leadership approach that focuses on inspiring and motivating subordinates to perform beyond expectations while fostering individual growth and organizational change (Bass & Riggio, 2005). Originally conceptualised by Burns (1978) and further developed by Bass (1985), transformational leadership is a process through which leaders elevate followers 'motivation, values and performance beyond transactional exchanges. Bass (1985) identified its four core dimensions, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. These dimensions enable transformational leaders to act as role models (idealized influence), generate an appealing vision (inspirational motivation), attend to individual's needs (individualized consideration) and encourage innovation (intellectual stimulation). Research has extensively shown that these traits affect to higher levels of trust, satisfaction, commitment and performance among employees (Bono & Judge, 2003; Judge & Piccolo, 2004).

Literature elaborates that transformational leadership links to a wide array of positive organizational outcomes. Judge & Piccolo (2004) conducted a meta-analysis and identified that transformational leadership affects positively to job satisfaction, effectiveness of leaders and follower motivation. Furthermore, transformational leadership has been examined as a strong predictor of individual and team performance (G. Wang et al., 2011). More recently, Decuyper & Schaufeli (2021) found transformational leadership associates positively with work engagement suggesting they act as motivational agents. These findings indicate that transformational leadership is particularly effective in stimulating intrinsic motivation and psychological investment.

Literature extensively suggest that the transformational leadership relates positively with the employee engagement. Transformational leaders create a sense of purpose, provide constructive feedback, and create supportive relational climates, all of which enhance employees' psychological investment in their work roles. From a resource-based perspective leadership behaviors can be perceived as job resources that enhance employees' willingness to cope with demands and remain energized (Bakker & Demerouti, 2017; Sun &

Bunchapattanasakda, 2019). Hence, transformational leadership is frequently positioned as a key antecedent of employee engagement.

Digital transformation significantly forces leaders to consider new theory and practice in the domain of leadership. Virtual transformational leadership includes effectively using digital tools to maintain effective communication, inspiration and build trust despite being lacking proximity interaction (Bartsch et al., 2021). Purvanova & Bono (2009) found that transformational leadership can remain effective in virtual environments, but its impact may depend on communication richness and team interaction patterns. Similarly, Hoch& Kozlowski (2014) argue that virtual team effectiveness is contingent upon structural support and leadership co-ordination mechanisms. These findings reveal that transformational leadership behaviors must be intentionally adapted to virtual contexts considering the inherent characteristics.

Even though empirical evidence supports a positive association between transformational leadership and engagement, much of this research is focused on their direct effects. Less attention has been given to identifying the psychological mechanisms through which transformational leadership exerts its influence in virtual settings. Understanding these mediating processes is particularly important in remote environments, where internal motivational states may play a more central role than observable leader behaviors.

2.3. Psychological Empowerment

Psychological empowerment is a multi-dimensional construct which reflects the individual's sense of control in their work role. Basic ideology was laid by Thomas & Velthouse (1990), where they defined empowerment beyond structural conditions stating that empowerment should be viewed as a dynamic psychological state. Building on this initial ideology Spreitzer (1995) operationalised psychological empowerment as a four-dimensional construct which includes meaning, competence, self-determination and impact. Meaning dimension related to the alignment between one's values, beliefs and the work they get to perform (Spreitzer, 2017). Confidence reflects individuals' confidence in their ability to successfully perform the job tasks and often relates to self- efficacy (Bandura, 1997). Self-determination reflects the level of autonomy and freedom employees perceive in their decision-making process (Deci & Ryan, 2000). Impact reflects the belief that employees work meaningfully influence for organizational outcomes (Sprecher, 1995).

Structural empowerment focuses on formal authority and access to resources, while psychological empowerment focuses on employees' internal perceptions of control and significance. Empowerment is not simply delegating authority, but it is a motivational state shaped by leadership behavior and work characteristics (Sprecher, 1995). Employees who experience high levels of psychological empowerment are more likely to display resilience and proactive behaviours.

Empirical research consistently links psychological empowerment with positive outcomes of work. (Seibert et al. 2011) found the empowerment positively associates with organizational commitment, job satisfaction and performance. Additionally, empowerment was found to

predict employee engagement by fostering intrinsic motivation and enhancing resource availability in the workplace (Bakker & Demerouti, 2017). From a JD-R perspective empowerment can be seen as a personal resource that strengthens employee's capacity to meet job demands and sustain engagement.

Transformational leadership plays an important role in fostering psychological empowerment. Behaviours like articulating meaningful visions, providing continuous support, promoting autonomy and involving followers in decision making process, closely align with empowerment dimensions (Bass, 1985; Spreitzer, 1995). According to Ibrahim et al. (2024) psychological empowerment mediates the relationship between transformational leadership and various positive outcomes, including organizational citizenship behaviours.

Psychological empowerment becomes very important in virtual contexts. Remote workers frequently experience lack of visibility and feedback which makes the competence and impact of the psychological empowerment more significant (Sardeshmukh et al., 2012). Scholars have identified the necessity of the construct in the remote context as the absence of physical supervision requires greater levels of self-regulation, motivation and autonomy among the employees (Wang et al., 2021). Hence, psychological empowerment provides a theoretically robust mechanism through which leaders' behavior may translate into sustained engagement in virtual teams.

2.4. Transformational Leadership in Virtual Teams

Digital transformation significantly forces leaders to consider new theory and practice in the domain of leadership. Virtual teams have characteristics like geographic dispersion, reliance on digital communication technologies, reduced face to face interactions and asynchronous coordination (Hoch & Kozlowski, 2014). These characteristics promote flexibility and accessibility to global skills, but they also reshape interpersonal dynamics and motivational processes (Bartsch et al., 2021).

One key feature of virtual teams is reduced social presence. In traditional office settings, leaders and followers share not only formal communication but also nonverbal-cues, spontaneous interactions and informal reinforcement. In virtual contexts, these mechanisms often filtered by digital platforms, limiting emotional richness and immediacy (Purvanova & Bono, 2009). Hence leader's influence is heavily dependent upon communication strategies and clarity of messaging. Transformational leaders who effectively use technology to remain accessible and visible have been shown to generate higher levels of engagement levels (Makarius & Larson, 2017).

Additionally, remote environments increase autonomy together with a higher demand for self-regulation. Remote employees need to effectively manage task boundaries, digital communication flows, and work life balance while having less direct supervision (Wang et al., 2021). Even though autonomy can enhance intrinsic motivation, it may also create ambiguity and isolation if not supported by leader guidance (Golden et al., 2008). Hence leadership behaviors provide direction, meaning and psychological support become critical in such conditions.

According to Purvanova & Bono (2009), transformational leadership can remain effective in virtual settings, but its impact varied depending on communication patterns and frequency of interactions. When the structural supportive mechanisms are in place, transformational leadership can generate higher motivation, performance and team cohesion in virtual teams (Hoch & Kozlowski, 2014). Transformational leaders who effectively use technology to remain accessible and visible have been shown to generate higher levels of engagement levels (Makarius & Larson, 2017). These findings show that transmitting transformational behaviors are more complex in remote settings.

Virtual teams have the potential to erode social cohesion and identification. This happens as geographic dispersion and reliance on technology mediated communication limit informal interactions that foster trust and mutual understanding (Gilson et al., 2015). In such situations leaders must play a key role in fostering shared purpose and alignment. Transformational leadership characteristics like articulating a compelling vision and individualized consideration become crucial in these scenarios.

Additionally, in virtual contexts, leadership effectiveness highly depends on the internal interpretations of the followers (Maznevski & Chudoba, 2000). In virtual contexts employees began to rely more heavily on cognitive and motivational processing to interpret leader behavior. Hence, psychological mechanisms through which leadership influences outcomes are important in virtual settings.

From a resource-based perspective, virtual context reshapes the configuration of job resources. According to JD-R framework remote work increases some demands such as technostress, coordination complexity and communication overload while at the same time altering the access to relational and supervisory support (Bakker & Demerouti, 2017; Bartsch et al., 2021). In this view leadership function not only as a behavioral style but as a critical resource provider in virtual teams.

Hence empirical evidence suggests that transformational leadership remains effective in virtual teams, but its effectiveness depends on psychological mechanisms through which leader behaviors are perceived. So, in virtual environments characterized by autonomy, isolation intrinsic motivation may become the key mechanism that links leadership to engagement. This underpins the necessity of examining mechanisms that explain how transformational leadership impacts employee engagement in virtual contexts.

2.5. Development of Main Argument Related to Psychological Empowerment as a Mediating Mechanism

Even though empirical evidence suggests a positive relationship between transformational leadership and engagement (Decuyper & Schaufeli, 2021; Judge & Piccolo, 2004), there is a dearth of evidence clarifying the psychological conditions through which this relationship occurs in virtual settings (Tims et al., 2011). According to Bartsch et al., 2021 and Gilson et al. (2015), remote employees rely more heavily on internal motivation mechanisms to interpret and respond to leader behaviors as leadership visibility is reduced and reinforcement

mechanisms are constrained. Psychological empowerment therefore provides a clear pathway through which transformational leaders may sustain engagement in virtual teams.

Transformational leadership behaviors closely align with the four dimensions of psychological empowerment. First, inspirational motivation and vision articulation enhance perceived meaning providing a clear picture to employees how their contribution is aligned to organizational purpose. Zhu et al. (2009) found that transformational leaders enhance empowerment through value alignment and competence signaling. Virtual employees often feel detached from organizational identity; hence articulation of meaningful goals becomes critical. Recent study on digitally transformed workplaces indicates that leadership behaviors that emphasize clarity, support and trust positively correlate with empowerment [perceptions under remote conditions(Bartsch et al., 2021; Eva et al., 2019)

Second, intellectual stimulation fosters competence among remote employees. Transformational leaders promote creativity, provide constructive feedback and put trust in followers' capabilities (Spreitzer, 1995). Employees start to believe in their capability to perform effectively due to these behaviors. This perceived competence becomes essential for sustaining energy in persistence in remote settings as the real time guidance is reduced (Xanthopoulou et al., 2007).

Third, individualized consideration and autonomy promote self-determination. Leader behaviors that combine autonomy with clear expectations reinforce employees' volitional control and psychological ownership (Eva et al., 2019). This alignment between structural autonomy and perceived autonomy strengthens empowerment and reduces ambiguity (Wang et al., 2021).

Finally, participative decision-making and recognition enhance perceived impact. Remote employees often struggle to see how their contribution influences final organizational outcomes due to reduced visibility. Transformational leaders increase transparency and reinforce the feedback that individual efforts matter, thereby strengthening sense of impact which contributes directly to motivational impact (Dust et al., 2014; Seibert et al., 2011).

The link between psychological empowerment and employee engagement is supported well theoretically and empirically. From JD-R Perspective, psychological empowerment can be conceptualized as a personal resource that enhances motivation (Bakker & Demerouti, 2017). Employees perceive their work as meaningful, feel competent, experience autonomy are more likely to exhibit vigor, dedication and absorption, which are the core components of engagement (Schaufeli et al., 2002). Meanwhile Seibert et al. (2011) conducted a meta-analysis which confirmed that empowerment is positively related to performance and motivational outcomes.

From a Social Exchange Theory perspective, transformational leaders signal trust, respect and support which employees reciprocate with increased psychological investment (Blau, 1964; Saks, 2006). Additionally, from a self-determination perspective leader behavior that enhances meaning, competence and autonomy satisfy fundamental psychological needs of employees, thereby strengthening intrinsic motivation and engagement (Deci & Ryan, 2000).

In virtual teams, employees rely more on cognitive interpretation and self-regulation (Gilson et al., 2015) while their office counterparts often experience frequent interactions, social cues and collective rituals. Hence the mediating function of psychological empowerment may be crucial in virtual settings. Because employees operate with greater autonomy, their internal perceptions of meaning, competence, and impact become primary drivers of engagement in the virtual context. Hence, transformational leadership may exert its strongest influence not directly, but through shaping empowerment cognitions.

Taken together, this analysis suggests that psychological empowerment functions as a central psychological pathway linking transformational leadership to employee engagement in virtual teams. By enhancing employees' perceptions of meaning, competence, self-determination, and impact, transformational leaders cultivate the motivational conditions necessary for sustained engagement under digital mediation conditions. This mediation logic provides a theoretically grounded explanation for how leadership remains effective in remote work environments.

Although psychological empowerment acts as a significant mechanism linking transformational leadership to employee engagement in virtual teams, this mediation mechanism is less likely to be universally applicable across contexts. Many conditions would shape the strength and direction of the relationship.

First, virtual communication quality may moderate the effectiveness of the delivery of transformational leader behaviors. Digital platforms differ in communication richness, feedback immediacy and synchronicity. If the communication is infrequent, ambiguous, intentions of the leader can be misinterpreted and thereby transformational behaviors would be ineffective. to Purvanova & Bono (2009). Gilson et al. (2015) found that misalignment between the medium and the message can distort the leader's intent. Hence under these conditions, even strong transformational behaviors may fail to heighten employees' perceptions of meaning and impact.

Second, professional isolation may adversely affect empowerment effects. Remote employees who experience social isolation and reduced social integration may struggle to understand organizational vision, collective purpose and identity (Molino et al., 2020) and that will limit the meaningfulness of empowerment (Golden et al., 2008). Hence, autonomy without relational connectedness can reduce empowerment

Third, the cultural differences can also significantly influence empowerment effects. In high power-distance cultures employees prefer stringer hierarchal norma and directive leadership. They may feel that excessive autonomy lacks guidance (Eva et al., 2019). In these scenarios transformational leader behaviors such as participation and self-determination would not uniformly enhance empowerment of employees. Hence the mediating role of empowerment could vary depending on national or organizational cultures.

Fourth, increased autonomy can generate self-regulation strain. Remote workers have improved independence over task scheduling and communication management, but it also elevates digital fatigue and boundary blurring (Molino et al., 2020) . Also, it raises expectations for self-discipline and constant availability(Wang et al., 2021). When job

demands increase, the motivational benefits of empowerment may reduce aligning with the Job Demands–Resources model (Demerouti & Bakker, 2023).

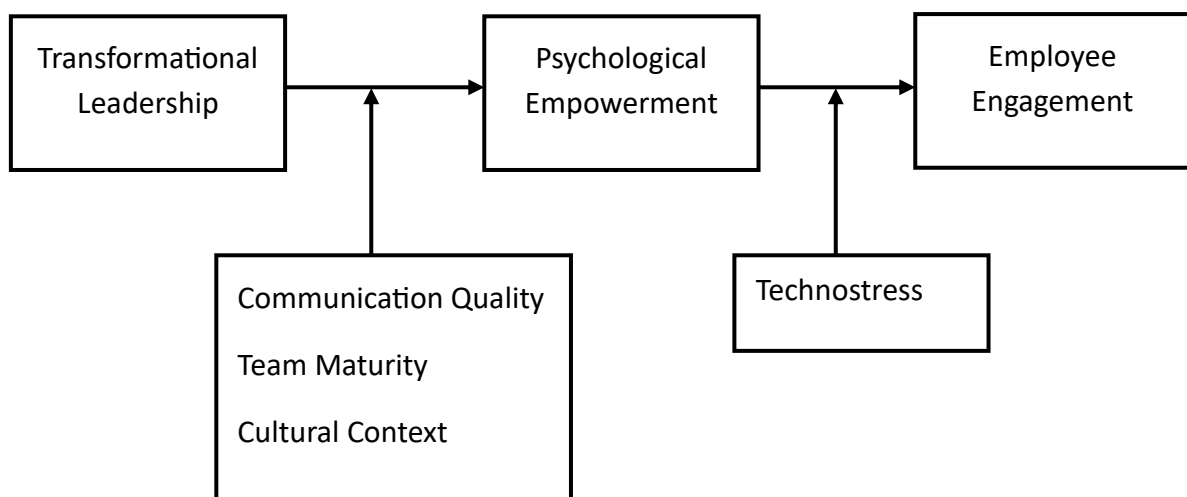
Also, the team development stage can influence the mediation strength. Newly formed virtual teams often lack trust and coordination norms. In these situations, structural clarity and task coordination may be more critical than motivational inspiration (Gilson et al., 2015). Hence transformational leadership can only exert indirect effect after foundational team processes are established (Hoch & Kozlowski, 2014).

These conditions suggest that the mediating mechanism of empowerment should be viewed as context-sensitive rather than universal as its effectiveness may depend on communication quality, cultural context, team maturity and demand- resource balance. These findings encourage future research to adopt more context-sensitive designs.

2.6. Proposed Conceptual Framework

Based on the analysis the paper suggests a mediation framework which positions psychological empowerment as the central mechanism which links transformational leadership to employee engagement in virtual settings. This framework assumes that in virtual teams, leadership behaviors are internalized through cognitive-motivational processes rather than direct behavioral reinforcement. Consequently, psychological empowerment acts as a personal resource that translates leaders' effect to engagement.

Model further acknowledge contextual sensitivity. Communication quality, team maturity, technostress and cultural values may moderate the strength of the transformational leadership-empowerment relationship. These moderators reflect the digitally mediated and autonomous nature of virtual teams.



Note: Developed by the researcher based on the literature

Figure 1-Proposed Conceptual Framework

3. Conclusion

The rapid expansion of remote work has transformed the way leadership influences employee motivation and engagement. Even though transformational leadership has consistently linked with positive work outcomes, its effectiveness in a virtual context depends increasingly on internal psychological mechanisms rather than observable leader behavior. This paper argued that psychological empowerment comprising meaning, competence, self-determination and impact act as the central mediating mechanism linking transformational leadership to employee engagement in virtual settings.

This paper integrated transformational leadership theory with motivational perspectives such as Job Demands–Resources model, Social Exchange Theory, and Self-Determination Theory, to provide a theoretically grounded explanation for how leadership influence is internalized in remote settings. Remote environments characterized by autonomy, reduced social presence, and increased self-regulation demands; empowerment becomes a critical driver for sustaining engagement.

Recognizing psychological empowerment as a key mechanism not only clarifies prior findings but also offers a context-sensitive framework for future empirical testing. As organizations continue to institutionalize remote work, understanding how leadership fosters motivational resilience through empowerment will remain central to sustaining engagement in digital workplaces.

4. Implications and Future Research Directions

4.1. Theoretical Implications

This review contributes to leadership and engagement literature by clarifying the psychological mechanism linking the transformational leader and employee engagement in virtual environments. While prior research has established a positive relationship between transformational leadership and employee engagement (Decuyper & Schaufeli, 2021a; Judge & Piccolo, 2004), much of this research has devoted to explain how this relationship works in a traditional office-based setting. Hence this study positions psychological empowerment as the central mediating mechanism which directs transformational leadership to employee engagement by integrating motivational perspective using theoretical foundation of Job Demands–Resources model, Self-Determination Theory and Social Exchange Theory.

This study further extends the empowerment theory by showing its contextual sensitivity. In virtual settings characterized by autonomy and reduced visibility, internal perceptions of meaning, competence, self-determination and impact may play a critical role in sustaining engagement of employees. Hence empowerment is conceptualized not only as a beneficial outcome of leadership, but as a necessary psychological construct through which leadership influence is internalized in virtual settings.

4.2. Practical Implications

The findings of this study suggest that practitioners should focus on deliberate cultivation of empowerment cognitions, not merely on behavioral inspiration. Leaders should promote purposeful and clear communication, provide development feedback, grant structured autonomy and improve the visibility of employee's contributions to sustain engagement in virtual settings. Organizations may also benefit from leadership development programs that focus on digital communication competence and psychological resource building.

More importantly managers need to realize that autonomy alone will not guarantee engagement. Proper reinforcement of meaning and perceived impact is needed to enhance the employee engagement among remote workers. Therefore, leaders must target the four empowerment dimensions to effectively manage a virtual team.

4.3. Future Research Directions

Future researchers can empirically test the proposed mediation model using longitudinal and multi-source design to validate the theory. Given the contextual contingencies established in section 5. Studies can examine moderating variable such as communication quality, technostress, cultural values and team maturity. Performing cross cultural and cross-industry studies can check the generalizability of the model. Additionally, multilevel research designs may capture how team-level leadership behaviors influence individual empowerment perceptions and collective engagement outcomes.

By addressing these directions, future research can refine understanding of how transformational leadership sustains motivation in increasingly digital workplaces.

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REMOTE WORKING AND EMPLOYEE WELL-BEING: THE MODERATING ROLE OF WORK-LIFE BALANCE IN A SRI LANKAN IT COMPANY

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Abstract

Purpose: The growing trend toward remote work in the post-COVID-19 era has brought significant changes in how employees perceive their workplaces, particularly in the IT sector in Sri Lanka. Despite being flexible and autonomy-based, remote work is associated with isolation, role ambiguity, and work-life balance conflicts, among other problems that have been shown to negatively affect employee well-being. This study investigates the impact of remote working on employee well-being and the moderating role of work-life balance support in a Sri Lankan IT company.

Design/methodology/approach: A quantitative, cross-sectional survey was conducted, and data were collected via a self-administered questionnaire from 126 employees of the organisation using a universal sampling technique. It was also analyzed with SPSS 27 version and with regression analysis to investigate the effects of remote working on employee well-being, and moderator analysis to investigate the moderating role of work-life balance support.

Findings: The results indicate that the effects of remote working on employees' well-being are moderately significant, and that support for work-life balance does not moderate the relationship. Nevertheless, support for work-life balance remains important for enhancing employee well-being.

Research limitations/implications: Increasing the sample size while not limiting it to a single organization and including several organizations across different sectors would improve generalizability. Moreover, longitudinal studies can offer deeper insights into how remote work impacts employee well-being, while qualitative methods can provide deeper perspectives on that.

Originality/value: Social support, leadership, and organizational culture are other variables that might play a greater role in moderating the impact of remote work on well-being. Thus, other possible moderating variables such as social support, leadership and organizational culture can be involved in future studies.

Keywords: Employee Well-Being; IT Sector; Remote Working; Sri Lanka; Work-Life Balance Support

1. Introduction

Remote work, especially increased by the global COVID-19 pandemic, has radically changed how employees relate to their workplaces, particularly in the IT industry in Sri Lanka. Although it has given employees greater flexibility and autonomy, the change has also brought numerous challenges, such as isolation, role ambiguity, and work-family conflict. Unless such issues are addressed, they may negatively affect employee well-being.

Employee well-being or physical, mental, and emotional health is a very significant aspect in the job satisfaction, job engagement and general productivity of the organization (Wright & Cropanzano, 2000). With high levels of well-being, people experience better performance, employee retention, and job satisfaction, and poor well-being triggers disengagement, absenteeism, and turnover (Krekel et al., 2019).

In this regard, companies should be very attentive to issues affecting their employees' well-being, especially in supporting work-life balance. Work-life balance means that an employee can balance his or her job and life without sacrificing one to the detriment of the other (Kossek & Ozeki, 1998). Support mechanisms such as flexible working hours, paid leave, and mental health support programs, including work-life balance, are essential for enabling employees to balance work and family. Past studies have shown that the adverse effects of remote work can be reduced through strong work-life balance support, which helps ensure that employees experience high well-being even amid the challenges of remote work (Choudhury et al., 2020).

This study aims to investigate the impact of remote work on employee well-being at a prominent IT firm in Sri Lanka and to explore the moderating role of work-life balance support. While remote work has been widely adopted in many organizations, its specific impact on employee well-being in Sri Lanka remains under-researched. Additionally, the role of work-life balance support in mitigating these effects has not been thoroughly examined. Therefore, this research seeks to fill this gap by providing evidence-based insights into how remote work influences employee well-being and how work-life balance support can alleviate its negative effects.

Based on the above foundation, the researchers poses the research problem as “How does remote work impact employee well-being, examining the moderating effect of work-life balance support?”

The two key research questions that will steer this study are as follows: (1) What is the effect of remote working on employee well-being in an IT company in Sri Lanka? and (2) How does work-life balance mediate the correlation between remote working and employee well-being? To address these questions, this study establishes two main objectives: first, to determine how remote work affects employee well-being in the chosen IT company, and second, to investigate how the work-life balance moderates the impact of remote work on employee well-being.

The significance of the study is that it may provide evidence-based suggestions to organisations to enhance employee well-being in remote work settings, especially in the Sri Lankan context. Further, knowledge of the moderate effect of work-life balance support will enable companies to design their policies more adaptively, thereby positively impacting the overall work experience of remote employees.

2. Literature review

Employee well-being is a concept that has been extensively examined, with many definitions and frameworks proposed. According to Wright and Cropanzano (2000), employee well-being is a blend of physical, mental and emotional well-being which leads to job satisfaction,

organizational commitment and productivity. Employee well-being also becomes a key factor in assessing the effectiveness of remote work arrangements. Although remote work provides flexibility and autonomy, it has also been linked with issues such as isolation, role ambiguity, and burnout, which can adversely affect employee well-being (Gagendran & Harrison, 2007; Golden et al., 2006).

The impact of the balance between job demands and available resources on employee well-being has been explained using theoretical models like the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007). According to the JD-R model, employees who face high work demands and inadequate resources are at risk of burnout, stress, and disengagement. On the other hand, the negative impact of job demands and supporting employees with appropriate resources, including autonomy, support, and flexibility, may reduce the negative impact of job demands and enhance their well-being. Flexibility and autonomy are among the resources that would assist employees in working conditions at home in remote work settings (Kossek & Ozeki, 1998).

Besides the JD-R model, other theories, including the Self-Determination Theory (SDT) have asserted that autonomy, competence and relatedness are important in promoting well-being (Deci & Ryan, 1985). In SDT, the higher the well-being is likely to be achieved when the employees feel they are in control of their work and supported by the organizations. This becomes especially true in remote work, where workers can control their schedules and work environments more, yet still face challenges with social connection and work-life balance.

Similarly, the importance of work-life balance support in remote working has been a topic of various studies. Work-life balance is the capacity of workers to balance their work and family life. The remote-work environment may frequently disrupt this balance, leading to stress and work-family conflict. Research has shown that work-life balance support programs, such as flexible work hours and mental health support, as well as distinct work-life boundaries, can reduce these adverse impacts (Kossek & Ozeki, 1998; Greenhaus, 2001). Further, work-life balance support has been demonstrated to elevate job satisfaction, reduce stress, and improve employees' overall well-being (Kalliath & Brough, 2008).

Moreover, studies have also emphasised the role of organisational support in enhancing employee well-being. Organisational support is defined as the resources, policies, and practices that are offered by organisations to assist employees with their work-life and personal life. Research indicates that when employees feel they receive strong organisational support, they tend to have better well-being, increased job satisfaction, and reduced stress (Bakker & Demerouti, 2007; Choudhury et al., 2020). With regard to remote work, organizational support may involve equipping employees with the tools and resources they need to be able to work comfortably at home, and it may also entail assisting with work-life balance.

2.1. Remote Working and Its Impact on Employee Well-being

Working remotely has been a notable part of the contemporary working environment, especially in areas like IT, where digital tools and technologies enable employees to work literally anywhere. Although remote work offers a number of advantages, including greater

flexibility and independence, it also poses challenges that may negatively affect employees' well-being. It has been found that remote workers often feel isolated, experience role ambiguity, and experience burnout; as a result, their job satisfaction decreases, engagement declines, and turnover increases (Gagendran & Harrison, 2007).

In a study by Bloom et al. (2013), remote workers were more productive and more satisfied with their jobs than office workers, mainly because remote work offers them the flexibility and autonomy they do not get in the office. Nevertheless, remote work has its downsides, especially regarding social isolation. Remote workers do not always have face-to-face interactions, as in a real office, which may make them feel lonely and disconnected from others and the organisation (Dong et al., 2025).

The COVID-19 pandemic has also demonstrated the significance of remote work and its effects on employee well-being. The pandemic left most organisations with no option but to switch to remote work in order to keep their employees safe. Although this transition gave employees the opportunity to work remotely, it also brought new problems, including blurred boundaries between work and personal life, increased stress, and difficulty balancing work and life. It has been found that remote employees during the pandemic experienced more severe stress, burnout, and anxiety symptoms, largely due to a lack of work-life balance and difficulties balancing work and personal life (Adikaram & Naotunna, 2023).

2.2. Work-life Balance Support and Its Role in Moderating the Impact of Remote Work

The role of work-life balance support in mitigating the effects of remote work on employees' well-being is significant. Workers in remote work environments find it difficult to develop a clear separation between their work and personal lives, which creates more stress and work-family conflict. Employees can cope with these issues and enhance their well-being through work-life balance support measures, such as flexible working schedules, mental health initiatives, and family leave.

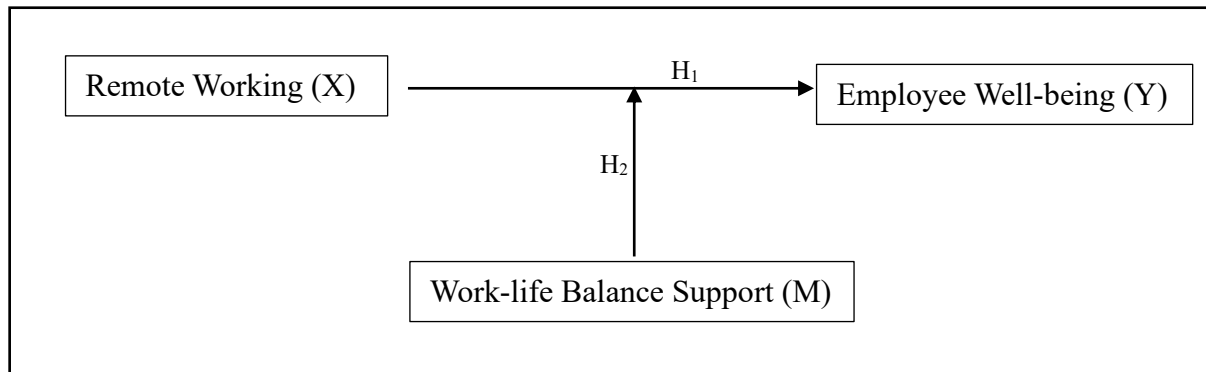
It has been found that employees who receive work-life balance support from their organisations report higher levels of job satisfaction, reduced stress, and better overall well-being (Kossek & Ozeki, 1998; Greenhaus, 2001). Work-life balance support can help employees balance professional and personal lives and address both demands, leading to less burnout and greater job satisfaction in the context of remote work (Kalliath & Brough, 2008). Nevertheless, work-life balance support is not necessarily sufficient to overcome the adverse impacts of working remotely, as this research demonstrates, suggesting that additional support systems, including social support and leadership, are needed to improve employees' well-being.

2.3. Hypotheses and Framework Development

Building upon the literature, this study proposes the following hypotheses:

- Hypothesis 1 (H₁): Remote working has a significant impact on employee well-being.
- Hypothesis 2 (H₂): Work-life balance support moderates the relationship between remote working and employee well-being.

Informed by these hypotheses, the study's conceptual framework integrates the Job Demands-Resources (JD-R) model and Self-Determination Theory (SDT) to explore the interplay between remote work, employee well-being, and work-life balance support. Based on the above foundations, the researchers have developed the study's conceptual framework as follows.



Source: Developed by the Researchers

Figure 1: Conceptual Framework

3. Methodology

This study adopted the "Research Onion" model proposed by Saunders et al. (2009). This model helps in identifying the different decisions made by researchers during the research process including philosophy, strategy, and data collection and analysis methodology. The Research Onion approach enables one to justify all research decisions clearly.

For this study, the researcher has adopted a quantitative, deductive approach, a correlational study with a cross-sectional time horizon, focusing on individual units of analysis.

According to Muijs (2022), quantitative research is the process of gathering and analyzing numerical data to test hypotheses using statistical tools. The existing theories in the literature are verified by using a deductive approach. Based on the presupposed hypotheses and the analysis of the acquired data, this method will allow drawing conclusions (Saunders et al., 2009). This is in contrast to an inductive approach which constructs new theories.

Moreover, this adopted a descriptive study. In the context of descriptive studies, the purpose is to depict the characteristics of the specific group or scenario in an accurate manner. This research study will focus on understanding the impact of remote working on employee well-being, examining the moderator role of work-life balance support in a selected company. However, the conceptual framework was used to develop hypotheses and conclusions were made by means of data analysis with the help of statistical tools. Considering the nature and operationalization of these research designs, the descriptive research design was utilized for this study.

By considering the time horizon, research study can be constructed as a cross-sectional study or a longitudinal study (Sekaran, 2003). In the cross-sectional studies, the researchers made conclusions on the basis of the data collected at a single point in time during which the data are

not compared at the various points. On the other hand, longitudinal studies involve data collected by taking into account two distinct periods during which the researchers intend to provide answers to the research questions by examining the behaviour of the variables at more than a single point in time (Sekaran, 2003). Hence, the study focused on understanding the impact of remote working on employee well-being, examining the moderator role of work-life balance support in a selected company. Accordingly, the cross-sectional study was adapted for this study.

According to Sekaran (2003), the extent of data collected for data analysis is referred to as the unit of analysis. Accordingly, under the individual unit of analysis, the responses gathered from each respondent were treated as individual data sources. In this study, the data was gathered from individual employees of the selected company and considered each response as an individual data source for data analysis. Accordingly, the unit of analysis of the present study was employees of the selected company.

The population consist of the total number of parties considered in order to generalize the research findings (Saunders et al, 2019). The scope of the present study is limited to employees in the selected IT company. Accordingly, the research population is limited to 152 employees.

The present study employed a probabilistic sampling technique to select the sample of the study, as the scope of the present study is limited to employees in the selected organization. As the population is known, small and reachable, the researcher utilized the universal sampling technique by selecting all the employees from the defined population to decide the sample. Therefore, the sample of the study was the same population.

The questionnaire was used as the primary tool for data collection. To ensure the efficient completion of the questionnaire, all the items were constructed in a simple closed-ended format in English. Further, the questionnaire was developed based on the studies of Lagou (2023), Waisiko et al. (2024), Ahamed (2025), and Ahmed, Zeeshan (2021). Moreover, in order to collect data, a Google Form was developed and shared among the respondents.

The questionnaire was outlined in two parts. Part I of the questionnaire consisted of the demographic profile, requesting information regarding gender, age, marital status, service period, and the type of employment. Part II consisted of all the variables included in the conceptual framework of the study. Under Part II, each item is scored on a five-point Likert scale ranging from 1= Strongly disagree to 5= Strongly agree.

The table below presents the operationalization of each construct utilised in the present study.

3.1. Operationalization of variables

Variable	Dimension	Indicator	Measurement
Employee Well-being	Physical Well-being (PW)	Emotional Drain	PWB1
		Overwork	PWB2
	Emotional Well-being (EWB)	Relationships	EWB1
		Competency	EWB2

Remote Working	Work-related Well-being (WWB)	Goals achievement	EWB3
		Control over work	WWB1
			WWB2
	Work Flexibility and Autonomy (WFA)	Work flexibility	WFA1
			WFA2
		Autonomy	WFA3
	Role Clarity (RC)	Job clarity	RC1
		Goals clarity	RC2
			RC3
	Productivity & Job Performance (PJP)	Productivity	PJP2
		Job Performance	PJP3
	Work-life Balance (WLB)	Work-family conflicts	WLB1
			WLB2
		Job strain	WLB3
	Perceived Climate (PC)	Work environment	PC1
			PC2
			PC3
Work-life Balance Support	Supervisor Support (SS)	Supervisor Support	SS1
			SS2
			SS3
	Perceived Organizational Support (POS)	Organizational Support	POS1
			POS2
			POS3
			POS4

Source: Researchers' Construction

The data collected from the respondents have been analyzed with the help of the Statistical Package for Social Sciences (SPSS, Version 27). Several statistical methods were used to analyse the data collected from primary and secondary sources.

At first, Cronbach's Alpha (α) statistics were used to ensure the internal consistency and reliability of the questionnaire. Subsequently, the demographic data were analyzed using descriptive statistics. To test the formulated hypotheses, the researchers have employed various inferential statistical techniques. The extent of the relationship between the dependent and independent variables has been measured using correlation analysis. Following this, the researchers used regression analysis to determine whether remote working has a significant impact on employee well-being. Moreover, Process Macro v5.0, by Andrew F. Hayes, was used to explore the moderating role of work-life balance support.

4. Results and Discussion

Data collection for the study was conducted by circulating a self-administered questionnaire via Google Forms to 152 employees of the selected company, using a universal sampling technique. As a result, 126 responses were received, of which 126 were considered valid and entered into SPSS for further analysis.

Out of 126 respondents, there were 89 (62.7%) females and 47 (37.3%) males. The study's gender representation suggests that most employees are female.

Among all respondents, the majority were in the 25 to 35 years age group, representing 84 (66.7%), while the smallest number was in the 36-to-45-year-old age group, representing 1.6%. Respondents aged 25 years or less accounted for 31.7% (40 respondents). However, there were no respondents from the above-45 age group. Based on the age distribution, the majority of employees are middle-aged.

Moreover, the results revealed that most employees are single. Of 126 respondents, 89 (70.6%) were single, and the remaining 34 (29.4%) were married.

Accordingly, the majority of employees (40.5%) have been employed for less than 1 year, reflecting relatively new joiners. Furthermore, 39.7% of employees have been employed for 1–3 years, indicating a significant portion. A smaller percentage, 14.3%, have been employed for 3–5 years, and only 5.6% of employees have 5-10 years of experience in the company. There were no employees with more than 10 years of experience at the company. This data highlights that most employees in the company have relatively short to moderate tenures.

In addition, 77 out of 126 respondents (61.1%) have been working as permanent employees, while 30 employees (23.8%) have been working as temporary or fixed-term employees. A smaller percentage, 12.7% (16 respondents), have been working as contract employees, and only 2.4% (03 respondents) of employees have been working as interns in the company.

4.1. Reliability and Validity Testing

The measurement model was tested to assess the validity and reliability of the constructs used in this study. The adequacy of the sample and sphericity were verified through the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test. The KMO coefficient for all variables was greater than 0.7, and the significance value (Sig.) from Bartlett's Test was less than 0.05, confirming that the sample was adequate for further analysis, particularly for conducting exploratory factor analysis.

Table 1: Reliability Statistics

Variable	Dimension	No. of Items	Cronbach Alpha
Employee Well-being [Cronbach Alpha = 0.719]	Physical Well-being	02	0.811
	Emotional Well-being	03	0.692
	Work-related Well-being	02	0.862
Remote Working [Cronbach Alpha = 0.799]	Work Flexibility and Autonomy	03	0.703
	Role Clarity	03	0.812
	Productivity and Job Performance	02	0.770
	Work-life Balance	03	0.882
Work-life Balance Support [Cronbach Alpha = 0.840]	Perceived Climate	03	0.737
	Supervisor Support	03	0.856
	Perceived Organizational Support	04	0.804

Source: Analyzed Data, 2025

Table 2: Sampling Adequacy

Variable	KMO Coefficient	Bartlett's Test [Chi-Square]	Sig.
Employee Well-being	0.662	355.804	<.001
Remote Working	0.653	603.374	<.001
Work-life Balance Support	0.802	649.324	<.001

Source: Analyzed Data, 2025

4.2. Hypothesis Testing: Simple Linear Regression

To test Hypothesis 1 (H1), a simple linear regression analysis was performed. The results from this analysis are summarized in the table below.

Table 3: Regression Statistics

R	R Square	Adjusted R-Square	Standard Error	Observations (N)	F	Sig.
0.203 ^a	0.041	0.034	0.51646	126	5.349	0.022 ^b

Source: Analzed Data, 2025

As per the regression results, 4.1% (R Square = 0.041) of the variation in employee well-being is statistically significant (Sig. = 0.022b), which is less than 0.05, and is explained by the independent variable remote working. Additionally, the marginal contribution of remote

working (0.271) is statistically significant (Sig. = 0.022b), confirming that remote working has a positive effect on employee well-being. Therefore, H₁ is supported, and the study concludes that remote work significantly impacts employee well-being.

4.3. Moderator Analysis

A moderator analysis was conducted to examine the effect of work-life balance support (WLBS) on the relationship between remote work (RW) and employee well-being (EW). The analysis was performed using Process Macro v5.0, adapted by IBM SPSS (Version 27).

Table 4: Model Summary

R	R Square	MSE	F	df1	df2	p
.2641	.0697	.2631	3.0490	3.0000	122.0000	.0313

Source: Analyzed Data, 2025

Table 5: Regression Coefficients

Regression Coefficients	Coefficient	Standard Error	t-value	p-value	LLCI	ULCI
Constant	-3.6277	4.1981	-0.8653	0.3886	-11.9433	4.6778
RW	1.8414	1.2263	1.5016	0.1358	-5.8622	4.2689
WLBS	1.6906	1.0944	1.5661	0.1199	-4.4633	3.8274
Interaction	-4.3000	3.1030	-1.3858	0.1633	-1.0442	1.8242

Source: Analyzed Data, 2025

The model's R-squared value of 0.0697 indicates that it explains 6.97% of the variance in employee well-being. The p-value for the F-test (0.0313) indicates that the overall model is statistically significant. While remote working (RW) has a positive impact on employee well-being, this effect is not statistically significant (p-value of 0.1358). Furthermore, the interaction term between remote working and work-life balance support (RW x WLBS) has a p-value of 0.1633, which is greater than 0.05, indicating no significant moderation effect.

Therefore, Hypothesis 2 (H₂), which proposed that work-life balance support moderates the relationship between remote working and employee well-being, is rejected due to the lack of a significant interaction effect.

However, these findings align with previous studies by Kossek & Ozeki (1998), who noted that while work-life balance support is beneficial, it is insufficient on its own to mitigate the challenges of remote work.

5. Conclusion

The aim of this research was to investigate the impact of remote working on employee well-being, and to examine whether work-life balance support moderates this impact. This analysis yielded several insights.

It was found that remote work has a positive impact on employee well-being. The regression analysis demonstrated a moderate positive relationship between remote work and employee well-being ($r = 0.203$, $p = 0.022$), indicating that remote work positively impacts overall employee well-being. Moreover, the regression analysis showed remote working was associated with a 4.1% variation in employee well-being ($R^2 = 0.041$). This indicates that remote work has a statistically significant yet moderate effect on employee well-being.

This study also explored the moderating role of work-life balance support. Although the mechanisms of work-life balance, such as flexible working hours, mental health support, and family-friendly policies, were established to be effective in reducing work-family conflict, the researchers have not established that these mechanisms play a significant moderating role in the relationship between remote working and employee well-being. The moderator analysis conducted with the Process Macro v5.0 indicated that remote working and work-life balance support did not interact significantly ($p = 0.163$), suggesting that work-life balance mechanisms did not moderate the relationship between remote work and employee well-being in this study.

This non-significant finding on work-life balance support aligns with the growing literature, which increasingly shows that work-life balance support has no moderating impact in the context of remote work. Golden et al. (2006) and Gagendran and Harrison (2007) found that the negative effects of remote working, including isolation and burnout, are not necessarily minimized, despite the fact that work-family conflict is also reduced by the support of flexible work arrangements or other work-life balance mechanisms. Kossek and Ozeki (1998) also noted that, although support mechanisms are important, they are not sufficient to significantly enhance well-being in remote work settings unless supplemented by other factors such as strong leadership support, social interaction, and role definitions. Also, Choudhury et al. (2020) found that work-from-anywhere does not always improve employee satisfaction; they may not address the root causes of isolation and role ambiguity that can influence well-being.

In short, work-life balance support does not moderate the effects of remote work on employee well-being, but it remains significant in enhancing it. Other factors, such as social support, leadership and organisational culture, may have a more significant impact on the moderation of the effects of remote work on well-being.

Further research findings indicate that remote work enhances employees' well-being. Remote work leads to employees being more satisfied with their jobs, having greater control over their work schedules, and achieving better work-life balance, all of which enhance overall well-being. Nevertheless, the research also outlines issues related to remote work, such as social isolation, role ambiguity, and burnout, that may counteract its advantages and harm employee health.

Regarding work-life balance support, researchers found that work-life balance mechanisms are significant in alleviating work-family conflict but do not moderate the impact of remote work on employee well-being. This indicates that the support for work-life balance is insufficient to counter the adverse effects of remote work. The other organisational variables may be more critical in moderating the interaction between remote working and employee well-being.

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**SELLER INTERACTIVITY AND PERSONALISATION IN CONVERSATIONAL
COMMERCE: EFFECTS ON CUSTOMER ENGAGEMENT AND SALES
CONVERSION AMONG SRI LANKAN SOCIAL MEDIA-BASED BUSINESSES**

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Abstract

Purpose: Conversational commerce enables real-time interaction between buyers and sellers through messaging platforms such as WhatsApp, Instagram Direct, and Facebook Messenger. In Sri Lanka, micro and small sellers rely heavily on chat-based selling due to low cost and accessibility. This study examines how seller interactivity and personalisation influence customer engagement and how customer engagement drives sales conversion.

Design/methodology/approach: A quantitative approach was adopted using 201 responses collected from micro and small social media sellers engaged in chat-based selling across Sri Lanka. Data were gathered through structured questionnaires using a five-point Likert scale. Due to the informal nature of the population, a non-probability sampling technique was applied. The proposed relationships were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). Reliability and validity were assessed using composite reliability, outer loadings, and AVE, while discriminant validity was evaluated using HTMT. Bootstrapping with 5,000 resamples was used to test the significance of structural relationships.

Findings: The results show that seller interactivity ($\beta = 0.238$, $p = 0.001$) and personalisation ($\beta = 0.206$, $p = 0.001$) have significant positive effects on customer engagement. Customer engagement also significantly influences sales conversion ($\beta = 0.272$, $p < 0.001$). These findings confirm the mediating role of engagement in linking conversational practices with sales outcomes. Interactive and personalised communication enhances customer involvement, increasing the likelihood of purchase and highlighting the importance of seller-driven communication behaviours in informal conversational commerce environments.

Research limitations/implications: The study focuses on micro and small sellers in Sri Lanka operating in informal digital marketplaces, which may limit generalisability. The findings provide practical implications by emphasising the importance of interactive and personalised communication in improving customer engagement and increasing sales conversion.

Originality/value: This study contributes to conversational commerce literature by focusing on seller-driven communication behaviours in informal chat-based environments and highlighting customer engagement as a key mechanism linking interactivity and personalisation with sales conversion.

Keywords: Conversational Commerce; Customer Engagement; Interactivity; Personalisation; Sales Conversion

1. Introduction

The early business exchanges were geographically and time-bound. Sri Lanka's traditional trade took place mostly in shops, village fairs, and local markets. However, the emergence of the internet in the 1990s led to the development of electronic commerce, allowing companies to sell goods beyond national borders (Attar et al., 2022; Michielsen et al., 2025). Consequently, major platforms such as Amazon and eBay emerged, and global online retail sales are projected to surpass USD 3.5 trillion by 2032 (Herzallah et al., 2025). Although e-commerce increased scalability and efficiency, its automated procedures limited direct interaction between buyers and sellers. To address this limitation, social commerce was introduced by combining e-commerce functions with social networking features. Conversational commerce allows buyers and sellers to communicate directly and in real time through messaging platforms such as WhatsApp, WeChat, and Facebook Messenger. Despite the rapid growth of social and conversational commerce, there is limited empirical understanding of how seller communication behaviours translate into actual sales outcomes. Existing studies have largely focused on consumer-side variables such as trust, purchase intention, and satisfaction, while relatively little attention has been given to seller-side behavioural practices during real-time selling interactions. Furthermore, most prior research has examined public or platform-mediated environments, such as social media feeds, live-streaming commerce, and automated interaction systems, rather than private, one-on-one chat-based selling contexts. Seller behaviours such as interactivity and personalisation, which are used during real-time conversations to transform customer interactions into completed sales, remain insufficiently explored, particularly within informal social media-based commerce. This gap is especially significant in Sri Lanka, where many small and micro-online sellers rely on private messaging apps like WhatsApp, Facebook Messenger, and Instagram Direct as their primary selling methods, often lacking monetary facilities to maintain a website. Many recent studies emphasise platform features and the broader social commerce environments, but provide limited insight into how sellers manage individual conversations to engage customers and convert them into buyers (Sohaib et al., 2022; Sun et al., 2021; Wu et al., 2023). This study addresses this gap by examining how seller interactivity and personalisation influence customer engagement and how customer engagement leads to sales conversion in conversational commerce. Drawing on social commerce and relationship marketing theory, this study investigates how seller communication behaviours function as strategic tools to enhance customer engagement. Specifically, this study seeks,

1. To examine the effect of seller interactivity on customer engagement in chat-based selling environments
2. To examine the effect of seller personalisation on customer engagement in chat-based selling environments
3. To analyse the effect of customer engagement on sales conversion in Sri Lankan social-media-based chat-based selling environments.

Considering the theoretical gap, this research is significant for understanding how conversational commerce supports the sustainability of micro and small-scale digital businesses in developing regional economies. In environments where digital e-commerce infrastructure, payment systems, and trust mechanisms are absent, the use of chat-based selling through social media such as WhatsApp and Facebook Messenger becomes a critical form of business for many firms. Seller-driven behaviour becomes critical in developing trust, engaging customers, and maintaining consistent sales. In terms of theoretical contribution, the study extends the literature on the emerging concept of conversational commerce by examining the effect of seller communication behaviour on customer engagement and sales. In terms of practical contribution, the study provides implications for micro and small online sellers who use social media platforms as primary channels of online business. Specifically, the study provides implications on how small online sellers can benefit from the use of interactive and personalised seller communication strategies in engaging customers and increasing online sales. Moreover, the study provides implications for digital platforms such as Facebook Marketplace and entrepreneurship development initiatives in promoting the use of communication tools and strategies that encourage small online sellers to move from part-time informal online business towards full-time online business.

2. Literature Review

2.1 Conversational Commerce

Conversational commerce refers to real-time communication between buyers and sellers using available messaging platforms like WhatsApp, Facebook Messenger, and Instagram Direct. Unlike in the case of e-commerce, where the buyers and the sellers do not communicate with each other during the time of purchase, conversational commerce provides a platform for the two parties to communicate with each other. Research indicates that communication-based interactions increasingly shape how transactions occur in social commerce environments. Recent studies demonstrate that digital interaction technologies can impact consumer engagement and behavioural reactions in online commerce environments (Jiang et al., 2022; Senali et al., 2024; Xiang et al., 2022). Despite the increasing adoption of conversational commerce, much of the existing literature focuses on platform characteristics or customer perceptions, while the behavioural role of sellers during real-time conversational interactions remains less explored.

2.2 Theoretical Foundation

This study mainly relies on the Stimulus-Organism-Response (S-O-R) framework, which describes how external stimuli impact internal psychological states, which determine the behavioural responses (Mehrabian & Russell, 1974). In conversational commerce environments, seller communication behaviours operate as stimuli, influencing consumers' psychological states such as engagement, which in turn affect behavioural reactions such as purchase decisions or sales conversion. Furthermore, concepts of relationship marketing emphasise the significance of continuous interaction between customers and sellers to build interpersonal relationships throughout commercial transactions. According to social exchange

theory, buyers tend to reciprocate positive experiences by remaining engaged and continuing relational exchanges with sellers.

2.3 Seller Interactivity

Seller interactivity refers to the extent to which sellers engage in real-time, two-way communication with customers during online interactions. Empirical research highlights the role of interactive communication in shaping customer behaviour in digital commerce environments. Real-time communication between buyers and sellers has been found to influence customer reactions and purchasing behaviour during online interactions (Sun et al., 2021). Recent studies further suggest that higher levels of interaction strengthen relational connections and increase customer participation in online transactions (Wu et al., 2023; Zhang et al., 2023). In addition, newer research in digital commerce contexts continues to emphasise the role of interactive communication in facilitating customer engagement during seller–customer dialogue (Tedjakusuma et al., 2025; Wang et al., 2024). Seller interactivity is composed of three main elements: two-way communication, a conversational tone, and the ability to quickly clarify customer questions. Research shows that two-way communication between sellers and customers turns simple browsing into an active relational interaction (Gu et al., 2023; Liu et al., 2022; Sohaib et al., 2022; Wu et al., 2023). Few studies highlighted that conversational tone is also important to appear approachable and help build trust with customers (Chen et al., 2022; Gu et al., 2023; Liu et al., 2022; Sharma et al., 2022; Sohaib et al., 2022; Wu et al., 2023). Finally, interactivity acts as a problem clarifier, where real-time responses help resolve customer doubts and reduce perceived transaction risks (Chen et al., 2022; Wu et al., 2023; Zhang et al., 2023). When sellers engage in more interactive communication, customers become more involved and engaged in the interaction. Customer engagement reflects the extent to which customers invest cognitive, emotional, and behavioural effort during interactions with a seller or business. Based on these theoretical and empirical arguments, seller interactivity is expected to influence customer engagement in conversational commerce environments.

H₁: Seller interactivity has a significant impact on customer engagement.

2.4 Seller Personalisation

Personalisation refers to the extent to which sellers tailor communication, recommendations, and responses according to individual customer needs and preferences. In conversational commerce environments, sellers may personalise interactions by adapting responses to customer inquiries, recommending relevant products, or providing customised information during conversations. Prior studies indicate that personalised communication improves perceived relevance and enhances interaction quality in online commerce environments (Sohaib et al., 2022). According to Kang et al. (2021), tailored responses can build interpersonal connections and increase customer engagement in interactions with sellers. The theoretical mechanism for personalising is firmly focused on identifying individual consumer preferences and providing customer-specific, tailored replies. A strong match between the message and the customer's specific requirements indicates to the customer that the seller is

involved in their specific problem, increasing the perceived value and satisfaction of the relationship (Chen et al., 2021; Good & Schwepker, 2022; Sohaib et al., 2022). Furthermore, using customer-based personalisation ensures that the conversation is tailored specifically to the individual user, eliminating generic sales pitches. This tailored strategy is critical for providing a highly customised social commerce experience that connects with the customer (Bawack et al., 2023; Chen et al., 2021). Based on these arguments, seller personalisation is expected to influence customer engagement in conversational commerce environments.

H₂: Seller personalisation has a significant impact on customer engagement.

2.5 Customer Engagement and Sales Conversion

Customer engagement refers to the level of cognitive, emotional, and behavioural involvement that customers demonstrate during interactions with a business or seller. Engagement extends beyond the act of purchase and reflects the extent to which customers actively participate in interactions with a brand or organisation (Hollebeek et al., 2014; Vivek et al., 2012). Prior research suggests that customer engagement contributes to relational and behavioural outcomes in digital commerce environments. Customer engagement has been determined in studies to impact developing relationships and several types of behavioural outcomes, including continuous interaction and purchase behaviour (Behnam et al., 2021; Busalim & Hussin, 2016). More recent studies indicate that interaction in digital commerce settings can impact customer decision-making and transaction outcomes (Jia, 2024). High levels of emotional engagement form an affective link between the customer and the seller, focusing the customer's attention and promoting long-term participation in the sales conversation (Behnam et al., 2021; Sun et al., 2021). Furthermore, engaged customers cognitively evaluate and use their interactive experiences to obtain long-term value from the exchange, increasing confidence in their purchase decisions (Sun et al., 2019; Ye et al., 2020). Traditionally, successful conversion in social and conversational contexts has been defined in terms of direct financial outcomes, such as explicit revenue and sales growth (Ha et al., 2016; Handoyo, 2024; He et al., 2019; Kozlenkova et al., 2017; Lawrence et al., 2019), fundamental financial performance (Lawrence et al., 2019), and achievement of targeted sales objectives (Charoensukmongkol & Suthatorn, 2021; Inyang & Jaramillo, 2020). However, the studies acknowledge that in relationship-based commerce, conversion includes long-term behavioural objectives such as customer retention and regional or demographic growth (Charoensukmongkol & Suthatorn, 2021; Chen et al., 2021; Shemi & Procter, 2018). In conversational commerce environments, purchase decisions often develop through ongoing communication rather than immediate transactions. Customers who are more engaged tend to be more likely to make purchases. Accordingly, customer engagement is expected to influence sales conversion in this context.

H₃: Customer engagement has a significant impact on sales conversion.

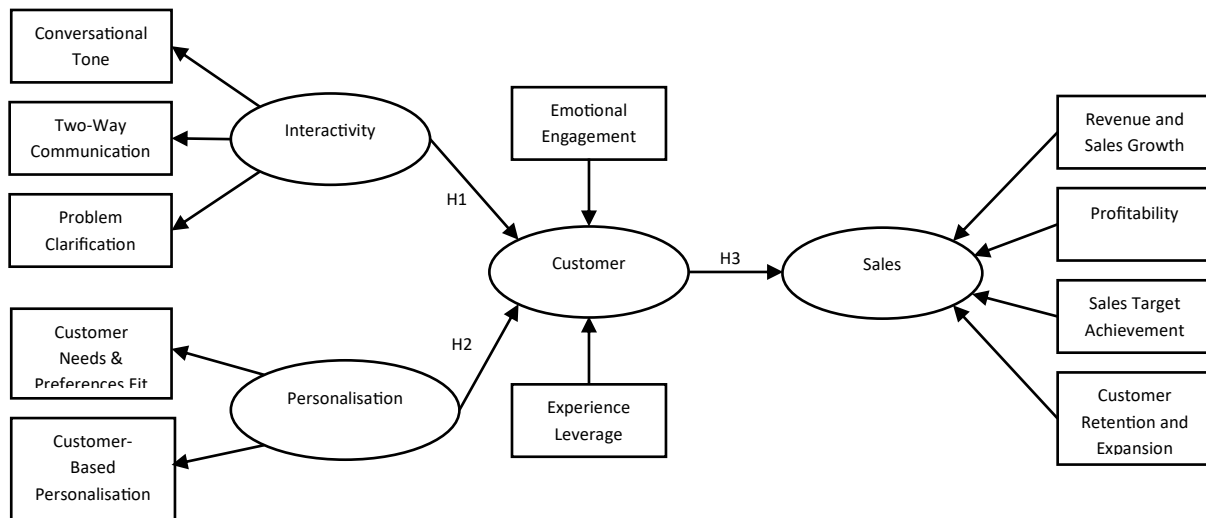


Figure 1: Conceptual Framework. Source: Author's Illustration

3. Methodology

3.1 Research Philosophy and Approach

The purpose of this study is to examine how conversational commerce practices affect the sales conversion of Sri Lankan social media-based small businesses. To achieve this objective, this study adopts a quantitative research design to examine the relationships among variables. Regarding the research approach, the study follows a deductive approach, since the hypotheses are built from prior theories such as social commerce, relationship marketing, and customer engagement theories and tested through survey data. Here, positivist philosophy is appropriate because the study examines the relationship between observable and measurable variables, while the deductive approach allows testing hypotheses driven by theory (Saunders et al., 2019). Accordingly, the study examines the relationship between seller interactivity, personalisation, customer engagement, and sales conversion using structured empirical data collected from social media-based online sellers.

3.2 Research Design and Time Horizon

A quantitative survey strategy was adopted to collect data from informal chat-based sellers involved in conversational commerce. Data collection was done using a structured questionnaire where respondents were asked to indicate their level of agreement using a five-point Likert scale. When it comes to the time horizon, the study adopts a cross-sectional time horizon, where the data is collected at a single point in time. A cross-sectional design is appropriate, since it examines the relationship between behavioural variables without changing the research environment (Sekaran & Bougie, 2016).

3.3 Population and Sampling Technique

According to this study, the target population is Sri Lankan micro and small online sellers who

are actively engaged in chat-based selling through social media platforms such as WhatsApp, Instagram, and Facebook Messenger. Because of the informal nature and absence of an official registry, establishing a comprehensive sampling frame was not possible. When the target population is dispersed and difficult to identify clearly, non-probability sampling methods such as snowball sampling, which is commonly used for accessing hidden populations (Saunders et al., 2019). Therefore, a snowball sampling technique was adopted, where the initial participants referred other online sellers involved in conversational commerce (Kirchherr & Charles, 2018). After screening, 201 valid seller responses were used for the final analysis. Regarding the sample size, a post-hoc power analysis was carried out with G*Power 3.1 software to check if the sample size used is adequate (Faul et al., 2009). With reference to Cohen (1988) suggestion, a medium effect size with $f^2 = 0.15$ and a significance level of 0.05 was used. With two predictors influencing customer engagement and a sample of 201, it showed that the statistical power is 0.999, which is well above 0.80. Hence, it is safe to say that the sample is adequate to test the hypothesised relationships (Hair et al., 2019).

3.4 Data Collection

Data collection was conducted using two methods, physical questionnaire distribution and structured one-to-one telephone interviews. For one-to-one telephone interviews, a standardised questionnaire script was followed to ensure all the questions were asked in the same manner to reduce interviewer bias. Standardisation of questioning procedures supports reducing interviewer bias and helping respondents understand the survey questions in the same manner (Bryman & Bell, 2015). This approach is vital because many informal chat-based sellers are not familiar with structured academic surveys. Each participant was guided through each questionnaire item and asked to indicate their level of agreement using the Likert scale. Self-reported performance measures are commonly used in small business research where objective financial data is not available. This is particularly common in informal entrepreneurial contexts. Regarding ethical consideration, participation was voluntary, and they were informed that this study was for academic purposes before responding.

3.5 Data Cleaning

Before the analysis, the dataset was checked for missing responses, incomplete questionnaires, outliers, and internal inconsistencies. Multicollinearity was checked using the Variance Inflation Factor (VIF) assessment, and no serious issues were detected. Preliminary data screening is recommended to ensure reliable SEM results (Hair et al., 2019).

3.6 Measurement of Constructs

Table 1: Indicator Table

Construct	Type	Indicators	Sources
Interactivity	Independent Variable (IV)	1. Conversational Tone	(Chen et al., 2022; Gu et al., 2023; Liu et al., 2022; Sharma et al., 2022; Sohaib et al., 2022; Wu et al., 2023)
		2. Two-Way Communication	(Gu et al., 2023; Liu et al., 2022; Sohaib et al., 2022; Wu et al., 2023)
		3. Problem Clarification	(Chen et al., 2022; Wu et al., 2023; Zhang et al., 2023)
Personalisation	Independent Variable (IV)	1. Customer Needs & Preferences Fit	(Chen et al., 2020; Good & Schwepker, 2022; Sohaib et al., 2022)
		2. Customer-Based Personalisation	(Bawack et al., 2023; Chen et al., 2020)
Customer Engagement	Mediator (MV)	1. Emotional Engagement	(Behnam et al., 2021; Sun et al., 2019)
		2. Experience Leverage	(Sun et al., 2019; Ye et al., 2020)
Sales Conversion	Dependent Variable (DV)	1. Revenue & Sales Growth	(Ha et al., 2016; Handoyo, 2024; He et al., 2019; Kozlenkova et al., 2017; Lawrence et al., 2019)
		2. Profitability	(Lawrence et al., 2019)
		3. Sales Target Achievement	(Charoensukmongkol & Suthatorn, 2021; Inyang & Jaramillo, 2020)
		4. Customer Retention & Expansion	(Charoensukmongkol & Suthatorn, 2021; Chen et al., 2020; Shemi & Procter, 2018)

Source: Author's Illustrations

3.7 Data Analysis

For the purpose of testing the hypothesized relationships, the research adopted the Partial Least Squares Structural Equation Modelling (PLS-SEM) technique. This was done using the SmartPLS software. The reason for choosing the PLS-SEM technique was the presence of multiple constructs in the conceptual model. Moreover, the technique does not require the assumption of data normality. It is highly recommended for carrying out predictive and exploratory research involving complex behavioral models with a medium sample size (Hair et al., 2019). The analysis was conducted in a two-stage approach. First, the measurement model was evaluated for the reliability and convergent validity of the constructs. Then, the structural model was tested through bootstrapping to assess the significance of the path coefficients. Bootstrapping enhances the accuracy of parameter estimates by generating repeated subsamples (Hair et al., 2019).

4. Results and Discussion

4.1 Results

4.1.1 Demographics

The percentage of female respondents was 65.2% (131 sellers), while that of male respondents was 34.8% (70 sellers), indicating a higher presence of female sellers. The sample was dominated by young sellers, with the largest percentage in the 20-24 age group at 29.9% and the 25-29 age group at 30.3%. The next highest percentage was for sellers aged 30-34 years at 17.4% and 35-39 years at 13.4%. Sellers used Facebook, Instagram, and other social media platforms for informal chat-based selling purposes, along with Sinhala, Tamil, and English as the languages during conversations with the customers.

4.1.2 Measurement Model Assessment

Table 2: Measurement Model

Latent Variable	Indicator	Code	Outer Loading	Cronbach's Alpha	Composite Reliability (CR)	AVE
Customer Engagement	Emotional Engagement	ENG1	0.855	0.602	0.834	0.715
	Experience Leverage	ENG2	0.836			
Interactivity	Conversational Tone	INT1	0.636	0.403	0.708	0.448
	Two-Way Communication	INT2	0.745			
	Problem Clarification	INT3	0.621			

Latent Variable	Indicator	Code	Outer Loading	Cronbach's Alpha	Composite Reliability (CR)	AVE
Personalisation	Customer Needs & Preferences Fit	PER1	0.894	0.395	0.756	0.613
	Customer-Based Personalisation	PER2	0.654			
Sales Conversion	Revenue and Sales Growth	SCV1	0.756	0.661	0.798	0.498
	Profitability	SCV2	0.740			
	Sales Target Achievement	SCV3	0.661			
	Customer Retention and Expansion	SCV4	0.659			

Source: Author's Illustrations

The results of the measurement model were analysed using indicator loadings, composite reliability (CR), and Average Variance Extracted (AVE) to check the internal consistency and validity. In PLS-SEM, composite reliability is considered a better alternative to Cronbach's alpha because it is a more accurate estimate of reliability in exploratory models (Hair et al., 2019). It has been argued that Cronbach's alpha could be influenced by the number of measures used to define the construct. For constructs with few measures (two or three items), the value of Cronbach's alpha might be below the recommended threshold even if the reliability is good. Because of this limitation, composite reliability is considered a more suitable measure of internal consistency in PLS-SEM (Hair et al., 2019). All constructs exceeded the recommended composite reliability threshold of 0.70, indicating satisfactory reliability. Indicator loadings ranged from 0.621 to 0.894, exceeding the minimum threshold of 0.50 recommended for exploratory study PLS-SEM studies (Hair et al., 2019). Therefore, all indicators were retained for the final model evaluation. Although the AVE values for interactivity and sales conversion are slightly below the recommended 0.50 threshold, according to Fornell and Larcker (1981), When AVE values are low, convergent validity remains acceptable if composite reliability exceeds the expected threshold of 0.60. As all the constructs in this model meet this requirement, the convergent validity of the measurement model is acceptable. Overall, both reliability and validity results meet the recommended criteria for PLS-SEM. Therefore, the study can proceed to structural model evaluation.

4.1.3 Structural Model Assessment

Table 3: Structural Model

Hypothesis	Path	Path Coefficient (β)	Standard Deviation	t-value	p-value	Decision
H ₁	Interactivity & Customer Engagement	0.238	0.073	3.246	0.001	Significant
H ₂	Personalisation & Customer Engagement	0.206	0.065	3.177	0.001	Significant
H ₃	Customer Engagement & Sales Conversion	0.272	0.069	3.965	0.000	Significant

Source: Author's Illustrations

The results of the structural model were analysed using the path coefficients (β), t-values, and p-values obtained through bootstrapping in SmartPLS. Accordingly, the relationship between interactivity and customer engagement (H₁) was positive and significant ($\beta = 0.238$, $t = 3.246$, $p < 0.001$). This implies that as the level of interactivity in conversational selling increases, customer engagement also increases. Hence, H₁ is supported. The relationship between personalisation and customer engagement (H₂) was also positive and significant ($\beta = 0.206$, $t = 3.177$, $p < 0.001$). Therefore, H₂ is supported. Customer Engagement had the strongest influence on sales conversion (H₃) ($\beta = 0.272$, $t = 3.965$, $p < 0.001$). Hence, H₃ is supported. The findings support the S-O-R framework, where seller communication behaviour acts as the stimulus, and these external stimuli affect the internal psychological state, which is the customer engagement, which then produces a behavioural response as sales conversion. These findings indicate that the hypothesised relationships in the conceptual model are supported by the empirical data.

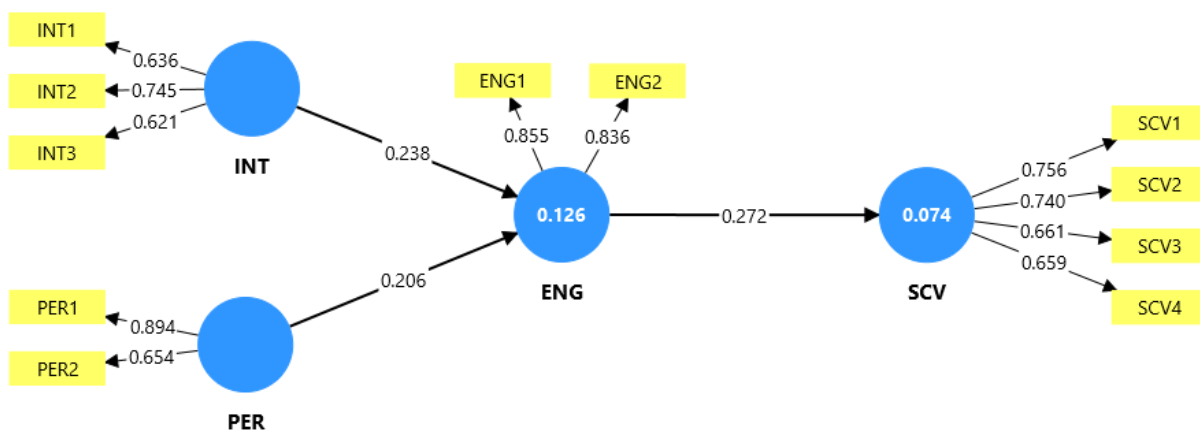


Figure 2: SmartPLS Output. Source: Author's Illustrations

4.2 Discussion

The findings show that conversational commerce strategies have a significant impact on consumer engagement and eventual sales conversion across social media retailers in Sri Lanka. Sohaib et al. (2022); Sun et al. (2021); Wu et al. (2023) illustrate that in chat-based selling settings, customers evaluate credibility, relational involvement, and purchase willingness based on the quality of seller communication compared to platform-based indicators. The positive connection between interactivity and customer engagement emphasises the significance of maintaining reciprocal communication throughout conversational interactions. Prior studies also indicate that responsive and real-time communication enhances both customer engagement and relationships when it comes to digital commerce (Sun et al., 2021; Zhang et al., 2023). Consumers are more likely to feel social presence and relationship intimacy when sellers respond rapidly and relevantly (Sheng, 2019; Sun et al., 2021; Wu et al., 2023). In Sri Lankan conversational commerce, where formal institutional trust measures such as safeguarding payments or platform authentication are not always available, interactive dialogue can help to compensate by strengthening attitudes toward responsiveness, accountability, and relational dependability. As a result, seller interactivity increases customer engagement in conversational commerce as it reduces uncertainty and builds stronger buyer and seller relationships.

These findings can be explained using the Stimulus-Organism-Response (S-O-R) and relationship marketing perspectives, since interactivity works as a stimulus, influencing perceptions of interaction and relational intimacy that support engagement as an internal state and constant conversational participation as a behavioural response (Liu et al., 2020; Sohaib et al., 2022). In this way, interactivity and personalisation serve as communication triggers that influence psychological engagement, as sales conversion indicates the visible behavioural impact.

The significant impact of personalisation on customer engagement indicates that customised messages and responses are highly effective in chat-based selling. When sellers tailor their communication, customers see the interaction as more appropriate and caring, which strengthens the emotional connection and engagement (Blasco-Arcas et al., 2016; Kim & Peterson, 2017; Sohaib et al., 2022). Previous studies also show that personalised communication increases perceived relevance and relational closeness in online interactions (Kang et al., 2021; Sohaib et al., 2022).

In personalised chat-based selling, the level of recognition and appreciation increases the perceived sense of value, motivating them to engage more with the seller. This is in line with the S-O-R theory, which suggests that personalisation increases engagement among consumers by evoking positive cognitive responses and emotions, not by forcing them to make purchases (Kang et al., 2021; Zhang et al., 2022). When sellers use personalised messages while interacting with their customers, the latter feel appreciated and feel that the seller understands their needs, increasing their cognitive and emotional engagement with the seller. The findings

have shown that sellers should personalise their interaction with the customer by using their names, remembering their preferences, and providing them with relevant recommendations. The personalised messages could even be as simple as providing the customer with relevant advice and increasing their sense of worth, creating an emotional connection with them, which is vital in one-to-one marketing.

The statistically significant positive relationship between customer engagement and sales conversion suggests that customer engagement plays a significant mediating function between seller communication and the occurrence of a sale. Customers who are highly engaged are more likely to participate actively in the interaction and ultimately complete a purchase. Previous studies have demonstrated that the higher the level of customer engagement, the better the behavioural outcome, such as making a purchase and interacting with firms (Behnam et al., 2021). In informal chat-based contexts, interaction may strengthen the perceived value of the seller-customer relationship, leading to the conversion of exploratory interactions into completed purchases. These findings suggest that engagement should be considered both an attitude construct and a practical performance measure for conversational sellers. Sellers are able to establish relationship consistency and raise the possibility that customer inquiries turn into purchases by providing interactions that are responsive, informative, and personally relevant even without an organised e-commerce infrastructure.

Strong customer engagement helps build relational trust, improves information clarity, and increases customer confidence during the buying process. As a result, uncertainty is reduced, leading customers to proceed from inquiry to purchase, where purchase decisions come from ongoing interactions between individuals over separate transactional activities. Interactivity and personalisation tend to increase engagement by improving emotional connection, cognitive engagement, and perceived social presence, which ultimately results in sales conversion. By applying social commerce and relationship marketing perspectives to the Sri Lankan conversational selling setting, the study demonstrates how seller-driven communication behaviours act as the fundamental components in determining engagement and sales outcomes (Bao et al., 2016; Sohaib et al., 2022; Zhang et al., 2022). As a result, it is evident that in the absence of institutional trust mechanisms such as platform-based reviews, ratings, and transaction safeguards, seller communication behaviours act as functional substitutes for trust-building in conversational commerce environments.

No unexpected relationships were observed in this study, as the hypothesised relationship between the variables was positive and significant in the expected direction. This suggests that the proposed theoretical framework correctly represents the relationship between seller communication and the outcome of customer engagement and sales conversion in the context of conversational commerce.

5. Conclusion

This study offers useful insight into how the communication behaviours of sellers affect customer engagement in sales conversion in conversational commerce, especially among small enterprises in Sri Lanka who use social media. Messaging apps like Facebook Messenger,

Instagram Direct Messages, and WhatsApp allow for real-time communication. Responsiveness, personalisation, and flexibility in communication in conversational communication appear to mitigate uncertainty, improve information clarity, and increase closeness in relational communication, highlighting the importance of human-centred communication in developing customer engagement. These findings imply the significance of social media platforms offering integrated selling spaces and communication tools that facilitate real-time interaction, like the Facebook marketplace. The study offers useful policy implications for government initiatives aimed at developing entrepreneurship in Sri Lanka. Initiatives in developing digital entrepreneurship, as well as selling support, could be useful in helping informal social media sellers move from part-time selling to full-time businesses. However, this study has a few limitations. The use of snowball sampling and self-assessed performance measures suggests that the findings should be interpreted with caution, as these factors may affect the generalisability of the results. Future research could further explore how conversational behaviour, engagement, trust-building, and sales performance interact across different digital contexts, seller experience levels, and platform designs to better understand the boundary conditions of conversational commerce.

Disclosure

Artificial intelligence tools were only used for editing purposes, including grammar correction. All aspects of this research, including study design, data collection, analysis, interpretation, and intellectual contribution, were conducted and validated by the authors.

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THE IMPACT OF BOARD GOVERNANCE MECHANISMS ON FINANCIAL DISTRESS: EVIDENCE FROM SRI LANKA

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Abstract

Purpose: Board governance practices play a critical role in ensuring corporate stability, particularly in emerging economies such as Sri Lanka, where firms are more vulnerable to financial shocks. This study examines the impact of board governance mechanisms on financial distress among consumer service companies listed on the Colombo Stock Exchange in Sri Lanka. It aims to address the limited sector-specific evidence in emerging markets by analyzing how board structure and composition influence firms' financial stability and their ability to mitigate early-stage financial difficulties.

Design/methodology/approach: The study adopts a quantitative research design using panel data from 37 consumer service companies listed on the Colombo Stock Exchange over the period 2020–2024. Financial distress is measured using the Altman Z-score model. Key board governance variables include board size, board independence, CEO duality, board committees, board meetings, female directors, and director expertise. Control variables such as firm size, leverage, and return on assets are incorporated. Data are collected from published annual reports. The study employs panel regression analysis using the Estimated Generalized Least Squares (EGLS) method to examine relationships, supported by diagnostic tests for multicollinearity, autocorrelation, and heteroscedasticity.

Findings: The findings reveal that board governance mechanisms significantly influence financial distress, with the model explaining approximately 75% of the variation. Board size, CEO duality, female directors, and the number of board committees show a significant positive relationship with financial distress, indicating potential inefficiencies and governance challenges. Conversely, board meeting frequency and leverage exhibit significant negative relationships, suggesting that active monitoring and financial discipline reduce distress. Board independence and director expertise are found to be statistically insignificant. Overall, the results highlight that governance mechanisms operate differently in emerging markets and may not always function as theoretically expected in reducing financial risk.

Research limitations/implications: The study is limited to 37 firms within the consumer services sector, restricting generalizability across industries. Reliance on secondary data and proxy measures for expertise may affect precision. The findings imply that governance effectiveness is context-dependent, emphasizing the need for tailored governance frameworks in emerging markets like Sri Lanka.

Originality/value: This study provides context-specific evidence from Sri Lanka, addressing a gap in emerging market research by focusing on financial distress rather than firm performance. It highlights that board governance mechanisms may produce unintended outcomes, offering valuable insights for policymakers, investors, and corporate managers.

Keywords: Board Governance; CEO Duality; Financial Distress; Sri Lanka

1. Introduction

1.1 Background of the Study

Corporate governance, as defined by the OECD, refers to the mechanisms, processes and relationships that control and direct a company. Effective corporate governance serves to balance the economic and social objectives of an organization while aligning the interests of shareholders, management and other stakeholders. Good management practices are particularly important in emerging markets such as Sri Lanka, where companies are more vulnerable to market volatility and economic uncertainty, to ensure the sustainability of the organization (Farag et al., 2018).

Recently, corporate governance has received considerable attention as a result of corporate scandals and financial crises, highlighting that many organizations failed mainly because of poor governance. The failure of Enron and Lehman Brothers company has exposed poor board governance mechanisms and hence the international push for better governance structures (Clarke, 2019). These failures prompted international reforms aimed at strengthening governance frameworks, including improvements in board independence, accountability, and transparency. The lessons from these global events are highly relevant to developing economies like Sri Lanka, where governance structures are still evolving and institutional enforcement mechanisms may be weaker (Senaratne, 2011). In Sri Lanka, corporate governance has gained increasing attention due to instances of financial instability and firm-level distress, particularly in sectors exposed to economic shocks.

Consumer services sectors in Sri Lanka is an important income earner, job provider and contributor to the quality of life of the people of this country. The sector is gradually emerging as risky for investment because large organizations in the sector have run into financial troubles, largely from poor managerial policies. Financial management of companies contribute to the bankruptcy or liquidation or takeover of firms with adverse effects on shareholders, employees, and the general economy.

This study recognizes board governance mechanisms, especially concerning the board of directors, as relevant components for accountability and effectiveness of corporate governance. Through board size, board independence, and board diversity, it has been seen that it does affect the decisions of an organization. Similarly, separation of roles between CEO and chairman (CEO duality) and board structure play an important role in overseeing management and mitigating the risk of financial distress (Shleifer & Vishny, 1997). Board governance, as a critical component of corporate governance, focuses on the structure, composition, and functioning of the board of directors in monitoring management and guiding strategic decisions. Mechanisms such as board size, board independence, CEO duality, board diversity, and board activity are widely recognized as influencing firm performance and financial outcomes (Zahra & Pearce, 1989). These mechanisms are expected to reduce agency conflicts (Jensen & Meckling, 1976), enhance monitoring effectiveness, and improve decision-making, thereby mitigating financial distress. This study seeks to address the gap in the literature on

the role of board governance in mitigating financial distress by analyzing data from companies listed on the Colombo Stock Exchange (CSE).

1.2 Problem Statement

The problem of corporate failure is still a concern for the stakeholders of the corporate world, especially in the developing countries including Sri Lanka. Although some enhancement activities have been carried out in recent years to enhancing the board governance mechanisms and there is limited understanding of how board governance mechanisms affect corporate among Sri Lankan consumer services listed companies Corporate governance encompasses the structures, processes and practices that govern an organization and ensure accountability, fairness and transparency in its relationships with all stakeholders (Shleifer & Vishny, 1997).

Furthermore, existing studies often examine governance variables in isolation or across multiple sectors without providing sector-specific insights. The consumer services sector, despite its economic importance and vulnerability to financial instability, remains underexplored in governance research. Additionally, limited research has examined how multiple board governance mechanisms jointly influence financial distress within Sri Lankan listed companies.

Another key limitation in prior research is the conceptual ambiguity between corporate failure and financial distress. Corporate failure refers to extreme outcomes such as bankruptcy or liquidation, whereas financial distress represents a deteriorating financial condition that precedes failure and can be measured using indicators such as the Altman Z-score (Altman, 1968). Understanding financial distress is critical, as early identification enables firms to implement corrective measures before reaching failure.

1.3 Research Objective

In response to these gaps, this study aims to examine the impact of board governance mechanisms on financial distress among companies listed in the consumer services sector of the Colombo Stock Exchange. Specifically, the study investigates how board size, board independence, CEO duality, board diversity, board committees, and board meeting frequency influence financial distress, while controlling firm-specific factors.

By focusing on a specific sector and incorporating a comprehensive set of governance variables, this study contributes to the existing literature by providing context-specific evidence from Sri Lanka. It also offers practical insights for policymakers, managers, and investors on improving board governance practices to reduce financial distress and enhance corporate stability.

1.4 Significant of the study

The significance of this study is in its potential contribution to various stakeholders including investors, managers, government agencies, scholars and other relevant parties. By investigating the impact of board governance mechanisms on corporate failure, this study aims to provide valuable insights that can contribute to improving the decision-making process and governance practices of Sri Lankan listed companies, particularly in the consumer services

sector. Investors are important stakeholders in any corporate ecosystem as their decisions directly impact capital allocation and company performance. This study is important to investors for several reasons. First, it helps people make informed decisions about the companies they choose to invest in. This research allows investors to assess the strength of governance institutions, which can improve their ability to assess risk and align their portfolios with companies that demonstrate strong corporate governance.

In addition, understanding the impact of governance on corporate failure can help investors better assess the risks inherent in their investments. The effects of Poor management practices can lead to financial instability and corporate failure, which can result in significant losses for companies' investors. As for the investors, this research will offer the information they are required to solve problems of critical appraisal of the governance mechanisms and making right decision regarding the investments. The results of this study have implications for managers in several ways. Understanding the dynamics of governance mechanisms and their impact on firm performance and financial stability can help managers develop strategies to strengthen governance practices. It can also help increase the capacity of the organization to manage pressure on the financial position thereby promoting long-term sustainability (Coles, Daniel, & Naveen, 2008).

Government agencies play a key role in shaping corporate governance structures and rules. This study is important to government stakeholders for several reasons. First, the results of this study can inform policymakers in the development and revision of corporate governance regulations. Effective governance structures are essential for promoting corporate accountability and transparency, which ultimately enhance investor confidence and market stability (OECD, 2004). Policymakers need empirical evidence to create structures that promote accountability and transparency and enhance investor confidence and market stability. By examining the impact of governance mechanisms on corporate performance, this study can help guide public policies that align with best corporate governance practices.

This study will also be a valuable benefit to scholars and researchers working on corporate governance, the same as board governance. By filling the gap in the existing literature on the relationship between board governance mechanisms and corporate failure, this study will contribute to the scholarly discourse surrounding governance practices in Sri Lanka. The findings could also be useful for scholars to expand the literature and explore governance effects on corporate performance across different contexts.

2. Literature review

Corporate governance has been widely examined as a key determinant of firm performance and financial stability. While early studies primarily focused on its role in enhancing shareholder value, more recent research emphasizes its importance in mitigating financial distress, particularly through effective board governance mechanisms. This section critically reviews the literature by integrating theoretical perspectives with empirical findings to develop testable arguments for the study. The systems and procedures that corporations use to be guided and managed have made corporate governance a crucial field of study and practice. It is the

structure that establishes the relationship between a company's shareholders, board of directors, management, and other stakeholders. It offers ways to reduce conflicts of interest and coordinate goals (OECD, 2015). Strong corporate governance is necessary for risk management, operational effectiveness, and firm stability, particularly in the competitive business environment of today where corporate accountability and transparency are under growing pressure (Shleifer & Vishny, 1997). Research suggests that strong corporate governance can have a major effect on the success of an organization by promoting accountability, increasing transparency, and safeguarding the interests of shareholders (Jensen & Meckling, 1976). This framework aims to reduce the risk of failure and establish corporate discipline, which will create sustainable value for stakeholders.

2.1 Theoretical Foundations and Link to Board Governance

The concept of the corporate governance is board governance to focus on the management of the company by the board of directors and their strategic decision making and their accountability of the shareholders. The fact is that the board also can serve as a possible dispute resolution between the shareholders and the management as well as is responsible for the fact that the various management decisions made are in shareholders' interest and promote accountability and transparency. The relationship between board governance and financial distress can be explained through several theoretical frameworks, including Agency Theory, Stewardship Theory, and Resource Dependence Theory.

Agency Theory posits that conflicts arise due to the separation of ownership and control, where managers may act in their own interests rather than those of shareholders (Jensen & Meckling, 1976). From this perspective, board governance mechanisms such as board independence, separation of CEO and chair roles (CEO duality), and active board monitoring (e.g., frequent meetings) are essential to reduce agency costs and prevent financial distress. Therefore, variables such as board independence and board meetings are expected to strengthen oversight and reduce the likelihood of financial deterioration.

In contrast, Stewardship Theory suggests that managers are inherently motivated to act in the best interests of the organization (Davis et al., 1997). This perspective implies that concentrated leadership structures, such as CEO duality, may enhance decision-making efficiency and organizational performance, particularly in complex environments. However, empirical evidence remains mixed, suggesting that the effectiveness of such structures depends on contextual factors.

Resource Dependence Theory emphasizes the role of the board in providing access to critical resources, expertise, and external networks (Pfeffer & Salancik, 1978). From this viewpoint, board size, diversity, and expertise enhance the board's ability to secure resources and manage uncertainty, potentially reducing financial distress. However, excessively large or poorly structured boards may lead to coordination problems and inefficiencies.

By integrating these theoretical perspectives, this study conceptualizes board governance mechanisms as multidimensional factors that can either mitigate or exacerbate financial distress depending on their structure and effectiveness.

2.2 Board Governance Mechanisms and Financial Distress

2.2.1 Board Size

The relationship between board size and financial outcomes remains widely debated. Resource Dependence Theory suggests that larger boards provide diverse expertise and external linkages, which can enhance decision-making and reduce risk (Pfeffer & Salancik, 1978). However, Agency Theory highlights potential inefficiencies associated with larger boards, including coordination problems, slower decision-making, and weaker monitoring (Jensen, 1993).

Empirical findings are mixed. Some studies find that larger boards improve firm performance through enhanced resource access (Adams & Ferreira, 2009), while others report that excessive board size is associated with poorer performance and increased financial distress due to inefficiencies (Yermack, 1996). These contrasting findings indicate that the impact of board size is context-dependent, particularly in emerging markets where governance structures may differ.

2.2.2 Board Independence

Board independence is widely regarded as a key mechanism for reducing agency conflicts and improving quality of governance. Independent directors are expected to provide objective oversight and limit managerial opportunism (Fama & Jensen, 1983). Empirical studies often find a negative relationship between board independence and financial distress, suggesting that independent boards enhance monitoring and reduce risk.

However, evidence from emerging markets presents a more complex picture. In contexts characterized by concentrated ownership and family control, the effectiveness of independent directors may be limited (Peng et al., 2003). Some studies report insignificant or weak relationships between board independence and firm outcomes, suggesting that formal independence does not always translate into effective oversight.

This inconsistency highlights the need to re-examine the role of board independence in specific institutional contexts such as Sri Lanka.

2.2.3 CEO Duality

CEO duality, where the roles of CEO and board chair are held by the same individual, is another widely debated governance mechanism. Agency Theory argues that CEO duality weakens board independence and increases the risk of managerial entrenchment (Jensen, 1993). In contrast, Stewardship Theory suggests that unified leadership can enhance decision-making efficiency and strategic clarity (Davis et al., 1997).

Empirical findings are inconclusive. Some studies find that CEO duality increases financial risk due to reduced oversight, while others suggest it may improve performance in certain contexts. This divergence indicates that the impact of CEO duality is contingent on institutional and organizational factors, warranting further investigation.

2.2.4 Board Diversity and Expertise

Board diversity, particularly gender diversity, has been associated with improved decision-making quality and enhanced governance effectiveness. Diverse boards bring varied perspectives, reduce groupthink, and strengthen monitoring functions (Adams & Ferreira, 2009). Similarly, director expertise is expected to improve strategic decision-making and financial oversight.

However, recent studies suggest that the relationship between diversity and financial outcomes is not always straightforward. While some evidence supports a positive impact, other studies report insignificant or even mixed effects, particularly in developing economies where structural and cultural factors may limit the effectiveness of diversity initiatives.

2.2.5 Board Committees and Meetings

Board activity, measured through the number of committees and frequency of meetings, reflects the intensity of governance processes. Agency Theory suggests that more active boards enhance monitoring and reduce financial distress (Vafeas, 1999). Frequent meetings allow boards to respond quickly to emerging risks and improve oversight.

However, excessive board activity may also indicate reactive governance, where boards meet frequently due to ongoing financial difficulties rather than proactive management. Similarly, a higher number of committees may improve specialization but can also create inefficiencies and coordination challenges.

These mixed findings suggest that the effectiveness of board activity depends on how governance mechanisms are implemented rather than their mere existence.

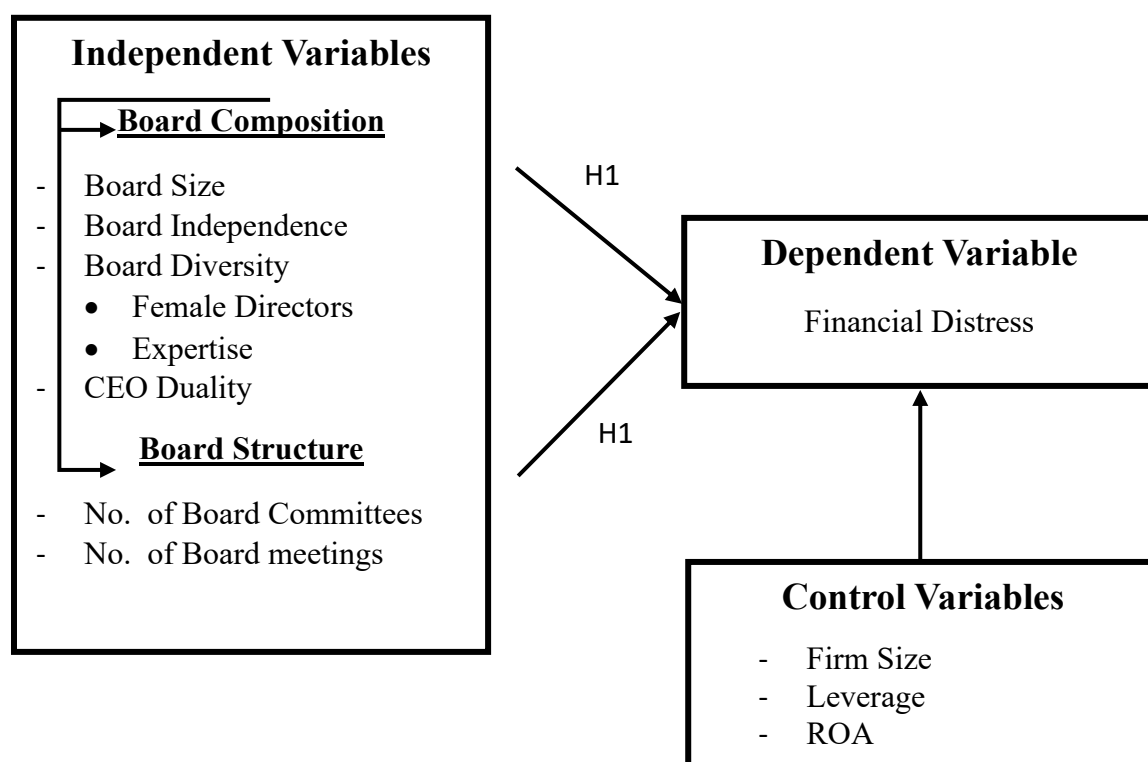


Figure 1: Conceptual framework (Source: Compiled by Author)

2.3 Synthesis and Research Gap

The reviewed literature reveals several important gaps. First, empirical findings on the relationship between board governance mechanisms and financial distress remain inconsistent, with results varying across institutional contexts. Second, most studies focus on developed economies, limiting the generalizability of findings to emerging markets such as Sri Lanka.

Third, existing research in Sri Lanka has largely examined corporate governance in relation to firm performance rather than financial distress, and often without a sector-specific focus. The consumer services sector, despite its economic importance and vulnerability to financial shocks, remains underexplored.

Finally, prior studies tend to examine governance mechanisms individually rather than collectively, limiting understanding of how multiple board characteristics interact to influence financial distress.

2.4 Hypothesis Development

Based on the theoretical and empirical review, board governance mechanisms are expected to have a significant impact on financial distress. While some mechanisms may reduce financial risk through improved monitoring and resource provision, others may increase risk due to inefficiencies or structural limitations.

H1 - Board governance mechanism has a significant impact on financial distress

3. Methodology

3.1. Research Design

This study adopts a quantitative research design to examine the relationship between board governance mechanisms and financial distress. A panel data approach is employed, combining cross-sectional and time-series data to provide more robust and reliable estimates. This design enables the study to capture both firm-level variations and changes over time, thereby improving the explanatory power of the model (Baltagi, 2008).

The study uses secondary data extracted from published annual reports, ensuring objectivity and consistency in measurement. A regression-based approach is applied to test the impact of governance variables on financial distress while controlling firm-specific characteristics.

3.2. Population, Sampling, and Data Collection

The population of the study consists of the 37 consumer services companies that are identified on the CSE on March 31, 2024. Due to its ability to generate income, generate employment, and improve living standards, this sector which mainly consists of companies in the hotel, restaurant, and leisure industries represents an important component of the Sri Lankan economy. As the sample, these 37 companies provide a concentrated perspective on board governance procedures and how they might affect financial distress in a high-impact industry.

37 companies in the consumer services sector that were listed on the Colombo Stock Exchange (CSE) as of March 31, 2024, are the subject of the quantitative data, that is taken from annual reports for the 2020-2024 period. These companies, that represent industries such as Hotels, Restaurants, and Leisure, contribute significantly to Sri Lanka's economy by bringing in generating revenue, creating employment, and enhancing citizens' quality of life.

3.3. Measurement of Variables

Financial Distress (FD) which is the dependant variable is measured using the Altman Z-score model (Altman, 1968), which is widely used to predict financial distress. Independent Variables (Board Governance Mechanisms) and the control variables are measured as mentioned below in table 1.

Table 1: Measurement of Variables

Variables	Measurement
Financial Distress	Altman z score $(1.2 * (\text{working capital} / \text{total assets}) + 1.4 * (\text{retained earnings} / \text{total assets}) + 3.3 * (\text{earnings before interest and tax} / \text{total assets}) + 0.6 * (\text{market value of equity} / \text{total liabilities}) + 1.0 * (\text{sales} / \text{total assets}))$
Board size	The number of members on the board
Board Independence	The proportion of independent directors
Board Diversity	-Female directors – No of female directors

	-Expertise – How many directors have masters degree or above qualification
CEO Duality	0 = Chairman and CEO roles are combined 1 = Chairman and CEO roles are separated
Number of Board Committees	The number of Board Committees
Number of Board Meetings	The number of Board Meetings
Firm Size	Total Assets
Leverage	Debt Ratio = Total Debt\Total Assets

Source: Compiled by Author

3.4. Model Specification

The study will employ a regression analysis to assess the impact of board governance mechanisms on financial distress. This approach works well for examining the relationship between several independent variables (board governance mechanisms) and the dependent variable (financial distress), while taking possible control variables into consideration.

Model Specification:

$$\text{Financial Distress} = \beta_0 + \beta_1(\text{BS}) + \beta_2(\text{BI}) + \beta_3(\text{FMD}) + \beta_4(\text{E}) + \beta_5(\text{CEO}) + \beta_6(\text{NBC}) + \beta_7(\text{NBM}) + \beta_8(\text{FS}) + \beta_9(\text{L}) + \beta_{10}(\text{ROA}) + \epsilon$$

3.5. Data Analysis Techniques

Data analysis is conducted using statistical software, employing a range of techniques to ensure robust and reliable results. Descriptive statistics are used to summarize the data distribution, while correlation analysis examines the relationships between variables. In addition, several diagnostic tests are performed to validate the model assumptions, including multicollinearity using the Variance Inflation Factor (VIF), autocorrelation using the Durbin–Watson test, and heteroscedasticity tests. Furthermore, panel regression analysis using the Estimated Generalized Least Squares (EGLS) method is applied to test the study hypotheses. Collectively, these techniques enhance the robustness and validity of the empirical findings.

3.6. Reliability and Validity

The study ensures reliability by using audited financial data from annual reports, which are subject to regulatory and professional verification. Construct validity is supported by adopting widely accepted measures such as the Altman Z-score for financial distress and standard proxies for governance variables used in prior studies (e.g., board size, independence). However, certain variables such as director experience rely on proxy measures, which may limit the precision of measurement.

3.7. Ethical Considerations

The study uses publicly available secondary data and does not involve human participants. Therefore, no ethical risks are involved. All data are used solely for academic purposes, and proper acknowledgment of sources is maintained.

4. Results & Discussion

4.1 Overview of Results

The empirical analysis reveals that board governance mechanisms significantly influence financial distress among consumer service firms listed on the Colombo Stock Exchange. The model demonstrates strong explanatory power ($R^2 = 0.749$), indicating that approximately 75% of the variation in financial distress is explained by the selected governance and control variables.

The findings provide mixed evidence regarding the effectiveness of different board governance mechanisms, highlighting the context-dependent nature of governance practices in emerging economies.

4.1. Descriptive Statistics

Table 2 shows the descriptive statistics for the key variables used in this study. These include measures of range (minimum and maximum values), dispersion (standard deviation), and central tendency (mean). The statistics draw attention to significant aspects of the sample's governance mechanisms and financial distress.

Table 2: Descriptive Statistics

Variables	Mean	Maximum	Minimum	Std. Dev.
Financial Distress	0.88880	3.49725	-0.73014	1.05968
Board Independence	0.41626	0.71429	0.16667	0.12129
Board Size	8.08649	12.00000	4.00000	1.79767
CEO Duality	0.24324	1.00000	0.00000	0.43021
Experience	2.16216	5.00000	0.00000	1.24485
Female Directors	0.12433	0.71429	0.00000	0.15442
No Board Committees	3.08108	5.00000	1.00000	0.75103
No Board Meetings	3.31892	7.00000	1.00000	1.14727
Leverage	0.39451	0.84254	0.01947	0.22062
ROA	-2.64608	13.82852	-22.26187	6.34470
Firm Size	9.84926	10.31452	9.38400	0.27081

Source: Compiled by Author

According to Table 2, the mean financial distress, measured by the Altman Z-Score, is 0.8888. A wide range of financial health is represented by this value, which ranges from a minimum of -0.7301, which indicates high distress, to a maximum of 3.4972, which indicates relatively stable firms. This value indicates moderate financial stability across the sample firms. With a standard deviation of 1.0597, the sector's financial health fluctuates, highlighting the range of financial difficulties companies face.

Also board independence shows an average of 41.63%, indicates that the inclusion of independent directors is moderate, though not highly prevalent, in the Sri Lankan consumer service sector. The maximum board independence is 71.43%, while the minimum is 16.67%, indicating variability across firms in adhering to governance practices. The average board size is 8 members, with a range from 4 to 12. CEO duality represents as a binary variable with a mean of 0.2432, meaning that while most firms in the sample combine the roles of CEO and board chairman, a practice more common in developing markets, 24% of firms in the sample separate these roles.

The average percentage of female directors on boards is 12.43 percent. However, some companies have no female directors at all, while others achieving a proportion as high as 71.43%. There is a limited but variable degree of gender diversity on the boards, as indicated by the standard deviation of 0.1544. The gender gap in corporate leadership positions, especially in traditional industries, is an international phenomenon that is consistent with this. The sample companies have an average of 3 board committees, with a range of 1 to 5. They also have approximately 3 board meetings a year, with a minimum of 1 and a maximum of 7.

Although these findings are consistent with standard governance procedures, some firms may not be actively engaging their boards, as indicated by the comparatively low frequency of meetings. Leverage fluctuates between 1.95% to 84.25%, with an average of 39.45% as determined by the debt-to-asset ratio. Because some businesses operate with limited leverage and others rely heavily on debt, this shows different levels of financial risk.

A crucial indicator of profitability, the return on assets (ROA), ranges widely from -22.26% to 13.83%, with an average of -2.6461%. Many of the companies in the sample face operational efficiency and profitability issues, as evidenced by the negative average ROA, and this reflects larger issues in the consumer service sector. Whenever firm size is calculated by total assets, the average value is 9.8493 with a narrow range, indicating that medium-sized companies comprise the majority of the sample.

4.2. Diagnostic Tests Analysis

4.2.1. Test of Multicollinearity

The results indicate that all VIF values are well below the commonly accepted threshold of 10, with most variables exhibiting VIF values close to 1. This suggests that there is no serious multicollinearity among the explanatory variables. Although some variables show relatively higher VIF values compared to others, they remain within acceptable limits, indicating only mild correlation that does not significantly affect the regression estimates. Therefore, it can be

concluded that multicollinearity is not a major concern in this study, and the estimated coefficients can be interpreted with a reasonable degree of confidence.

Table 3: Multicollinearity

Variables	Coefficient	Centered
	Variance	VIF
Board Independence	0.206962	1.175831
Board Size	0.000865	1.079051
CEO Duality	0.016058	1.147739
Experience	0.002184	1.306965
Female Directors	0.131206	1.208317
No Board Committees	0.005387	1.173483
No Board Meetings	2.63E-03	1.334393
Leverage	0.094045	1.767826
ROA	8.46E-05	1.314516
Firm Size	0.045879	1.299371

Source: Compiled by Author

4.2.2. Test of Auto Correlation

The Durbin-Watson statistic for this study is 1.6164, which is slightly less than 2. This suggests that the residuals have a slight degree of positive autocorrelation. This indicates the need for careful interpretation even though it does not represent an important violation of regression assumptions. When appropriately taken into consideration, moderate autocorrelation, such as that observed here, is common in panel data studies and usually does not compromise the validity of regression results.

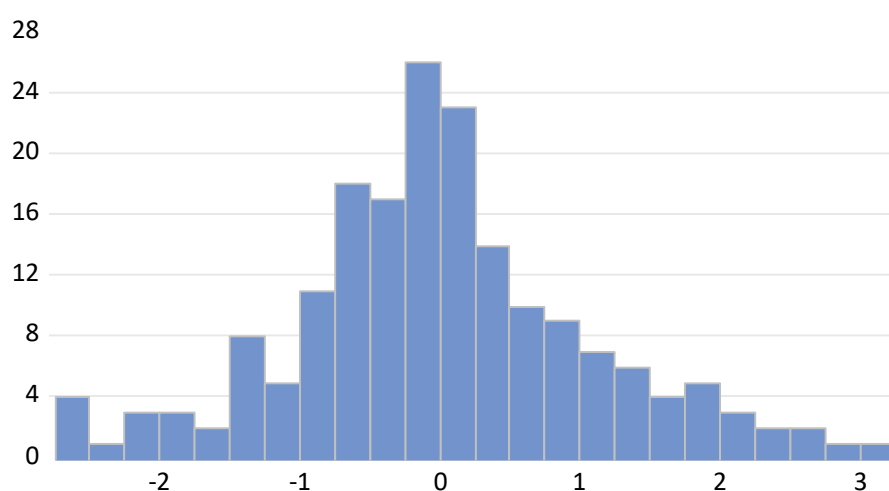


Figure 2: Normality Test

4.2.3. Test of Heteroscedasticity

The results show that the probability value of the likelihood ratio test is statistically significant (p-value = 0.0000), indicating the presence of heteroscedasticity in the model. This suggests that the variance of the residuals is not constant across observations. To address this issue, the study employs the Panel EGLS (Estimated Generalized Least Squares) method with cross-section weights. This technique corrects for heteroscedasticity and ensures more efficient and reliable parameter estimates.

Table 4: Heteroscedasticity Analysis

	Value	df	Probability
Likelihood ratio	222.4597	37	0.0000

Source: Compiled by Author

4.3. Regression Analysis

4.3.1 Panel EGLS (Cross-section Weights) Regression Results

Based on the model's R-squared value of 0.7492, the factors included in the model explain almost 75% of the variance in financial distress. This suggests a good fit for the data, highlighting the relevance of these governance mechanisms in addressing financial distress.

The findings show that board size has a positive and significant impact on financial distress with a p-value below 0.05 (0.000) and a strong t-statistic (9.318947). This finding may reflect inefficiencies in decision-making processes within larger boards, as they are often associated with slower responses to financial challenges. Furthermore, there is a strong positive correlation between CEO duality and financial distress, indicating that having too much power in one person may make oversight more difficult and raise risks for companies. Another factor that significantly and positively affects financial distress is the presence of female directors, with a coefficient of 1.336 and a highly significant p-value of 0.000.

On the other hand, leverage shows a significant negative effect on financial distress, with a coefficient of -1.092 and a p-value of 0.000. The analysis emphasizes the significance of effective financial management via indicating that companies with lower debt levels have greater ability to reduce financial risks. Additionally, there is a negative correlation between the frequency of board meetings and financial distress (coefficient of -0.147, p-value of 0.0002), highlighting the need for consistent and active governance engagement in maintaining financial stability. However, board independence and experience are not statistically significant in this context, as indicated by their respective p-values of 0.384 and 0.684. This data suggests that other factors in the Sri Lankan consumer service sector may have a greater or smaller direct impact on financial distress than these board governance characteristics.

Table 5: Regression Output Summary

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Board Independence	-0.27078	0.31046	-0.87217	0.38430
Board Size	0.20617	0.02212	9.31895	0.00000
CEO Duality	0.25200	0.08501	2.96421	0.00350
Experience	-0.01577	0.03869	-0.40762	0.68410
Female Directors	1.33568	0.31132	4.29035	0.00000
No. of Board Committees	0.15941	0.07046	2.26249	0.02490
No. of Board Meetings	-0.14650	0.03812	-3.84280	0.00020
Leverage	-1.09241	0.22924	-4.76536	0.00000
Firm Size	0.10838	0.19218	0.56398	0.57350
ROA	0.04885	0.00771	6.33942	0.00000
C	-1.33874	1.96251	-0.68216	0.49600

R square = 0.749217 F-Value (P-Value) = 51.98280 (0.0000)

Durbin Watson Stat = 1.6510

Source: Compiled by Author

4.4. Hypothesis Testing

Table 6: Hypothesis Testing for Individual Corporate Governance Mechanisms

Hypothesis	C Value	T-Statistic (P-Value)	Hypothesis Accepted/Rejected
<i>H1a: Board Independence has a significant impact on financial distress.</i>	-0.27078	-0.872170 (0.3843)	Rejected

H1b: Board Size has a significant impact on financial distress.	0.20617	9.318947 (0.0000)	Accepted
H1c: CEO Duality has a significant impact on financial distress.	0.25200	2.964207 (0.0035)	Accepted
H1d: Experience has a significant impact on financial distress.	-0.01577	-0.407622 (0.6841)	Rejected
H1e: Female Directors have a significant impact on financial distress.	1.33568	4.290354 (0.0000)	Accepted
H1f: Number of Board Committees has a significant impact on financial distress.	0.15941	2.262486 (0.0249)	Accepted
H1g: Number of Board Meetings has a significant impact on financial distress.	-0.14650	-3.842803 (0.0002)	Accepted

Source: Compiled by Author

According to the analysis, financial distress is not significantly predicted by board independence ($C = -0.270775$, $p = 0.3843$). However, research indicates that board independence improves oversight and lowers the probability of distress (Porath, 2023). However, cultural and regulatory differences or restrictions in the practical authority of independent directors may be the cause of this outcome in Sri Lanka's consumer service industry. On the other hand, financial distress is positively and statistically significantly correlated with board size ($C = 0.206170$, $p < 0$).

According to previous studies, larger boards may increase the variety of decision-making (R. Adams & Ferreira, 2008). Based to this study, the importance of board size is probably due to its function in offering comprehensive supervision in complex organizational environments. CEO duality reflects a significant positive impact ($C = 0.251997$, $p < 0.01$), that implies that combining the CEO and chairman roles could centralize authority, reducing conflict and encouraging decisive action during distress. This result is consistent with earlier studies that showed the way role consolidation can increase efficiency (Voinea C, Rauf F & Fratostiteanu 2022).

Experience is not statistically significant ($C = -0.015771$, $p = 0.6841$), so it is opposite to expectations. This could suggest that board members' experience is not enough to mitigate financial distress. This relationship gets moderated by variables such as market conditions and industry-specific experience. Having female directors has a significant positive effect on reducing financial distress ($C = 1.335676$, $p < 0.01$). This corroborates previous research that suggests gender diversity promotes creative thinking and improved supervision (Perera M, Prasad P & Semage N, 2023).

The number of board committees is positively significant ($C = 0.159414$, $p < 0.05$), highlighting the importance of specialized governance mechanisms in addressing financial challenges. This result is consistent with governance literature that highlights the function of committees in distributing oversight responsibilities. A substantial negative correlation between the number of board meetings and financial distress is observed ($C = -0.146500$, $p < 0.01$). According to earlier research findings, regular meetings probably enhance monitoring and responsiveness to emerging financial risks (Vafeas & Vlittis, 2024).

To ensure that the hypothesis is supported by a clear and statistically validated majority of the governance variables examined, the majority rule is adopted, offering a strong framework for hypothesis testing. Based on the majority rule, the hypothesis that "Board governance mechanisms have a significant impact on financial distress" is accepted.

4.5. Discussion and Findings

The findings show a positive and significant correlation between board size and financial distress (coefficient = 0.206, $p < 0.01$), indicating that in Sri Lankan consumer service companies, financial distress rises in line with board size. The findings of this study imply that although larger boards are frequently linked to a wider range of perspectives, skills, and expertise, these advantages might not always translate into reduced financial distress. Instead, larger boards may introduce inefficiencies, delays in decision-making, and weaker accountability, leading to poor financial outcomes.

However, the results of this study show that there is no statistically significant relationship between board independence and financial distress (coefficient: -0.271; t-statistic: -0.87; p-value: 0.384).

In this study, CEO duality demonstrates a statistically significant positive impact on financial distress (coefficient: 0.252; t-statistic: 2.96; p-value: 0.003). This finding supports the argument that separating the chairman and CEO positions improves governance effectiveness by reducing conflicts of interest and ensuring more objectivity in board decisions.

There is a statistically significant positive effect of having female directors on increasing financial distress, and this is in line with previous research (coefficient: 1.336; t-statistic: 4.29; p-value: <0.001). According to this research, in Sri Lanka's consumer service industry, the finding that more female directors are linked to increased financial distress may seem inconvenient, given that prior research frequently indicates that gender diversity improves decision-making and lowers financial distress (Carter et al., 2023; Terjesen et al., 2024).

In this study, experience is measured by the number of directors holding a master's degree or higher qualification, regardless of whether the degree is directly related to the specific industry. Experience has no statistically significant effect on financial distress, according to the regression results (coefficient: -0.015771 ; t-statistic: -0.407622; p-value: 0.6841). The limitations of using educational attainment alone to measure experience may be the cause of this finding. Educational qualifications do not always translate into relevant professional expertise, particularly in industries that demand sector-specific knowledge, as Adams et al. (2023) point out.

In this case, having a master's degree may not ensure familiarity with the operational difficulties or financial complexities of the Sri Lankan consumer service sector. Although directors with advanced degrees may be technically or managerially knowledgeable, their ability to mitigate financial distress may be limited by their lack of industry-specific experience. Petra and Mikail (2024) point out that directors' direct exposure to the industry has a significant impact on governance outcomes and that the value of experience varies depending on the context.

This study finds that the number of board meetings has a statistically significant negative impact on financial distress (p-value: <0.001, t-statistic: -3.84, coefficient: -0.147). Also this research implies that more frequent board meetings may not always translate in improved governance, especially in the consumer service sector in Sri Lanka. Reactive governance may be indicated by excessive meetings, where boards meet regularly to handle ongoing crises instead of taking a proactive approach.

According to the study, the number of board committees has a positive and significant impact on financial distress, suggesting that more board committees could lead to more financial distress in the consumer service sector in Sri Lanka.

4.6. Synthesis and Contribution to Literature

Overall, the findings highlight that board governance mechanisms do not operate uniformly, and their effectiveness depends on institutional and organizational contexts. This study makes several important contributions to the literature. First, it offers valuable contextual insight by providing empirical evidence from Sri Lanka, an under-researched emerging market, demonstrating that corporate governance mechanisms may operate differently compared to those in developed economies. Second, it contributes to conceptual clarity by focusing on financial distress rather than corporate failure, thereby shedding light on early-stage financial deterioration and addressing a notable gap in prior research. Third, from a theoretical perspective, the findings largely support Agency Theory particularly with regard to board size, CEO duality, and board activity while offering limited support for Resource Dependence and Stewardship theories within this context. Finally, the study highlights important practical implications, suggesting that enhancing governance quality requires not only the adoption of formal structures but also their effective implementation in practice.

5. Conclusion

This study examined the impact of board governance mechanisms on financial distress in the consumer services sector of Sri Lanka using panel data from listed firms. Rather than simply identifying individual relationships, the findings collectively highlight that the effectiveness of board governance mechanisms is highly context-dependent and cannot be generalized across all institutional settings. The study also attempted to fill the gap in the literature on how corporate governance affects financial difficulties, especially when considering Sri Lanka, a developing economy with unique regulations, cultural, and economic characteristics.

The majority of the data was gathered through annual reports, and the connection between board governance practices and financial difficulty were found using regression analysis. A key insight emerging from the study is that governance structures designed to enhance

oversight may not always function as intended in emerging markets. The results suggest that certain mechanisms such as larger board size, CEO duality, and increased board committees may be associated with higher financial distress, potentially due to coordination inefficiencies, concentration of power, and structural complexity. In contrast, active governance practices, particularly frequent board meetings, appear to play a more effective role in mitigating financial distress by improving monitoring and responsiveness.

Importantly, the study also reveals that commonly emphasized governance attributes, such as board independence and director expertise, may not significantly influence financial distress in this context. This finding underscores the limitation of adopting formal governance structures without considering their actual effectiveness within specific institutional environments.

Overall, the study contributes to the literature by shifting the focus from corporate failure to financial distress as an early warning indicator, providing more nuanced insights into how governance mechanisms influence firm stability. It also demonstrates that governance effectiveness depends not only on structural characteristics but also on how these mechanisms operate in practice.

5.1. Theoretical Implications

This study makes several important theoretical contributions. First, it provides empirical support for Agency Theory, particularly in explaining how governance inefficiencies such as excessive board size and CEO duality can increase financial risk due to weaker monitoring and control.

Second, the findings offer limited support for Resource Dependence Theory, suggesting that while board diversity and size are expected to enhance resource access, their benefits may not materialize in contexts where coordination challenges dominate.

Third, the study challenges the universal applicability of Stewardship Theory, as unified leadership structures (CEO duality) appear to increase rather than reduce financial distress in this setting.

By integrating these perspectives, the study highlights the need for a context-sensitive approach to corporate governance, particularly in emerging economies where institutional and cultural factors shape governance effectiveness.

5.2. Practical Implications

This study offers critical insights into the impact of board governance mechanisms on financial distress in the Sri Lankan consumer service sector, contributing to the understanding of how specific governance practices influence a company's ability to navigate financial challenges.

However, managers should understand that according to the study, although board committees are crucial for supervision, an excessive number of committees might actually make financial difficulties worse. It implies that committee efficacy should be valued more highly than committee size. Committees with distinct tasks that help improve decision-making and prevent inefficiencies should be the main emphasis of managers.

Investors and shareholders can learn important lessons about the board governance systems of companies that they invest. Although theoretically significant, the study discovered that board independence does not always translate into improved financial results in Sri Lanka's consumer service industry, especially in family-owned enterprises where family members frequently make all of the decisions. The study also highlights the beneficial effects of gender diversity on financial performance. Given their capacity to give a variety of viewpoints, female directors have been shown to make a substantial contribution to enhancing governance and reducing financial distress. Because it has been demonstrated that this improves decision-making and promotes long-term sustainability, investors and shareholders should push businesses to diversify their boards, particularly with regard to gender.

5.3. Limitations of the Study

A notable constraint of this research is its concentration on a sample of only 37 businesses, all of which are listed on the Colombo Stock Exchange (CSE) and are involved in the hotel and consumer services industries. This provides a narrow perspective on a significant area of the Sri Lankan economy, but it limits the findings' applicability to other sectors like manufacturing, technology, or retail. With its unique operational dynamics, the consumer service industry, especially the hospitality sector is very vulnerable to outside shocks like downturns in tourism or changes in the economy.

One significant drawback of this study was the methodology used to measure directors' experience. A simple measure for determining whether directors have a master's degree or other advanced degree was employed in this study. This method does not take into consideration the director's real expertise managing the financial complexity of that specific industry or the educational background's relevance to the company's sector. When it comes to financial decision-making, for instance, a director with a degree in an area that isn't relevant (such as engineering or veterinary science) might not be as valuable as one with an MBA or a background in finance. More specific measurements of experience, including the period of time a director worked on boards in relevant businesses or their prior leadership responsibilities during financial crises, could be included in future research to improve this.

Another limitation of the study is its dependence on secondary data, especially annual reports. One significant issue is the lack of qualitative insights. Conducting case studies or interviewing with board members and senior executives could help future study better understand the context of decision-making.

5.4. Recommendations for Future Research

Expanding the scope of this study to encompass a wider variety of industries beyond the hospitality and consumer services sectors would be a logical next step. Different board governance dynamics may be offered by industries such as manufacturing, retail, or even technology, particularly considering shifting industry-specific possibilities and constraints.

This research only included directors with a master's degree or above when measuring experience. Examining both official credentials and real-world experience in the field could be a more thorough strategy. The use of a composite index that considers the period of time

directors has been on boards in relevant industries, their involvement in financial decision-making, and their experience handling corporate crises should be explored in future studies.

Future research might concentrate on the effects of family control on governance effectiveness, as many Sri Lankan businesses, particularly those in the consumer services industry, are family owned. This study identified related-party transactions, board independence, and CEO duality as important elements that may be studied in relation to family-owned businesses. Gaining understanding into how family dynamics and governance interact may be helpful for businesses looking to strengthen governance frameworks while preserving family control.

The Altman Z-score, which focuses on financial variables, was the main tool used in this study to quantify financial distress. To give a more complete picture of a company's financial health, future studies could incorporate more or other signs of financial hardship, such as operational cash flow analysis, liquidity ratios, or profitability ratios.

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**THE IMPACT OF DESPOTIC LEADERSHIP STYLE ON INNOVATIVE WORK
BEHAVIOR OF OFFICE STAFF IN PUBLIC BANKS IN AMPARA DISTRICT: A
MEDIATING ROLE OF EMOTIONAL EXHAUSTION**

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Abstract

Purpose: Innovative work behavior is essential for improving effectiveness and service quality in public sector organizations. However, despotic leadership practices may undermine employees' psychological resources and inhibit innovation. Drawing on the Job Demands Resources (JD-R) Model, Conservation of Resources (COR) Theory, and Social Exchange Theory, this study examines the impact of despotic leadership style on innovative work behavior of office staff in public banks in the Ampara District of Sri Lanka, with emotional exhaustion acting as a mediating variable.

Design/methodology/approach: A quantitative research design based on the positivist philosophy was adopted, using a deductive approach and survey strategy. Data were collected from 155 office staff members employed in selected public banks using a self-administered online questionnaire. Established measurement scales were used to assess despotic leadership, emotional exhaustion, and innovative work behavior. Data analysis was conducted using SPSS version 23.0, incorporating descriptive statistics, reliability, validity tests, correlation analysis, regression analysis, and mediation analysis using the PROCESS macro were employed to examine direct and indirect relationships among the study variables.

Findings: The study offers theoretical contributions by integrating three established frameworks and practical implications for leadership development in the under-researched South Asian public banking sector. The study contributes to theory by combining three complementary frameworks to explain how despotic leadership impairs innovation, offering a more holistic understanding than past studies that typically rely on a single theoretical lens.

Research limitations/implications: Practically, the findings are expected to provide valuable insights for leadership development, employee well-being interventions, and organizational policy formation in Sri Lanka's public banking sector a setting where such research remains limited.

Originality/value: The study emphasizes the importance of adopting ethical, empowering, and supportive leadership practices to enhance psychological resourcefulness and foster a culture of innovation within public sector institutions.

Keywords: Despotic Leadership; Emotional Exhaustion; Innovative Work Behavior; Public Banks; Sri Lanka

1. Introduction

Innovative work behavior (IWB) has become a critical driver of organizational success in an increasingly competitive and dynamic business environment. Organizations today rely heavily on employees who can generate, promote, and implement new ideas that improve processes, services, and overall organizational performance. Innovative work behavior refers to the intentional generation, development, and realization of new ideas within a work role, group, or organization to enhance effectiveness and adaptability. Such behaviors are particularly important in service-oriented sectors such as banking, where innovation can significantly improve operational efficiency, service delivery, and customer satisfaction.

In the public banking sector, encouraging employees to engage in innovative work behavior is especially important because these institutions often operate within highly structured and bureaucratic environments. Employees' ability to introduce new ideas, improve service processes, and contribute to organizational development is essential for maintaining competitiveness and sustainability. However, organizational innovation does not occur automatically; it is strongly influenced by leadership behavior and workplace conditions. Leadership plays a central role in shaping employees' psychological states, motivation, and willingness to engage in creative and proactive behaviors.

1.1. Problem statement

What is the nexus between despotic leadership style, innovative work behavior and emotional exhaustion of office staff in Public Banks in Ampara District?

1.2. Research questions

Based on the above research problem, the research questions can be linked as follows.

1.2.1. Primary research question

1. What is the impact of despotic leadership style on innovative work behavior of office staff in Public Banks in Ampara district?

1.2.2. Secondary research questions

1. What is the impact of despotic leadership style on emotional exhaustion of office staff in Public Banks in Ampara district?
2. What is the impact of emotional exhaustion on innovative work behavior of office staff in Public Banks in Ampara district?
3. Does emotional exhaustion mediate the relationship between despotic leadership style and innovative work behavior of office staff in Public Banks in Ampara district?

1.3. Research objectives

1.3.1. Primary objective

1. To identify the impact of Despotic Leadership style on innovative work behavior of office staff in Public Banks in Ampara district.

1.3.2. Secondary objectives

- 1.0 To identify the impact of Despotic Leadership style on emotional exhaustion of office staff in Public Banks in Ampara district.

2.0 To identify the impact emotional exhaustion on innovative work behavior of office staff in Public Banks in Ampara district.

3.0 To examine the mediating effect of emotional exhaustion on the relationship between despotic leadership style and innovative work behavior of office staff in Public Banks in Ampara district.

2. Literature review

2.1 Innovative work behavior

According to Ren & Zhang (2015), “workplace innovations mean introducing something new or advancing the existing concept that is crucial for the innovation of organizational process, methods, and products. Similarly, organizations identify those elements that enhance employees’ innovative behavior” (Janssen, 2004). (Ahmad et al., 2021)

According to Rahman, Osman-Gani, Momen, & Islam, (2015), Innovative work behavior consists of three stages idea generation, idea development, and idea realization. Generating ideas means that employees come up with new ideas, and promoting ideas means finding supporters and working to achieve those ideas (Ranasinghe & Samarasinghe, 2019). IB characteristics were described as going beyond their job descriptions or responsibilities. They also argued that IB relied on their understanding of their exchange relationships (Abdullah, et al, 2019). An employee's IWB means going beyond the scope of basic job requirements and responsibilities. It involves initiating, realizing, and commercializing innovative and creative ideas and solutions that are useful for innovative work behavior (Afsar & Bibi, 2018).

2.2 Despotic leadership style

Despotic leadership is defined as poor leadership conduct that contradicts the legitimate interests of the company and undermines subordinate motivation and well-being. Despotic leadership in other words refers to the leadership which has very little regard for others and do not behave in a socially constructive way. This type of leadership is exploitative in nature and is not absorbing but the main focus of such kind of leadership is on self-interest of leader. Despotic leadership does not care about employee’s needs but they only focus on building themselves and maintaining their position and power just for the sake of their own interest. (Tufail & Zafar, 2021)

Despotic leadership behaviors are fixated on attainment of supremacy, dominance, and are driven by self-interest. Such leaders always put their interests before everybody else and are manipulative, bossy, unforgiving, and arrogant (Howell & Avolio, 1992). (Raza et al., 2024)

Aronson (2001, p. 252) referred the despotic leadership as “leaders who distort the mission and goals of the organization and abuse resources by using them to further their own interests. These leaders may secure the acquiescence of subordinates by threatening to and actually employing manifest force”. De Hoogh and Den Hartog (2008) defined “despotic leadership as a tendency to engage in authoritarian and dominant behavior in pursuit of self-interest, self-aggrandizement, and exploitation of their subordinates and resources.” (DAHRI, August 2019)

2.3 Emotional exhaustion

According to Chen and Wang (2019), “emotional exhaustion is the drained-out physical and emotional condition of an individual because of negative life events, work-life imbalance or unlawful top management, excessive organizational work demand, and job stress.” (Saeed et al., 2022)

“Emotional exhaustion refers to the condition in which employees feel physical and enthusiastic consumption which results in unnecessary work, individual requests and steady pressure. Emotional exhaustion can be felt through sensation of being mentally work out and fatigued because of stain from professional work overload. Here is mandatory to discuss that fatigue flags the beginning of physical or mental breakdown of an employee. Emotional exhaustion means an ongoing physical and enthusiastic consumption those results from unnecessary work, individual requests, and steady pressure. It tends to be brought about by one's exorbitant work, which prompts a feeling of emotional and psychological exhaustion and actual depletion experienced by sincerely drained workers” (Lim, Kian Yeik and Chong, 2021). (Tufail & Zafar, 2021) Moore (2000, p. 336) described the emotional exhaustion as “depletion of emotional and mental energy needed to meet job demands”. Maslach, Schaufeli, and Leiter (2001), “emotional exhaustion refers to feeling depleted and drained by the emotional demands of the work” (p. 399). Following Maslach and colleagues in this study, they describe that emotional exhaustion arrives when emotional demands exceed what an individual can afford during an interpersonal interaction at work. (DAHRI, August 2019)

2.4 Theoretical gap

Figure 1 discloses that most (16) studies out of 45 have used the COR as their anchor theory in examining the nexus between Despotic Leadership and Innovative work behavior. Moreover, only four studies have been used out of 45, both the COR with the SET on Despotic Leadership and Emotional Exhaustion. Finally, only four studies have used the COR and JD-R Model on the nexus between Emotional Exhaustion and Innovative work behavior. An integrated theoretical framework that connects these three perspectives remains missing in the literature. Existing studies treat COR, SET, and JD-R in isolation, failing to capture the complex psychological chain through which despotic leadership erodes innovation capacity. This study fills this void by combining COR, SET, and JD-R models to offer a holistic view of how despotic leadership depletes resources (COR), damages leader-employee exchange (SET), and triggers emotional exhaustion that ultimately reduces innovative work behaviors (JD-R).

Although previous studies have examined destructive leadership and employee outcomes, limited research has explored how despotic leadership influences innovative work behavior through psychological mechanisms such as emotional exhaustion. Moreover, empirical evidence from the public banking sector in developing countries, particularly Sri Lanka, remains scarce. Therefore, this study addresses this gap by examining the mediating role of emotional exhaustion in the relationship between despotic leadership and innovative work behavior among employees in public banks.

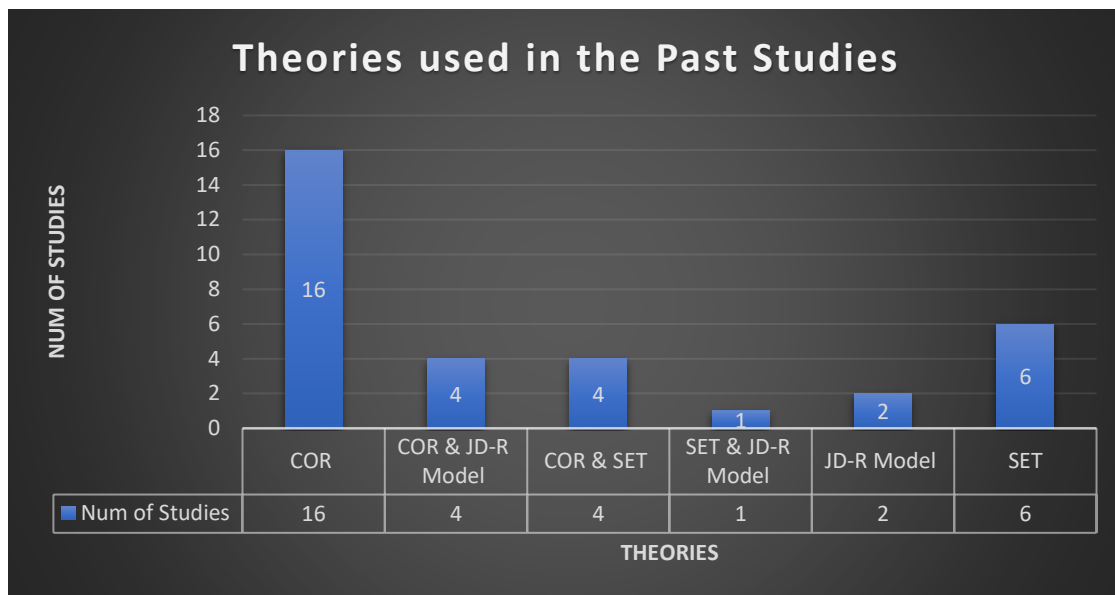


Figure 1: Theories used in the past studies

2.5 Article selection for the review

The study conducted a Systematic Literature Review (SLR) using Munez and Cohen's (2017) five-stage method. First, relevant keywords were identified to define the topic. Next, peer-reviewed articles from six databases (Taylor & Francis, Emerald, Springer, Wiley, Elsevier, Sage) published between 2015 and 2025 were selected. Using the PRISMA approach, articles were screened, excluding non-English papers, book chapters, and conference papers. After a thorough review, 45 English-language journal articles were retained for analysis.

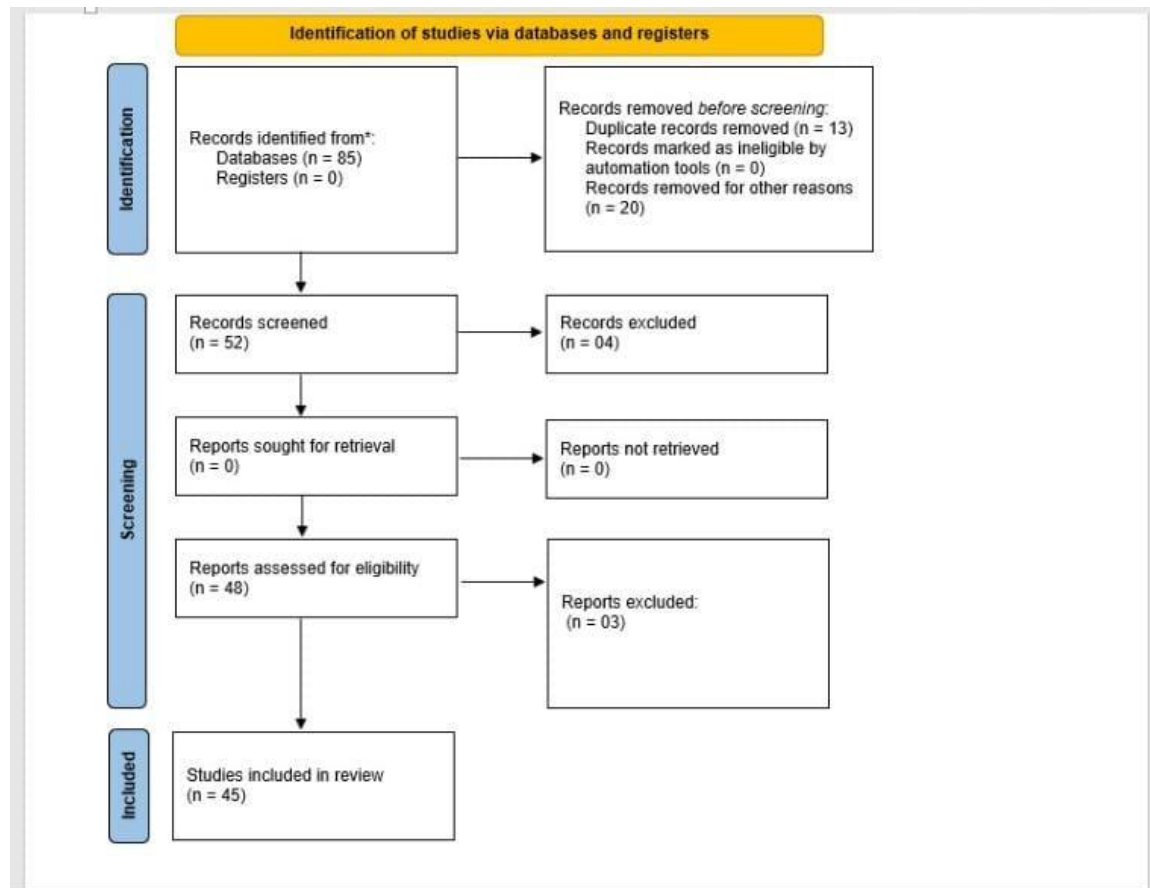


Figure 2: Flow Diagram Prisma

Article Characteristics - The chart shows the distribution of review articles by publisher out of 45 articles analyzed. Emerald published the highest share (11 articles, 24%), followed by Springer (5 articles, 11%) and Elsevier (4 articles, 9%). Frontiers Media SA and the Academy of IRMBR each contributed three articles (7% each), while MDPI AG had two (4%). A significant portion (19 articles, 42%) came from other publishers, indicating a broad spread beyond the primary identified sources.

2.6 Hypothesis development

The SLR and the narrative review are used to identify the themes of the endogenous variable (IWR) antecedents to formulate the study's hypotheses. The SLR is recommended by methodological and entrepreneurship literature since it helps to ensure methodical, transparent, and replicable findings in formulating hypotheses (Linan & Fayolle 2015). The hypotheses of this study are developed considering the articles published between 2015 and 2025 in well-known databases (Research Gate Taylor & Francis, Emerald, Wiley Online Library and Sage). The following themes related to Innovative Work Behavior are discovered after conducting a narrative review and the SLR in this study.

2.6.1 Themes and clusters

This section targets the first objective: identifying key research themes on despotic leadership, emotional exhaustion, and innovative work behavior using VOS viewer. The terms appearing at least five times were mapped in abstract terms, with connections and color-coded clusters

showing thematic relationships. The visualization shows three primary clusters, each representing a significant theme in the literature.

Cluster 1 – Red – Innovative Work Behavior (IWB) - This cluster focuses on aspects like leadership, organizational justice, empowerment, work engagement, and self-efficacy, which are important in improving employees' ability and willingness to create and implement new ideas, while also taking into consideration the fact that stress and resource depletion can be major inhibitors of innovative work behavior.

Cluster 2 – Green – Despotic Leadership & Emotional Exhaustion This cluster covers despotic leadership, emotional exhaustion, job satisfaction, turnover intention, and counterproductive behavior, showing how authoritarian and exploitative leadership increases stress and burnout, reducing creativity and innovation. It connects to workplace incivility and conservation of resources theory in explaining these adverse workplace outcomes.

Cluster 3 – Blue – Theoretical and Contextual Links - This cluster links conservation of resources theory with workplace incivility, showing how despotic leadership depletes employees' psychological and social resources. This resource loss triggers defensive withdrawal, harming well-being and reducing innovative work behavior, as employees struggle to meet job demands under hostile leadership conditions.

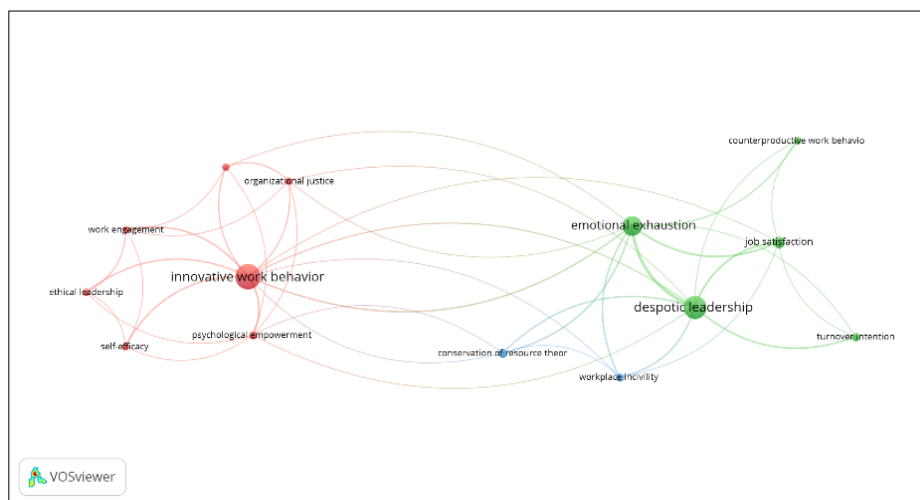


Figure 3: VOS viewer

2.6.2 Despotic leadership on innovative work behavior

Despotic leaders often prioritize personal interests and exercise excessive control over subordinates, which reduces employees' autonomy and psychological safety. According to Conservation of Resources Theory, such leadership behaviors threaten employees' valuable psychological resources, including motivation and creativity. When employees experience resource loss, they become less willing to invest effort in innovative activities. Therefore, despotic leadership is likely to reduce innovative work behavior among employees. (Ahmad et al., 2021)

H1. Despotic leadership style has a significant negative impact on innovative work behavior of office staff in public banks in the Ampara District.

2.6.3 Despotic leadership on emotional exhaustion

Despotic leadership often creates a stressful and psychologically demanding work environment. Employees who experience constant pressure, unfair treatment, or lack of support from their leaders may feel emotionally drained and mentally fatigued. Emotional exhaustion refers to the feeling of being emotionally overextended due to excessive job stress and demands. Since despotic leaders tend to impose strict control and create negative workplace interactions, employees working under such leadership are more likely to experience higher levels of emotional exhaustion. (Raza et al., 2024)

H2. Despotic leadership style has a significant positive impact on emotional exhaustion of office staff in public banks in the Ampara District.

2.6.4 Emotional exhaustion on innovative work behavior

Innovative work behavior requires creativity, energy, and cognitive effort. Employees who experience emotional exhaustion often feel mentally fatigued and lack the motivation necessary to engage in creative or proactive activities. When employees are emotionally exhausted, they tend to conserve their remaining energy by focusing only on basic job tasks rather than participating in extra-role behaviors such as idea generation or implementation. Therefore, emotional exhaustion is expected to negatively influence innovative work behavior. (Saputra & Rozyanti, 2022)

H3. Emotional exhaustion has a significant negative impact on innovative work behavior of office staff in public banks in the Ampara District.

2.6.5 Mediating role of emotional exhaustion

Despotic leadership can indirectly influence innovative work behavior through emotional exhaustion. When employees are exposed to authoritarian and exploitative leadership behaviors, they may experience increased stress and emotional strain. This emotional exhaustion can reduce their motivation and psychological capacity to engage in innovative activities. Thus, emotional exhaustion acts as a mediating mechanism that explains how despotic leadership ultimately reduces employees' innovative work behavior. (KOCH & ADLER, 2018)

H4. Emotional exhaustion mediates the relationship between despotic leadership style and innovative work behavior of office staff in public banks in the Ampara District.

2.7 Conceptual framework

The framework illustrates how Despotic Leadership Style (DLS) influences Innovative Work Behavior (IWB) among office staff in public banks, with Emotional Exhaustion.

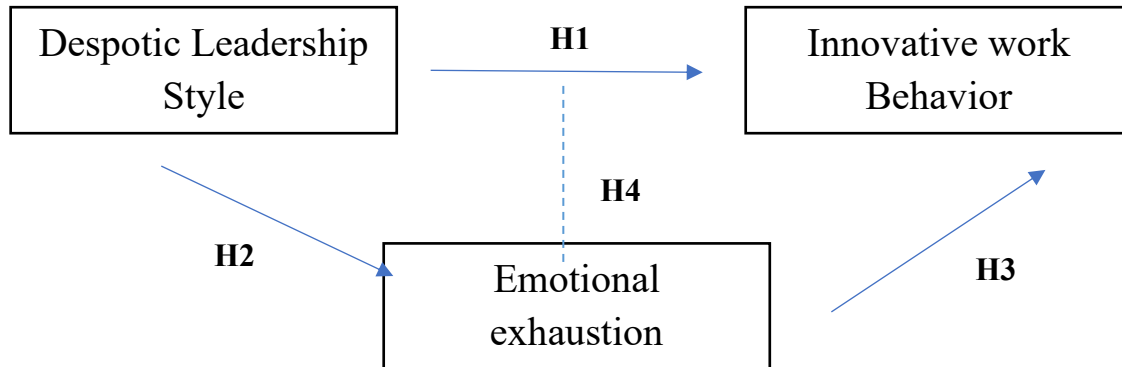


Figure 4: Conceptual Framework

3. Methodology

This study adopts a quantitative research design under the positivist philosophy, as it focuses on measurable variables and statistical analysis. A deductive approach was used to test hypotheses developed from existing theories, including the Job Demands Resources (JD-R) Model, Conservation of Resources (COR) Theory, and Social Exchange Theory. A cross-sectional survey strategy was employed. The population consisted of 260 office staff members working in public banks (BOC, People's Bank, NSB, and RDB) in the Ampara District.

3.1. Population

The population for this study includes 260 office staff who are employed in public banks within the Ampara District of Sri Lanka. These employees are very important in ensuring that banking activities are carried out effectively. Their performance is closely affected by leadership behaviors, working environment, and psychological well-being, making them the best subjects to study the relationship between despotic leadership, emotional exhaustion, and innovative work behavior.

3.2. Sample

The sample size for the study was established using the Krejcie and Morgan (1970) sample size determination table, which defines the number of samples required at a confidence level of 95% with a margin of error of 5%. For a population of 260 office staff in public banks within the Ampara District, the table recommends a sample size of 155 respondents. Therefore, the study has been conducted using 155 office staff from different branches of public banks within the Ampara District. By using a representative sample from the population, the research has enhanced its validity. According to the Krejcie and Morgan (1970) table, the required sample size for a population of 260 employees is 155. However, 170 usable responses were collected and used for the final analysis.

Table 1: Sample Size Determination

Population Size (N)	Sample Size (S)
250	152
260	155
270	159
280	162
290	165

Source: Krejcie & Morgan (1970)

3.3. Sampling technique – cluster sampling

Cluster sampling was selected because employees were geographically distributed across multiple bank branches within the Ampara District. Each branch represented a cluster, and respondents were selected from these clusters to ensure representation of different public banks operating under similar organizational policies and leadership structures. Cluster sampling was employed in this study because the office staff working in public bank branches in the Ampara District are distributed across 15 geographically dispersed branches of four public banks: Regional Development Bank (RDB), People's Bank, Bank of Ceylon (BOC), and National Savings Bank (NSB). While each branch varies internally in terms of staff roles and experiences, they are externally homogeneous because all branches operate under similar policies, hierarchical structures, and leadership frameworks within Sri Lanka's public banking sector.

3.4. Data collection instrument - a self-administered online questionnaire

The final version of the questionnaire was prepared in English (as in the original measures) and structured on a five-point Likert scale and seven-point Likert scale, ranging from strong disagreement to strong agreement. A self-administered online questionnaire was selected as the most appropriate data collection instrument, since the respondent's office staff working in public banks possess sufficient computer literacy and regularly engage with digital platforms in their workplace. Data were analyzed using SPSS (Version 23) for descriptive statistics and preliminary analysis, and SmartPLS (Version 4) for measurement model and structural model evaluation. Reliability, validity, and hypothesis testing were conducted using PLS-SEM techniques.

3.5. Measures

Innovative work behavior was measured through nine questions in the leader questionnaire, divided into three subscales: idea generation, idea promotion, and idea realization. The utilized scale, tailored to our dyadic approach, is an adapted version based on research by Van der Vegt and Janssen (2003) on innovative work behavior. Sample items include: "Creating new ideas for improvements" for idea generation, "Exciting key people in his/her work about innovative ideas" for idea promotion, and "Implementation of innovative ideas in his/her work" for idea realization were used. Participants responded using a 7-point Likert scale, ranging from 1

(never) to 7 (always), with higher scores indicating more innovative work behavior from the employee. The high reliability of the scale is indicated by the Cronbach's alpha of $\alpha = .95$. (Dora Katharina Yue, 2024)

The working definition of the Despotism leadership style of this study is "Despotism leadership is characterized by authoritarian, exploitative, and self-serving behaviors where leaders prioritize personal interests over subordinates' well-being" (De Hoogh & Den Hartog, 2008). For despotism leadership (independent variable), a measurement scale generated by De Hoogh and Den Hartog (2008) is used. There was a total of six items on this scale, which were measured with the help of 5 points Likert scale from "1=strongly disagrees" to "5=strongly agree". The same scale is used by Naseer et al., (2016), having an alpha value of 0.92. The sample items included in scales are, "My supervisor tends to be unwilling to relinquish control of projects" and "My supervisor expects unquestioning obedience from subordinates." (Shahid Mehmood, Riffut Jabeen, Muhammad Asif khan, Mohammed Arshad Khan, Beata Gavurova, Judit Olah, 2023)

The working definition of Emotional Exhaustion this study is "Emotional exhaustion refers to feelings of being emotionally overextended and depleted of emotional resources due to work" (Maslach & Jackson, 1981). For the mediator of the current study, a nine-item scale is taken from an earlier study of Maslach and Jackson (1981). The same scale is used by Medler-Liraz and Seger Guttmann (2018) having an alpha reliability of 0.9. The response for emotional exhaustion measure is recorded on a seven-item scale i.e. ("1= never, 2= rarely, 3= occasionally, 4=sometimes, 5= frequently, 6=usually, 7= every time"). The sample items for this scale are "I feel used up at the end of the workday" and "I feel emotionally drained from my work." (Muhammad Tufail and Hamza Zafar , 2021)

4. Data presentation and analyses

4.1. Sample description

The demographic profile of the 170-office staff in public banks in the Ampara District shows a balanced and diverse sample. Most respondents were from Bank of Ceylon (36.5%) and People's Bank (34.1%). Gender distribution is nearly equal (47.6% male, 52.4% female). Overall, the sample is diverse and suitable for examining the study variables.

Table 2: Sample Composition (N=170)

		Frequency	Percent (%)
Bank	BOC	52	36.5
	Peoples Bank	58	34.1
	NSB	30	17.6
	RDB	30	17.6
Gender	Male	81	47.6
	Female	89	52.4

Age	18-24	36	21.2
	25-29	44	25.9
	30-34	39	22.9
	35-39	19	11.2
	40-44	12	7.1
	45-49	9	5.3
	50 & above	11	6.5
Your Designation	Manager	20	11.8
	Assistant Manager	17	10.0
	Officer	62	36.5
	Banking Assistant	35	20.6
	Banking Trainee	26	15.3
	Others	10	5.9
Work Experience	Less than 1 Year	24	14.1
	1-3	40	23.5
	3-5	36	21.2
	5-10	30	17.6
	Above 10 Years	40	23.5

4.2. Descriptive statistics

Table 3: Descriptive Statistics

	Despotic Leadership Style	Innovative Work Behavior	Emotional Exhaustion
N	170	170	170
Range	4.00	5.44	5.57
Minimum	1.00	1.00	1.43
Maximum	5.00	6.44	7.00
Mean	3.6088	2.3222	4.9303
Std. Deviation	.78995	1.07568	1.45448
Skewness	-1.325	1.897	-.806
Kurtosis	1.987	3.886	-.372

4.3.Normality

This study is multivariate with metric data; it is required to test multivariate normality. But Hair et al. (2010) suggest that as it is practically difficult to test multivariate normality, it is satisfactory to achieve 34 univariate normality for all variables. Thus, univariate normality is tested for all three variables in this study. As well as Field (2009) declared that when sample size is large (> 30), the selected sample can be approximately normal.

Table 4: Skewness and Kurtosis Statistics indicating normality of Constructs

Variable	N	Skewness	Kurtosis
Despotic Leadership Style	170	-1.325	1.987
Innovative Work Behavior	170	1.897	3.886
Emotional Exhaustion	170	-0.806	-0.372

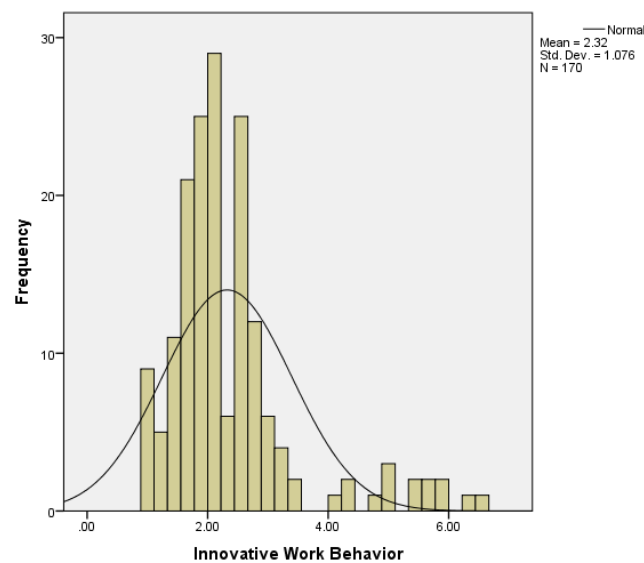


Figure 5: Normality

Table 4 presents the skewness and kurtosis statistics used to assess the normality of the key constructs based on 170 valid responses. According to Hair et al. (2010), data can be considered approximately normal when skewness values lie between -2 and +2 and kurtosis values lie between -3 and +3. For this study, the skewness values range from -1.325 to 1.897, while the kurtosis values range from -0.372 to 3.886. These results indicate that all variables fall within or close to the acceptable range, suggesting that the data are approximately normally distributed.

4.4. Linearity

The assumption about the linearity behind the two variables is a straight-line relationship (Hair et al., 2010). All relationships in the conceptual model of the study were examined to ensure linearity relationship between variables.

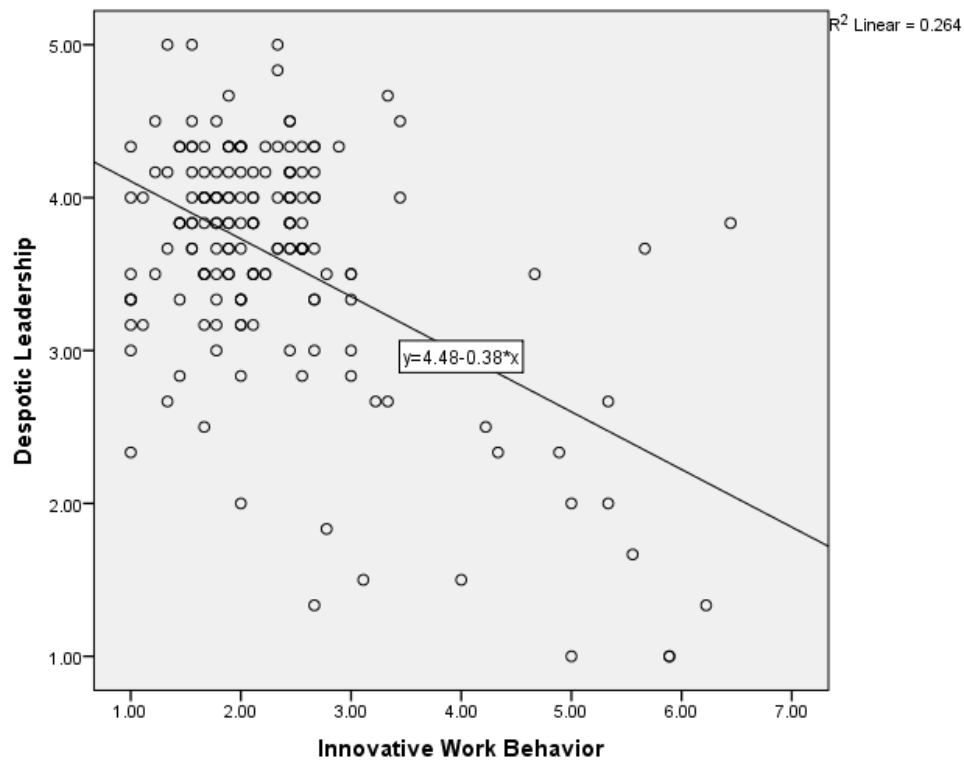


Figure 6: Linearity

The scatterplot indicates a clear negative linear trend, best described by the regression equation $Y = 4.48 - 0.38X$, suggesting that as despotic leadership increases, innovative work behavior decreases among employees. The linear model was moderately explanatory with an R^2 value of 0.264, indicating that approximately 26.4% of the variation in despotic leadership can be explained by innovative work behavior. Hence, the linearity assumption was met for this relationship, confirming the suitability of applying linear regression and mediation analysis in subsequent hypothesis testing.

4.5. Validity

Internal validity of a questionnaire refers ability of the questionnaire to measure what is intended to measure (Saunders et al., 2011). Often when discussing the validity of a questionnaire, researchers refer construct validity (Cooper & Schindler 2008, as cited in Saunders et al., 2011). Validity with reference to the context is discussed as follows.

In order to test the construct validity KMO and Bartlett's test was performed for each variable in Annexure E. The results of three variables are as follows.

Table 5 : KMO and Bartlett's Test - Despotic Leadership Style

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.876
Bartlett's Test of Sphericity	Approx. Chi-Square	552.660
	df	15
	Sig.	.000

According to Table 5 sampling adequacy of Despotic Leadership Style was 0.876 (>0.5) and it is significant under the 0.05. Moreover, Extraction Sums of Squared Loadings was 65.714% and it also greater than 50%. Thus, the construct validity of Despotic Leadership Style was guaranteed.

Table 6: KMO and Bartlett's Test - Innovative Work Behavior

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.942
Bartlett's Test of Sphericity	Approx. Chi-Square	1727.566
	df	36
	Sig.	.000

According to the sampling adequacy coefficient of Innovative Work Behavior was 0.942 and it met the minimum threshold value 0.5 and moreover it is significant under the 0.05. Extraction Sums of Squared Loadings was 77.917% and it also met the minimum threshold value 50%. Thus, the construct validity of Innovative Work Behavior also assured in this study.

Table 7: KMO and Bartlett's Test - Emotional exhaustion

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.913
Bartlett's Test of Sphericity	Approx. Chi-Square	1306.765
	df	21
	Sig.	.000

According to Table 7 sampling adequacy value of Emotional Exhaustion was 0.913 and it also reached to the threshold value 0.5 under the 0.05 significance level. Moreover, Extraction Sums

of Squared Loadings was 78.900% and it also met the minimum threshold value 50%. Thus, the construct validity of Emotional Exhaustion also assured in this study.

4.6. Reliability

Internal or inter-item consistency method. Cronbach's alpha is the most frequently used method and the most common measure of internal consistency. It is most commonly used when have multiple Likert questions in a survey/questionnaire.

Table 8: Reliability statistics of measures

Measure	Cronbach alpha	Number of items
Despotic Leadership Style	0.895	6
Innovative Work Behavior	0.964	9
Emotional Exhaustion	0.955	7

According to Table 8 it is concluded that all the measures used are reliable and all coefficients of measures are greater than 0.7. The Cronbach's alpha of each measure and the highest scale if item deleted indicates none of the items demand deletion is required.

4.7. Correlation

Table 9: Pearson Correlation Statistics

	Despotic Leadership Style	Innovative Work Behavior	Emotional Exhaustion
Despotic Leadership Style	1	-0.513**	0.392**
Innovative Work Behavior	-0.513**	1	-0.661**
Emotional Exhaustion	0.392**	-0.661**	1

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Note. (1) Between .1-.3: small effect. (2) Between .3-.5: medium effect. (3) Above .5: large effect.

Table 20 summarizes the Pearson correlation coefficients among Despotic Leadership, Emotional Exhaustion, and Innovative Work Behavior for the sample of 170 public bank employees. The findings show some significant correlations with the hypotheses developed. First, it is clear that despotic leadership has a significant negative correlation with innovative work behavior, with a correlation coefficient of $r = -0.513$ and $p < 0.01$. This implies that employees' capacity to generate and apply new ideas is negatively affected by authoritarian

leadership that is self-serving in nature. Second, it is also clear from the findings that despotic leadership has a positive correlation with emotional exhaustion, with a correlation coefficient of $r = 0.392$ and $p < 0.01$. This implies that employees who work with leaders with a high level of despotism are likely to suffer from emotional exhaustion. Third, it is also clear from the findings that there is a strong negative correlation between emotional exhaustion and innovative work behavior, with a correlation coefficient of $r = -0.661$ and $p < 0.01$. This implies that employees who suffer from emotional exhaustion are less likely to generate and apply new ideas.

4.8. Hypotheses testing

H1. Despotic leadership style has a significant negative impact on innovative work behavior of office staff in public banks in the Ampara District.

Table 10: Model Parameters and model summary of Hypothesis 01

Hypothesis	Regression Weights	Beta Coefficient	R ²	F	p-value	Hypothesis Supported
H1	Despotic leadership style → Innovative work behavior	-0.699	0.264	60.158	0.000	Yes

The findings indicate that there is a negative and significant relationship between despotic leadership and innovative work behavior, with a beta coefficient of -0.699 and p-value of 0.000 ($p < 0.05$).

The R² value of 0.264 indicates that 26.4% of the variance in innovative work behavior can be explained by despotic leadership. The F-value of 60.158 further confirms that the regression model is statistically significant. Therefore, Hypothesis 01 is supported, confirming that despotic leadership negatively impacts innovative work behavior among public bank employees in the Ampara District.

The results indicate that despotic leadership negatively influences innovative work behavior. This finding supports the Conservation of Resources (COR) Theory, which suggests that employees experiencing resource threats from destructive leadership behaviors become less willing to invest effort in innovative activities. The result is also consistent with previous studies (Ahmad et al., 2021; Erkutlu & Chafra, 2018) which found that authoritarian leadership reduces employee creativity and innovation.

H2. Despotic leadership style has a significant positive impact on emotional exhaustion of office staff in public banks in the Ampara District.

Hypothesis	Regression Weights	Beta Coefficient	R ²	F	p-value	Hypothesis Supported

H2	Despotic leadership style → Emotional exhaustion	0.723	0.154	30.577	0.000	Yes

Table 11: Model Parameters and model Summary of Hypothesis 02

The results indicate a positive and statistically significant relationship between despotic leadership and emotional exhaustion, with a standardized beta coefficient (β) of 0.392, a t-value of 5.530, and a p-value of 0.000 ($p < 0.05$). This shows that as despotic leadership behaviors increase, employees' emotional exhaustion also rises significantly.

The R^2 value of 0.154 suggests that 15.4% of the variance in emotional exhaustion is explained by despotic leadership. The model is statistically significant as indicated by the F-value of 30.577 ($p = 0.000$). Therefore, Hypothesis 2 (H2) is supported.

H3. Emotional exhaustion has a significant negative impact on innovative work behavior of office staff in public banks in the Ampara District.

Table 12: Model parameters and model summary of Hypothesis 03

Hypothesis	Regression Weights	Beta Coefficient	R^2	F	p-value	Hypothesis Supported
H3	Emotional Exhaustion → Innovative work behavior	-0.661	0.437	130.298	0.000	Yes

The results show that there is a negative and significant relationship between emotional exhaustion and innovative work behavior, as the value of beta coefficient = -0.661, $t = -11.415$, and $p = 0.000$ ($p < 0.05$). The value of the coefficient of determination, The R^2 value of 0.437, shows that 43.7% of the variance in innovative work behavior is explained by emotional exhaustion. The model is significant as the value of $F = 130.298$, and $p = 0.000$. Therefore, Hypothesis 3 (H3) is supported.

H4. Emotional exhaustion mediates the relationship between despotic leadership style and innovative work behavior of office staff in public banks in the Ampara District.

Hypothesis 4 proposed that emotional exhaustion mediates the relationship between despotic leadership style and innovative work behavior among office staff in public banks in the Ampara District. The mediation analysis conducted using PROCESS Macro (Model 4) supports this hypothesis.

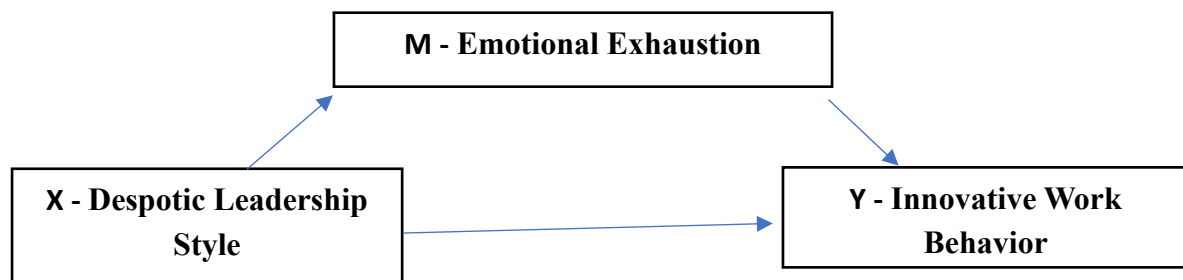


Figure 7: Total Effect

Total effect = - 0.6992

Direct Effect = - 0.4091

Indirect Effect = - 0.2131

The mediation analysis showed that despotic leadership significantly reduces innovative work behavior ($b = -0.6992$, $p < 0.001$). When emotional exhaustion was added as a mediator, the direct effect decreased to -0.4091 , indicating partial mediation. The indirect effect was significant ($b = -0.2902$), with a bootstrapped confidence interval that excluded zero, confirming mediation. These results demonstrate that emotional exhaustion meaningfully explains how despotic leadership weakens employees' innovative work behavior in public banks.

Table 13: Model Parameters and model summary of Hypothesis 04

Effect Type	Effect (b)	SE	t	p	LLCI	ULCI	Decision
Total Effect of DL on IWB	-0.6992	0.0901	-7.7562	0.000	-0.8772	-0.5212	Significant
Direct Effect of DL on IWB	-0.4091	0.0799	-5.1174	0.000	-0.5669	-0.2512	Significant
Indirect Effect of DL on IWB	-0.2902	0.741	-	-	-0.4386	-0.1446	Significant

$p < 0.05$, DL = Despotic Leadership, IWB = Innovative Work Behavior, EE = Emotional Exhaustion.

The results show that emotional exhaustion plays a significant mediating role in the relationship between despotic leadership and innovative work behavior. Despotic leadership is positively related to emotional exhaustion, and emotional exhaustion is negatively related to employees' ability and motivation to perform innovative behavior. The mediating effect is statistically significant and partial, as the direct effect is also significant after controlling for the mediator. Thus, Hypothesis 4 is completely supported by the empirical findings. The mediation analysis confirms that emotional exhaustion partially mediates the relationship between despotic

leadership and innovative work behavior. This indicates that despotic leadership increases employees' emotional exhaustion, which subsequently reduces their ability and motivation to engage in innovative activities. This finding aligns with the JD-R Model, which suggests that excessive job demands and psychological strain reduce employees' engagement and performance outcomes.

5. Conclusion & recommendation

5.1. Conclusion of the study

This study examines the impact of despotic leadership on innovative work behavior among office staff in public banks in the Ampara District, considering emotional exhaustion as a mediator. Grounded in Conservation of Resources (COR) Theory, Social Exchange Theory (SET), and the Job Demands-Resources (JD-R) Model, the research demonstrates that authoritarian, controlling leaders create fear, limit autonomy, and reduce intrinsic motivation, which directly suppresses innovation. Consistent with SET, despotic leadership increases emotional exhaustion, as employees experiencing unfair treatment report higher stress, low morale, and psychological strain. In line with the JD-R Model, emotional exhaustion significantly diminishes innovative work behavior by depleting the energy and cognitive resources required for creativity and problem-solving. Importantly, emotional exhaustion mediates the relationship between despotic leadership and innovation, indicating that destructive leadership indirectly hinders innovation by eroding employees' emotional well-being. The findings contribute theoretically by integrating COR, SET, and JD-R frameworks and offer practical implications for fostering supportive leadership in Sri Lanka's public banking sector to enhance employee innovation.

5.2. Theoretical Implications

This study contributes to leadership and innovation literature by integrating the Conservation of Resources Theory, Job Demands Resources Model, and Social Exchange Theory to explain how despotic leadership affects innovative work behavior through emotional exhaustion. This study makes a significant contribution to the theoretical and empirical understanding of despotic leadership, emotional exhaustion, and innovative work behavior within the Sri Lankan public banking sector. As very few studies have explored the combined effects of destructive leadership and psychological well-being on innovation in developing country contexts, this research fills an important theoretical void. Drawing on the Conservation of Resources (COR) Theory (Hobfoll, 1989), Social Exchange Theory (SET), and the Job Demands Resources (JD-R) Model, this study integrates these frameworks to explain how despotic leadership depletes employees' emotional and psychological resources, leading to emotional exhaustion and diminished innovative work behavior.

Furthermore, the study extends these Western-origin theories by validating their applicability in an Asian, public-sector context characterized by hierarchical structures and power distance. It confirms that emotional exhaustion acts as a key psychological mechanism through which despotic leadership suppresses innovation, thereby enriching the theoretical understanding of leadership's dark side. To the best of the researcher's knowledge, this is the first empirical study

conducted in Sri Lanka's public banking sector examining this mediating relationship. Thus, it contributes to the broader body of leadership and organizational behavior literature by expanding the theoretical relevance of COR, SET, and JD-R models to culturally distinct and resource-constrained environments.

5.3. Practical Implications

The findings suggest that public banks should promote supportive and ethical leadership practices to reduce emotional exhaustion among employees and encourage innovative work behavior. Leadership development programs and stress management initiatives can help improve employee well-being and organizational innovation. Practically, this study offers important insights for a variety of stakeholders in the public banking system in Sri Lanka, as it shows that despotic leadership is associated with increased emotional exhaustion and decreased innovative work behavior, and that emotional exhaustion is a key mediator of this relationship.

From a research perspective, this study illustrates the need for further research into despotic leadership in the public sector and in high power-distance cultures. It points to the central role of emotional exhaustion in the relationship between despotic leadership and decreased innovation, and encourages research that adopts a mixed-method approach.

For bank managers and bank administrators, the study's results underscore the importance of moving away from authoritarian leadership and instead adopting an ethical, empathetic, and supportive style of leadership. Managers are encouraged to promote a culture of idea-sharing, well-being programs to combat emotional exhaustion, and innovation rewards to enhance creativity.

For HR professionals, the study's results underscore the importance of establishing selection parameters for leaders based on emotional intelligence and ethical behavior. Additionally, they need to promote well-being programs, innovation rewards, and grievance handling systems to combat emotional exhaustion.

For policymakers and government officials, the study highlights the importance of embedding leadership accountability, stress-management programs, and grievance-handling mechanisms into regulatory frameworks. Strengthening sector guidelines can help create psychologically safe and innovation-friendly organizational cultures.

For employees and trade unions, the findings encourage early recognition of emotional strain, active use of support systems, and collective negotiation for fair treatment. Trade unions can advocate for leadership conduct standards, mental health support, and innovation-enhancing initiatives to ensure healthier and more productive workplaces.

Overall, the study's practical contributions guide stakeholders in reducing despotic leadership, protecting employee well-being, and fostering innovation within public banks.

5.4. Limitations of the study

Despite its contributions, this study has several limitations. First, the research used a cross-sectional design, where data were collected at a single point in time; therefore, the results identify relationships among variables but cannot confirm causal relationships. Future studies

could employ longitudinal research designs to better examine changes over time. Second, the study was limited to office staff in public banks in the Ampara District of Sri Lanka, which may restrict the generalizability of the findings to other sectors or regions. Future research may include different industries, private banks, or broader geographic areas to enhance generalizability. Third, the study relied on self-reported questionnaire data, which may introduce response bias or common method bias. Collecting data from multiple sources could improve reliability. Finally, this study considered emotional exhaustion as the mediating variable, while other factors such as psychological safety, job satisfaction, or organizational support could also influence innovative work behavior.

5.5.Directions for future research

Future research can extend this study in several important ways. First, since this study employed a cross-sectional research design, future studies may adopt longitudinal approaches to better examine the causal relationships between despotic leadership, emotional exhaustion, and innovative work behavior over time. Second, the present study focused only on office staff in public banks in the Ampara District of Sri Lanka; therefore, future research could expand the sample to include private banks, other financial institutions, and different industries or geographical regions to enhance the generalizability of the findings. Third, future studies may consider using multiple data sources, such as supervisors or organizational records, to reduce common method bias associated with self-reported data. Additionally, researchers may examine other mediating or moderating variables, such as psychological safety, organizational support, job satisfaction, or employee resilience, to gain deeper insights into how leadership styles influence innovative work behavior.

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THE IMPACT OF FAMILY SOCIO-ECONOMIC STATUS ON STUDENTS' ACADEMIC PERFORMANCE: EVIDENCE FROM THE ISLAND ZONE OF JAFFNA DISTRICT

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Abstract

Purpose: Academic Performance in the G.C.E. Ordinary Level (O/L) examination plays a crucial role in shaping students' future educational and career pathways in Sri Lanka. However, persistent disparities in academic outcomes have been observed in the Island Zone of the Jaffna District; no study has specifically examined the impact of family socioeconomic status on academic performance in the Island zone of Jaffna. Therefore, this study examines the impact of family socio-economic status, measured through parental education, household income, and family size, on the academic performance of G.C.E. O/L students in the Island Zone of Jaffna District.

Design/methodology/approach: A quantitative research approach with a cross-sectional survey design was adopted. The population consisted of 477 students who sat for the 2024 G.C.E. O/L examination in eleven government schools across four Divisional Secretariat divisions. Using stratified random sampling, 213 students were selected as the final sample. Data was collected through structured questionnaires, and academic performance was measured using examination grades. Statistical analysis was conducted using SPSS, including reliability and validity testing, correlation analysis, and multiple regression.

Findings: The findings revealed that parental education had a statistically significant positive effect on students' academic performance ($p < 0.05$), whereas household income and family size did not show significant effects. The results suggest that intellectual guidance and educational awareness within the home environment may have a stronger influence on students' academic success than purely economic resources. The study highlights the importance of strengthening parental educational involvement and enhancing parent-school collaboration to reduce academic disparities in rural and island communities.

Research limitations/implications: This study offers practical insights for policymakers and educators to improve strategies to support students from underprivileged backgrounds. Community-based educational support programs may further assist students who lack sufficient learning resources at home.

Originality/value: Collectively, these efforts can help reduce educational imbalances and foster integration and sustainable academic development in island and rural regions.

Keywords: Academic Performance; Family Size; Family Socio-Economic Status; Household Income; Parental Education

1. Introduction

1.1 Background of the study

Education plays a key role in social development and national economic growth. It enhances individuals' future success and improves the overall quality of the country's labor force (Gu et al., 2024). In Sri Lanka, according to the Department of Examination, the basic education consists of primary and secondary levels (O/L, A/L). The G.C.E O/L examination is particularly important because it determines students' future academic and career pathways. However, students' academic performance is influenced by various factors beyond the school environment. Academic reflects students' achievement of learning goals and future potential (Hu et al., 2025).

Socio-economic status represents a family's education, Occupation and income (Li et al., 2019). It includes factors such as parental education, household income and family size. The educational background of the parents has a significant influence on their academic achievement (Mootoorurpen & Cooshna naik, 2021). Parents with higher educational backgrounds often demonstrate greater engagement in maintaining their children's academic performance (Mootoorurpen & Cooshna naik, 2021). Higher household income boosts academic performance through better resources, while government aid can support low-income students' education (Machebe et al., 2017).

Family represents the cornerstone of social structure. A supportive and caring home can safeguard stable and steady development in adolescents (Adongo et al., 2022). Especially in the Island zone, this factor may affect academic performance, with possible positive or negative effects. They also face issues like lack of attention, limited money and discipline issues. This will negatively affect students' academic performance (Adongo et al., 2022). This research examines factors affecting academic outcomes, focusing on family socio-economic status. Family size influences relationships and can significantly impact a child's development and learning (Adongo et al., 2022).

However, Sri Lanka's educational system shows general improvement; some students in rural areas, like the Jaffna district, continue to perform below the national average range (Kumudhini & Mathusha, 2024). This evidence suggests that family socio-economic status impacts the students' academic outcomes.

1.2 Problem statement

Education refers to the process of acquiring knowledge, skills, and competencies that support individual and social development (Durmaz et al., 2025). Despite improvements in Sri Lankan education system, students in the island zone of Jaffna continue to perform below the national average in the G.C.E O/L examination (Kumudhini & Mathusha, 2024). However, very little research has specifically addressed the influence of family socio-economic status including parental education, house hold income, and family size on these students. This study, therefore, aims to examine how family socio-economic status impacts the academic performance of G.C.E. O/L students in the island zone of the Jaffna District.

1.3 Research objectives

To fill this identified gap on how family socio-economic status impacts the students' academic outcome in the island zone of Jaffna, the study aims to explore the following objectives,

1. To assess the impact of parental education on the academic performance of G.C.E O/L students in the Island zone of Jaffna district.
2. To assess the impact of household income on the academic performance of G.C.E O/L students in the Island zone of Jaffna district.
3. To assess the impact of family size on the academic performance of G.C.E O/L students in the Island zone of Jaffna district.

1.4 Research questions

Based on this objective, this study examined how family socioeconomic status affected the academic performance of G.C.E. O/L students in the Island zone of the Jaffna district. The following research questions were derived from existing literature gaps

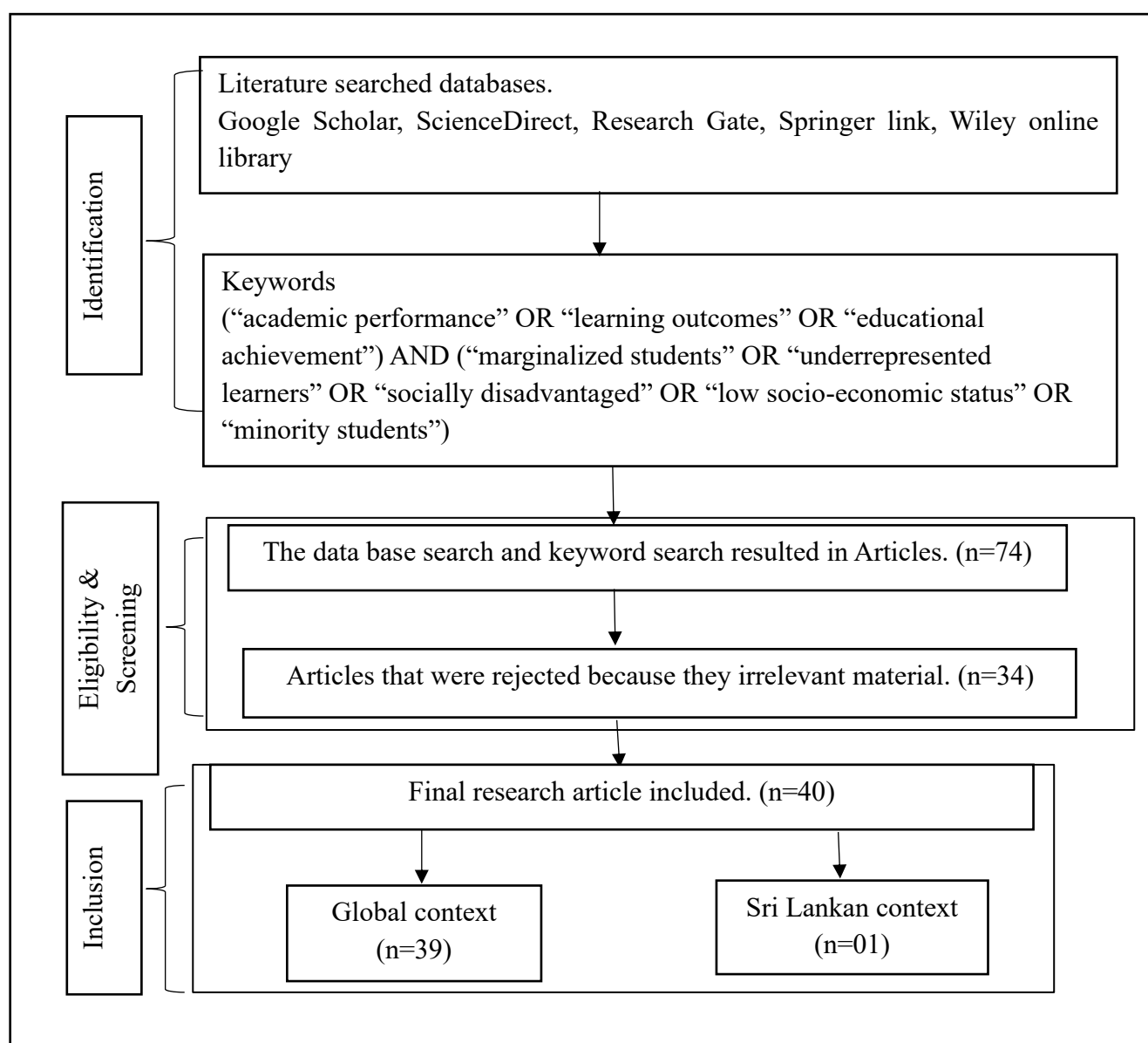
- 1.0 How does parental education impact the academic performance of G.C.E O/L students in the Island zone of Jaffna district?
- 2.0 How does the household income impact the academic performance of G.C.E O/L students in the Island zone of Jaffna district?
- 3.0 How does family size impact the academic performance of G.C.E O/L students in the Island zone of Jaffna district?

1.5 Significance of the study

The G.C.E O/L examination is a crucial milestone in students' education. The Island zone of Jaffna district represents different socio-economic groups, which can influence their learning outcomes. Over the past two decades, the island zone has been observed to have relatively low academic performance compared to other zones. Therefore, identifying the factors impacting academic performance in the island zone is essential to reducing educational disparities.

2. Literature review

This section focuses on analysing and discussing the previous literature done by numerous researchers from around the world on the impact of Family Socio-Economic Status on the students' academic Performance.



Theoretical Perspective

Human Capital Theory: Human Capital Theory explains that parents invest in their children's education to improve future outcomes. This theory is directly related to parental education and family income, as educated and financially stable parents can provide better educational resources, guidance, and learning environments (Cazarez, 2022).

Social Capital Theory: Social Capital Theory highlights the importance of relationships and support systems. This theory is linked to parental involvement, where parents' engagement in children's education (such as helping with homework and school participation) enhances academic performance (Sengonul, 2022).

In addition, sociological perspectives explain that students' academic performance is influenced by their social environment, including family background, cultural values, and

community support systems (Becker & Tomes, 1986). These perspectives highlight that both economic and social conditions shape educational outcomes.

2.1 Introduction to Literature Review

Although many studies have examined parental education, household income, and family size separately, few have considered these factors together. Additionally, research in island and rural contexts remains limited. Therefore, this review explores how family socio-economic status influences academic performance, focusing on G.C.E. O/L students in the Island Zone of Jaffna.

Parents' education significantly influences students' academic achievement. In addition, Parental education means the highest level of education obtained by students' parents (Gerra et al., 2020). Secondly, children from low-income families are more likely to perform lower academic performance and reduce years of schooling (Zhao & Bodovski, 2021). Family size means the number of members that a family has in their home. This may contribute to molding students' academic performance (Olagundoye & Adebile, 2019). Overall, family socio-economic status strongly impacts the students' academic performance.

2.1.1 Parental Education and Academic Performance

Parental education plays an important role in molding students' academic performance (Kumudhini & Mathusha, 2024). Parents with higher education offer better support, guidance, and resources, enhancing their children's academic performance and overall development (Zhang X., 2012). Thus, the role of education runs parallel with their occupational level (Erola et al., 2016). Parental education strengthens study habits, students' confidence and overall academic performance.

Both fathers' and mothers' education influences students' academic performance, with studies showing that fathers' education positively affects achievement through greater parental involvement. Similarly, fathers' financial resources also enhance children's academic success, through greater parental investment in their children's education (Yang & Wan, 2015). While previous studies have observed and pointed out the significant role of mothers in their children's education (Korupp et al., 2002). A Dutch survey found that mothers' education had a greater impact on students' academic outcomes than fathers', especially when the mother was not employed (Buis, 2013). Furthermore, it was found that parents' active participation includes modelling, guiding their children and supporting their children's encouragement during homework, which supports improvements in students' academic performance and motivation (Zambak et al., 2025).

In the Sri Lankan context, family socio-economic status has a significant impact on students' academic performance. Helping with homework was recognized as more important, since students showed higher achievement when parents were actively engaged in their learning. Overall, emotional and psychological encouragement from parents significantly influences students' educational performance (Careemdeen, 2023).

Parenting education programs provide knowledge, skills and practices that help to improve children's short-term and long-term improvement (Finders et al., 2016). Parental involvement, including discussing schoolwork, helping with homework, and engaging in activities, enhances students' academic performance (Feraco et al., 2022). However, some studies argue that higher parental education does not always guarantee better academic performance, as factors such as students' motivation, peer influence, and school quality also play a significant role.

2.1.2 Family Income and Academic Performance

Family income is a key component of family socioeconomic status and plays an important role in shaping students' academic performance. Families with higher incomes can obtain private classes and extra supplementary classes, which can help students overcome learning difficulties.

However, the influence of parental financial resources has been rarely studied in existing studies. Despite recent evidence providing a strong relationship between both parental wealth and income and the students' academic performance (Cooter et al., 2004). Researchers explain how family income affects students' academic performance (Wiborg & Gratz, 2022). Parents with lower incomes are less involved in their children's academic performance at home and school (Wang et al., 2016). First, parents' income can influence their children's education since families with limited money have fewer resources to invest in education, which builds students' abilities (Becker & Toms, 1986). Wealthy families can invest more in their children's education, such as hiring private tutors or accessing better schools with experienced teachers (Wiborg & Gratz, 2022).

Private tutoring is a significant global investment for parents (Bray & Kwo, 2013). Participation in private tuition also depends on the parents' family background (Zhang & Xie, 2016). Children from affluent families were more likely to participate in private classes than others (Buchmann, 2002). Students from low-income families are less likely to access private tuition and learning resources, while higher-income families can provide better educational support, leading to improved academic performance.

Global studies show that in the 1990s, a \$1,000 increase in parents' income in the US and Canada led to a 0.05 standard deviation improvement in students' academic performance (Duncan et al., 2011). In Norway, one study found that family income had a minor impact on academic performance (Loken, 2010). An article from Norway indicates that the impact of parental income is significant among less-income families in the United States (Wiborg & Gratz, 2022). Overall, these international studies indicate that family income normally influences students' academic performance. Nevertheless, certain studies (Loken, 2010) found that family income has only a minor impact in some contexts, suggesting that non-financial factors such as parental support and school quality may be equally important.

2.1.3 Family Size and Academic Performance

A child's initial development begins at home. Family size is an important component in students' academic performance. Family size means the total number of people in a family.

Numerous studies have been carried out to explore the impact of family on students' academic performance. Previous research has investigated how family structure affects students' academic performance. Although if a school plans a good educational program, students achieve effective learning outcomes only when their family supports the students (Strapazzo et al., 2025). Family size affects learning: larger families divide attention and resources among children, while smaller families provide more parental support and resources, improving academic performance (Strapazzo et al., 2025). Parents with numerous children may struggle to allocate sufficient time to each child's educational development. With only two or three children, parents can allocate more time to academic growth (Suleman et al., 2012).

Research has clearly shown that the number of siblings plays a role in students' education. The findings clearly show that children with more siblings have lower academic performance than those with fewer siblings (Karwath et al., 2014). Having more siblings means each child gets less attention from their parents. Having more siblings can limit a child's educational opportunities and access to resources, reducing their chances of higher education (Li & Hiwatari, 2024). Furthermore, birth order also plays a big role in family size. Birth order refers to a child's birth order within the family. The firstborn gets more support and investment in education from the parents (Dayiodlu et al., 2009). Children in small families often receive more time and resources for academics, enhancing performance, while larger families may provide less individual support, limiting learning. On the other hand, some research indicates that children from larger families may develop better social and adaptive skills, which can positively influence their learning in certain situations. Overall, family composition plays a significant role in shaping students' academic performance.

2.2 Literature Review Summary and Lacunae

The research shows that family socio-economic status, consisting of parental education, family income and family size, exerts a substantial impact on students' academic performance. Furthermore, Parental education boosts learning strategies and confidence, while income impacts access to resources and support. However, more contextualized and longitudinal studies are needed to understand how these factors influence outcomes in underserved regions.

2.3 Conceptual Framework

The conceptual framework of the study is illustrated below

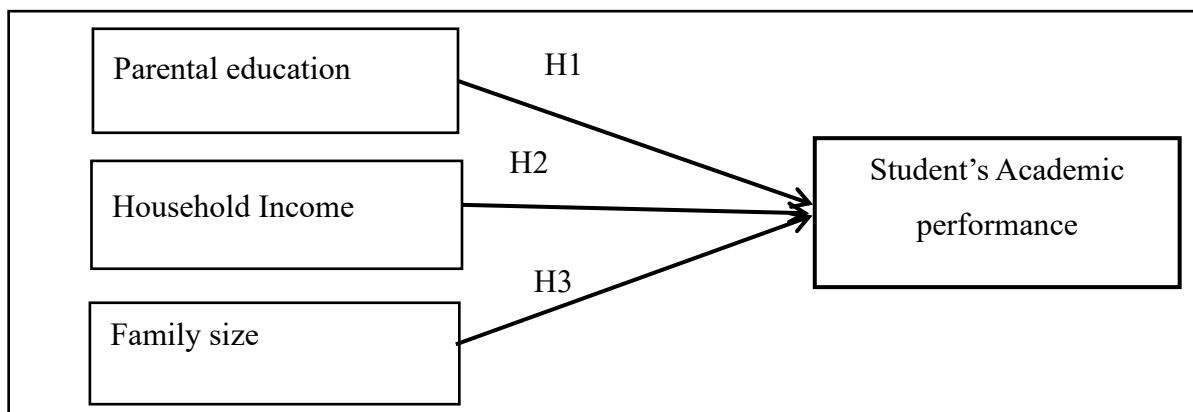


Figure 1: Conceptual framework

Hypothesis

H1: There is a significant impact of parental education on the academic performance of G.C.E O/L students in the island Zone of Jaffna district.

H2: There is a significant impact of household income on the academic performance of G.C.E O/L students in the island Zone of Jaffna district.

H3: There is a significant impact of family size on the academic performance of G.C.E O/L students in the island Zone of Jaffna district.

3. Methodology

3.1 Research approach

The study used a deductive approach, applying existing theories on family socio-economic factors to the Island Zone of Jaffna and collected quantitative data to assess their impact on students' academic performance.

3.2 Strategies

The research strategy outlines the method used to collect data related to the study's objectives. In this research, a survey strategy was employed to collect data related to family socio-economic status. This quantitative survey uses structured questionnaires to collect data from many participants for precise statistical analysis.

3.3 Site

The research was undertaken in the Island Zone of the Jaffna district. These include geographically isolated, predominantly rural areas. Focusing on this under-researched area provides a relevant context for examining the relationship between family socio-economic status and students' academic achievement.

3.4 Sample

The Research population for this study includes G.C.E (O/L) students from government schools within the Island Zones of the Jaffna district. According to Taherdoost (2016), stratified random sampling is a method in which the population is divided into different strata (sub-groups) such as Kayts, Velanai, Karainagar and Delft.

The study included four Divisional Secretariat (DS) divisions, which were selected for the research. Students who sat for the G.C.E. (O/L) examination in 2024 were selected as respondents. The eleven schools had a total of 477 students who applied for the G.C.E. (O/L) examination in 2024. Out of this population, A final sample of 213 students was selected. This sample size is statistically adequate, as it exceeds the minimum threshold of 200 recommended for regression-based analysis and represents approximately 45% of the total population, thereby enhancing statistical power and reducing sampling error. Additionally, the relatively

large sample size ensures sufficient variability and reliability for detecting relationships among variables.

Table 1 : Stratified sampling Table

Division	Sample
Kayts	50
Karainagar	48
Delft	19
Velanai	96
Total	213

Source: Author's Illustration

3.5 Measure

The questionnaire used in this research was developed based on previously validated instruments used in socio- economic and educational research. The measurement items related to parental education, household income, and family size were adapted from prior studies examining family socio-economic status and academic performance (Sirin, 2005) and (Zhao & Bodovski, 2021). The questionnaire consisted of both demographic and Likert- scale items designed to measure students' perceptions of family socio-economic conditions.

Data were collected using a structured questionnaire adapted from validated instruments in prior studies. The questionnaire included both demographic variables and Likert-scale items measuring family socio-economic conditions. A few statements:

- “My parents guide me regularly in my school studies.”
- “My family income allows me to access sufficient educational resources.”
- “Having many family members affects my ability to focus on studies.”

A 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to measure subjective perceptions in a standardized, quantifiable way. Its simplicity, reliability, and ability to capture varying attitude intensities make it suitable for statistical analyses like correlation and regression.

The present research aims to evaluate students' academic performance based on their exam results in 9 subjects. The subjects were measured using 5 objectives: (W=5, S=4, C=3, B=2, A=1). These letters represent the Grades.

3.6 Analysis tools

The dataset was examined using statistical software programs such as SPSS to ensure accurate and efficient data processing. via these tools, the study was able to identify relevant patterns, correlations, and the extent to which each independent factor influenced student outcomes.

4. Results and discussion

4.1 Data description

4.1.1 Pilot test

The first pilot test was conducted with a sample of 30 students. The responses from Pilot Test 1 showed that variables related to socio-economic factors generally yielded positive results, indicating that students understood these items and answered them appropriately. Therefore, the main data collection process was conducted.

Based on our data collection, A total of 265 questionnaires (papers) were distributed. Of which 213 completed and valid responses were deemed usable for analysis.

4.1.2 Demographic characteristics

Table 2: Demographic characteristics of the respondent

	Frequency	Percentage %
Gender of the respondents		
Male	98	46%
Female	115	53.99%
The number of siblings of the respondents		
None	13	6.10%
1-2	124	58.21%
3-4	64	30.04%
5 or more	12	5.63%
The father's education level of the respondents		
No formal education	06	2.81%
Primary education	29	13.6%
Secondary education	139	65.25%
Tertiary education	39	18.30%
The mother's education level of the respondents		

No formal education	02	0.93%
Primary education	10	4.69%
Secondary education	140	65.72%
Tertiary education	61	28.63%
Household income of the respondents		
Less than LKR 20,000	107	50.23%
LKR 20,000- 50,000	81	38.02%
LKR 50,000-100,000	22	10.32%
Above LKR 100,000	3	1.40%

Source: Authors' illustration

The demographic characteristics of the respondents are presented in Table 26.

4.2 Analysis

4.2.1 Reliability test

The reliability of the data collection is assessed using Cronbach's alpha value. According to (Mugenda, 2003) Reliability refers to the degree to which a research instrument produces consistent results under duplicated administrations. When the Cronbach's alpha is more than 0.7, the data collection reliability is within an acceptable range. Although the Cronbach's alpha value for household income (0.695) is slightly below the commonly accepted threshold of 0.70, it is still considered acceptable for exploratory social science research.

Table 3: Reliability test

Variable	Cronbach's-Alpha
Academic performance	0.847
Household income	0.695
Parental education	0.825
Family size	0.776

Source: Authors' illustration

4.2.2 Validity test

Table 4: Validity test

Variable	KMO Measure of Sampling Adequacy
Academic performance	0.873

Household income	0.663
Parental education	0.689
Family size	0.742

Source: Authors' illustration

The suitability of the data for factor analysis was checked using the KMO and Bartlett's test. The KMO values range from 0.663 to 0.873, which shows that the sample is acceptable. This test of sphericity was significant at $P < 0.001$ for most variables. Justifying that these variables are sufficiently correlated and can be subjected to factor analysis.

The significant result of Bartlett's test of sphericity ($P < 0.001$) confirms that the correlation matrices differ from identity matrices, confirming that the data are appropriate for factor extraction. As a result, factor analysis may be employed to identify the underlying structure of the variables.

Correlation Matrix

Table 5: Correlation Matrix of SES Variables and Academic Performance

Variable	1	2	3	4
Academic performance	1			
Household Income	0.125	1		
Parental Education	0.141	0.384	1	
Family Size	0.091	0.391	0.634	1

Source: Authors' illustration

Multiple Regression

Table 6: Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	0.161 ^a	0.026	0.012	0.73492

Source: Authors' illustration

Coefficient

Table 7: Coefficient

Model	Collinearity statistics	
	Tolerance	VIF
Household Income	.816	1.226
Parental Education	.576	1.737
Family Size	.572	1.747

Source: Authors' illustration

Table 8: Linear Regression Analysis (Academic performance and Family socio-economic status)

Regression Coefficients	
Effect	p-value
Constant	<.001
HI_Mean1	.069
PE_Mean1	.040
FS_Mean1	.185
SES_Mean 1	.030

Source: Authors' illustration

4.3 Hypothesis testing

Hypothesis 1 (H1): Academic performance and Parental education

H₀: There is no impact of Parental education on the Academic performance of students.

H₁: There is a significant impact of Parental education on the Academic performance of students.

The regression model demonstrated that parental education significantly predicted students' academic performance ($F=4.292$, $p=0.040$). Parental education observed a positive effect on academic performance ($B=0.093$, $\beta=0.14$, $p=0.040$), which suggests a meaningful contribution to academic performance.

This result is supported by other international research studies, such as (Zhao & Bodovski, 2021) which confirmed that the higher the education level of the parents, the better the academic achievements of their children through better guidance and support at home. In the same way, the research study of (Careemdeen, 2023) emphasized the importance of the participation of the parents, especially the educated ones, in the academic achievements of their children in the Sri Lankan context.

This result can be explained by the fact that educated parents can give better guidance to their children regarding their academic achievements through the provision of a supportive learning environment at home, especially in resource-limited settings such as the Island Zone. According to Human Capital Theory (Cazarez, 2022) which states that parents invest their knowledge and skills in their children to maximize their future productivity.

Hypothesis 2 (H2): Academic performance and Household income

H₀: There is no impact of household income on the Academic performance of students.

H₁: There is a significant impact of household income on the Academic performance of students.

The regression model revealed that household income was not a significant predictor of academic performance ($F=3.352$, $p=0.069$). While the coefficient indicated a positive relationship ($B=0.091$, $\beta=0.125$, $t=1.831$), the relationship was not statistically significant ($p=0.069$), which shows a weak predictive influence.

However, this finding differs from many international studies, including (Duncan et al., 2011) and (Wiborg & Gratz, 2022), which reported a positive relationship between family income and students' academic outcomes. A plausible explanation is that most families in the Island Zone have similar income levels, limiting variation in economic advantages. Additionally, non-financial factors such as parental support and school-based learning may compensate for limited resources.

From a theoretical perspective, this finding suggests that Social Capital Theory (Sengonul, 2022) may be more relevant than economic capital in this context, as strong family and community relationships provide academic support beyond financial capability.

Hypothesis 3 (H3): Academic performance and Family size

H_0 : There is no impact of family size on the Academic performance of students.

H_1 : There is a significant impact of family size on the Academic performance of students.

The regression model found that family size was not a statistically significant predictor of academic outcomes ($F=1.771$, $p=0.185$). Although a positive relationship was shown ($B=0.064$, $\beta=0.091$), the effect did not reach statistical significance ($p=0.185$).

This finding contrasts with previous research, such as (Suleman et al., 2012) and (Karwath et al., 2014) which suggests that the performance of students from smaller families is superior because of more parental attention and care. Non-significant findings in the family size dimension in the Island Zone could be attributed to the presence of strong support networks in the community that compensate for the lack of parental attention in larger families.

The older members of the family could help younger members with their homework, as the concept of responsibility for children's education is embedded in the culture of the community. The results obtained in the study indicate that the success of students is more related to the quality of support from the family than the number of family members. This could be attributed to the fact that social capital theory (Sengonul, 2022) acknowledges the importance of relationships in facilitating learning outcomes, as seen in the results obtained from the study. The social capital of the family helps in reducing the effects of larger family sizes.

4.4 Inferences

The study found that parental education has a significant positive effect on students' academic performance, while household income and family size do not show significant effects. This suggests that parental educational background and guidance at home play a stronger role in shaping academic success than financial resources. In the Island Zone, similar economic conditions among families and strong community support systems may reduce the influence of income and family size on academic outcomes (Adongo et al., 2022) and (Careemdeen, 2023).

5. Conclusion

5.1 Summary

This study examined the impact of family socio-economic status on the academic performance of G.C.E. O/L students in the island zone. Parental education significantly influences academic performance. Conversely, household income and family size had non-significant effects. The study emphasises the need for targeted educational programs and school-based support to reduce academic disparities in rural and island communities. The findings contribute to existing literature by highlighting the greater importance of non-financial family factors in rural and island contexts.

5.2 Recommendation

Based on the study's findings, parents should provide guidance and intellectual support to enhance students' academic performance. Schools should enhance parent-teacher collaboration and support students from lower-educated families. Policymakers should promote parental empowerment and education. Future studies could investigate ways to strengthen parents' engagement in students' learning.

5.3 Implications

Although tentative, the study provides insights into how to enhance academic outcomes in island areas. The family socio-economic factors, including household income, parental education, and family size, may impact student learning outcomes. Overall, the results underscore the need for collaboration among schools, families, and educational authorities to enhance academic support for the students from diverse socio-economic backgrounds.

5.4 Limitations

The research was limited to within a specific geographical context, focusing only on G.C.E O/L students in the island Zone of Jaffna district. Additionally, the study adopted a cross-sectional design, which limits causal interpretations, and self-reported questionnaires may introduce perceptual bias. Furthermore, contextual factors- including limited school resources, shortage of teachers, and insufficient facilities- may have affected students' academic achievement and were not completely considered in this research. Hence, further research employing longitudinal designs and a broader sample is recommended to strengthen the validity of the findings.

5.5 Future research

Future studies should adopt over-time research designs to better understand the long-term impact of family socio-economic factors on students' academic performance. Enhancing the sample to include students from other Districts would enhance the applicability of the findings. In addition, involving qualitative methods may provide deeper insights into parental involvement and home learning environments, supporting the development of more effective educational strategies.

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THE IMPACT OF INTERNAL CONTROL ON REAL EARNINGS MANAGEMENT IN SRI LANKA: EVIDENCE FROM COLOMBO STOCK EXCHANGE

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Abstract

Purpose: The systemic issues of earnings management and the poor corporate governance of the emerging economies highlight the need to explore the effectiveness of the internal control systems in limiting the opportunism of the managers. Irrespective of regulatory modification, empirical research on the effects of internal control quality on Real Earnings Management (REM) in the Sri Lankan context is lacking.

Design/methodology/approach: To fill this gap, the research investigates how internal control systems affect Real Earnings Management of non-financial firms listed on the Colombo Stock Exchange. Based on Agency Theory, it assumes efficient internal controls lessen information asymmetry and managerial opportunism, boosting the quality of financial reporting. Using secondary panel data from 2020 - 2024 period, the study quantitatively assesses whether stronger internal control mechanisms constrain significantly on real earnings management. The Internal Control Index constructed through content analysis of governance disclosures per the COSO framework, and Real Earnings Management proxied by Abnormal Discretionary Expenditure (ADE).

Findings: The results show a significantly negative relationship ($\beta = -0.007413$, $p < 0.01$); higher internal control indicates firms engage less in real earnings management and adhere more to standards. The strength of the model, $R^2 = 0.9154$, indicates control factors and firm-specific factors explain 91% of the variance in real earnings management. Its high explanatory power highlights internal control quality as a key governance tool in reducing real earnings management practices. In addition, the data from recent corporate incidents in Sri Lanka further support the hypothesis that weak internal controls allow firms to engage in profit management.

Research limitations/implications: These findings are significant as they reveal the role of internal control systems in enhancing earnings quality in emerging capital markets. The substantial negative relationship between internal control quality and real earnings management supports agency theory predictions which propose that effective monitoring and control systems decrease information asymmetry and manage opportunism.

Originality/value: High earnings quality and transparency in reporting financial results from robust internal control systems minimizing discretionary spending of management and enhancing the reporting quality. The results highlight the importance of strong internal controls for investor confidence in Sri Lanka's corporate sector.

Keywords: COSO Framework; Discretionary Expenditure Manipulation; Internal Control Systems; Real Earnings Management; Sri Lankan Listed Companies

Introduction

Background of the Study

Over the past decades, the global financial environment has been significantly disrupted due to a series of huge financial scandals from corporations such as Enron, Wirecard, WorldCom, and Lehman Brothers. This is proof of the extreme effects of the management's manipulation of the company's earnings. Although such failures do immense and extensive damage to stakeholders, with long term implications for the effectiveness of regulatory structures and mechanisms of governance (Dechow et al., 1996).

Internal control as a major aspect of corporate governance in Sri Lanka consists of a set of policies, procedures and mechanisms that aim at providing operational effectiveness, financial integrity and adherence to other regulatory frameworks and the Sri Lanka Accounting Standards (SLFRS/IFRS). To increase the number of internal controls in various organisations, the code of Corporate Governance (2023) in the Institute of Chartered Accountants of Sri Lanka (CA Sri Lanka) plays a crucial role in improving internal controls. Moreover, the Central Bank of Sri Lanka (CBSL) and the Securities and Exchange Commission of Sri Lanka (SEC) impose the policy of internal control on the Public Listed Companies and Financial institutions. Sri Lanka has adopted some of the Committee of Sponsoring Organisations (COSO) frameworks, which include Control Environment, Risk Assessment, Monitoring, Information and Communication and Control Activities.

Earnings management can be defined as the intentional act of corporate managers in the financial reporting process to manipulate the stated financial results to reach the set targets or strategic goals. (Healy et al., 1998). Real Earning Management (REM) includes operational choices meant to influence the reported earnings, unlike Accrued-based Earnings Management (AEM), which relies on accrual-based changes. (Roychowdhury et al., 2006). Yet the empirical data show that companies can still use REM to become profitable, especially in regulated businesses.

Following De Silva et al. (2017) cases of Pramuka Banks, Edirisinghe Trust Finance Limited (ETI) and Golden Key Credit Card Company show how management misconduct and poor internal control have led to financial instability and massive loss to shareholders. Such recent experiences of misstatements and control failures show that even with the current requirements, managers might still be involved in actions that supersede short-term financial gains at long term sustainability.

The research examines the efficacy of corporate-governance structures and financial reporting standards to determine the substantial variables that shape the practices of REM and provide suggestions on how to enhance regulatory compliance.

Research Problem

The management of earnings in the Sri Lankan business is a significant problem, and the recent financial anomalies and corporate scandals (Cohen & Zarowin, 2010). Although corporate governance systems and regulatory instruments, including the Code of Best Practices on

Corporate Governance (2023), and additional control by the SEC and the CBSL, the methods used by REM remain a cause of concern due to their subtle and functional characteristics (Gunny, 2010). Among these methods, manipulation of discretionary expenditure, including cuts in research and development, advertising, and administrative costs, has become a subtle but effective method for managers to conform to earnings expectations. (Roychowdhury et al., 2006).

Internal controls also serve as an initial line of defence against fraudulent financial reporting and as a measure to ensure the businesses have effective processes of monitoring the financial transactions, risk evaluation, and corrective actions. (McNally, 2013). In Sri Lanka, however, the actual effect and effectiveness of such measures among businesses differ significantly, which makes their contribution to the fight against REM questionable. Recent incidents such as the ETI Financial and Entrust Securities frauds demonstrate that financial manipulation often occurs even though Sri Lankan businesses are legally required to adhere to the SLFRS and other financial reporting regulations. As a result, these instances illustrate how REM can be undetected due to insufficient internal controls, costing investors funds and harming businesses' reputations. (CBSL, 2020).

The academic literature on earnings management in Sri Lanka is inadequate, particularly in terms of REM and internal controls. While studies such as (Roychowdhury et al., 2006) and (Gunny, 2010) providing evidence on REM practices and governance weaknesses in other contexts, there is a significant gap in research on how internal controls can minimise REM in Sri Lanka. Even though there are corporate governance regulations in many business industries, their implementation and implementation of internal control vary. The question of the effectiveness of internal controls in REM prevention in Sri Lanka is a challenge. The investigation examines whether companies with strong internal control mechanisms have lower levels of REM, intending to fill a gap in the literature.

Research Question

What is the impact of internal control system quality on Real Earnings Management Practice in listed companies in Sri Lanka?

Research Objective

To examine the impact of internal control system quality on Real Earnings Management practice in listed companies in Sri Lanka.

Significance of the Study

The research offers significant contributions to academia, regulatory agencies, corporate practitioners, and investors by concentrating on the function of internal control systems in reducing REM, an important and unexplored topic in Sri Lanka's financial reporting context. The research offers to the academic discussion on earnings management by concentrating specifically on the Sri Lankan environment, where there is limited research on the convergence of internal control and REM.

To regulators, including the SEC, CBSL, and CA Sri Lanka, the research provides practical guidance on the effectiveness of internal controls in enhancing the quality of financial reporting. Despite the introduction of the SLFRS and the Code of Best Practices on Corporate Governance in Sri Lanka (CA Sri Lanka, 2017), cases of ETI Finance (2018) and Entrust Securities (2016) reveal that regulatory oversight and internal controls remain weak (CBSL, 2020). Moreover, the study offers strategic information to corporate leaders and board members and allows investors to assess financial integrity better, enhancing investor trust and financial stability in the market.

Literature Review

The regulatory framework of the internal control in Sri Lanka is based on a mix of corporate governance regulation, company law, industry-specific regulations, and international auditing standards. Internal control requirements are mainly regulated by the Companies Act No. 7 of 2007, the Code of Best Practices on Corporate Governance issued by the Institute of Chartered Accountants of Sri Lanka. (CA Sri Lanka, 2017) The Accounting and Auditing Standards of Sri Lanka Act No. 15 of 1995, as well as industry-specific regulations prescribed by the Colombo Stock Exchange (CSE) and the Central Bank of Sri Lanka (CBSL).

The Code of Best Practices on Corporate Governance (CA Sri Lanka, 2017) highlights the responsibilities of board members in designing an effective internal control system. According to the Code, the board is required to review the effectiveness of internal control at least annually and to disclose its findings in the annual report. The Audit Committee is also mandated to assist the Board in evaluating the effectiveness of internal control and risk management systems.

The Companies Act no.7 of 2007 provides for numerous articles overlapping with the governance code. Under Section 148, the company needs to keep proper accounting records, while Sections 150–154 mandate audited financial statements. Sections 187–190 impose fiduciary duties on directors, while Sections 188–200 require disclosure of interests to avoid conflicts. (Companies Act, 2007).

The Sri Lanka Accounting and Auditing Standards Act, No. 15 of 1995, makes it a mandatory requirement to follow the Sri Lanka Financial Reporting Standards (SLFRS / LKAS) and the Sri Lanka Auditing Standards (SLAuS), which further facilitates application of internal controls. The risk assessment process for the audit, as documented in SLAuS 315, specifically emphasises that the auditor should understand the internal control system as part of audit risk assessment.(SLAuS 315, 2015).

Internal Control and Earnings Quality

Agency theory (Jensen & Meckling, 1976) emphasises that when monitoring mechanisms are inadequate, managers may pursue personal interests at the expense of shareholders. Effective internal accounting control systems increase transparency, decrease information asymmetry, and minimise earnings manipulation.(Healy et al., 1998).

Empirical studies in developed countries report a negative relationship between weak internal controls and abnormal accruals, low accrual quality, and the likelihood of material

misstatement (Skaife et al., 2011). Lian et al. (2024) find that strong internal control mechanisms significantly constrain both accrual-based and REM.

The growing prevalence of REM, where firms alter the actual economic activities to achieve their targeted profits, such as trimming discretionary expenditures, cutting R&D, and adjusting production and quantity (Roychowdhury et al., 2006), also adds complexity to the environment. As REM is not accrual-based manipulation it is harder to detect with traditional audit methodologies, making it so attractive in poorly governed countries such as Sri Lanka.

Cross-country research by Zang (2011) and (Cohen & Zarowin, 2010) reveals that when confronted with regulatory pressure from REM to comply with regulations or standards, firms often tend to replace REM with accrual manipulation. In developing countries like Sri Lanka where enforcement is weak, and there are optional disclosures of internal control, firms have the possibility to use both strategies.

Ali & Kamardin (2018) showed that insufficient regulatory enforcement in emerging countries encourages an environment for REM, such as sales overstatement, cost-cutting and overproduction. Although these practices also help to meet short-term earnings levels, they have the potential to impair a firm's financial condition in both the short and long run by depressing future cash flows, misrepresenting inventory valuation and reducing its competitive advantage. (Roychowdhury et al., 2006)(Cohen & Zarowin, 2008).

Real Earnings Management and Discretionary Expenditure Manipulation

REM is the practice of changing real world operating activities to manipulate reported earnings. A common technique of REM involves the manipulation of discretionary expenditures, encompassing research and development (R&D), advertising, maintenance, and selling, general, and administrative (SG&A) costs. Prior studies indicate that effective internal control mechanisms can mitigate earnings manipulation (Li et al., 2020)

Managers frequently cut these expenditures when they are facing pressure to meet the earnings expectations. (Roychowdhury et al., 2006)(Gunny, 2010). Lowering discretionary expenses instantly boosts reported net income and short-term cash flows because they are typically expensed in the period in which they are incurred, it may have an adverse effect on performance in the future. (Gunny, 2010)(Vorst, 2016).

For instance, prior studies discovered that CEOs nearing the end of their period often cut R&D expenditure to boost short-term earnings. Baber et al. (1991) and Bens et al. (2003) provide similar evidence.

Graham et al. (2005) discovered that more than 80% of respondents would reduce discretionary expenditures such as R&D or advertising to achieve their earnings benchmarks. This survey implies that REM is both prevalent and encouraged by business decision-makers.

However, investors consider R&D and some SG&A expenses as long-term investments. While Bhojraj et al., (2003) demonstrates that companies that surpass expectations by decreasing R&D underperform overall, Lev et al., (1996) and Chan et al., (1999) demonstrate that R&D is positively associated with future earnings and stock returns.

Wijesinghe & Kavinda, (2017) found similar evidence among listed manufacturing companies in Sri Lanka, concluding that REM through R&D cuts distorts profitability under high earnings pressure.

Internal Control Components and Earnings Management in the Sri Lankan Context

Internal control systems are widely considered to be important for the prevention of inaccurate financial reporting activity, and more especially REM. However, effectiveness depends on the implementation of each component. (Johnstone et al., 2011). The COSO (2013) framework is five interrelated components supported by seventeen underlying principles. McNally (2013) argues that these components and principles must operate together for internal controls to function effectively.

In Sri Lanka, many family-owned and founder-led firms face challenges in implementing this integrated framework. In Sri Lanka, accountability and ethical governance are compromised by limited board oversight, low auditing committee independence, and concentrated ownership. (Ashfaq & Rui, 2019). Most companies do not have standardised risk registers, periodic fraud risk assessments, and systematic responses to regulatory/market changes. Prominent levels of REM may occur through operational manipulation, such as overproduction or expenditure cuts. (Roychowdhury et al., 2006)(Hermanson et al., 2021). Control activities are also weakened by inadequate segregation of duties and limited use of enterprise resource planning (ERP) systems. Information and communication systems remain fragmented, while monitoring activities are frequently treated as formalities rather than effective oversight mechanisms, allowing REM behaviours to persist (Habib et al. (2022); Ali & Kamardin (2018))

Research Methodology

The study is quantitative in nature, and data are collected from secondary sources such as annual reports of companies quoted at CSE. Secondary data is usually obtained from the companies' annual reports and financial statements. A content analysis method is used to evaluate internal control effectiveness based on relevant disclosures, which focus on the five COSO Framework components. These qualitative findings are systematically coded and transformed into quantitative measures. According to Roychowdhury et al. (2006) This study focuses on abnormal discretionary expenditures as a proxy for discretionary expenditure manipulation.

Abnormal discretionary expenditures

$$\frac{DISC}{TAt - 1} = \alpha + \beta_1 \frac{1}{TAt - 1} + \beta_2 \frac{St - 1}{TAt - 1} + \varepsilon$$

Operationalisation of Variables

The variables used in this study are operationalised in such a way that the research hypothesis can be evaluated empirically. The dependent variable is REM, and it is quantified using Abnormal Discretionary Expenditures, which includes a reduction in advertising, research and development (R&D), and selling, general, and administrative (SG&A)

expenses.(Roychowdhury et al., 2006). These deviant discretionary spending are approximated as the residuals of a regression of discretionary spending on sales, where high negative values represent increased discretionary cost reductions to accommodate REM.

The main independent variable, Internal Control System (ICS) quality, is measured using the five components of the COSO framework, each represented by observable indicators. The control environment reflects organisational integrity, ethical values, board oversight, organisational structure, assignment of authority and responsibility, commitment to competence, and enforcement of accountability.(McNally, 2013).

Risk assessment includes objective setting, risk identification and analysis, fraud risk assessment, and the evaluation of significant changes (McNally, 2013). Control activities comprise the selection and development of control measures, general technology controls, and implementation through formal policies and procedures (McNally, 2013). Information and communication refer to the relevance and quality of information and the effectiveness of internal communication within the organisation and with external stakeholders (McNally, 2013). Monitoring activities are operationalised through ongoing and independent evaluations and the identification and reporting of control deficiencies (McNally, 2013).

In addition to the dependent and independent variables, several control variables are included to account for firm-specific characteristics. Market capitalisation (MC) is measured as the natural logarithm of the firm's year-end market capitalisation. Profitability is measured using return on assets (ROA) lagged by one year ($t-1$), calculated as net income before extraordinary items divided by the average total assets over the previous two fiscal years. Firm size (SIZE) is measured as the natural logarithm of total assets to capture the scale of operations. (Wali & Masmoudi, 2020).

The population consists of all companies listed on the CSE during the period 2020–2024, covering a broad range of industries. The sample comprises all non-financial firms listed on the CSE over the same period, selected using a purposive sampling technique. Financial institutions, including banks, insurance companies, and other financial service providers, are excluded due to their distinct regulatory frameworks, capital structures, and financial reporting requirements.

Conceptual Framework

The conceptual framework for the study is developed through a process of drawing upon theoretical and empirical inputs, which are depicted in Figure 3.1 Conceptual Framework. The dependent variable in this study is REM, which is the manipulation of operating activities such that reporting earnings can be managed. Internal Control Systems is an independent variable, which is measured by five aspects of the COSO Framework: control environment, risk assessment, control activities, information and communication, and monitoring.

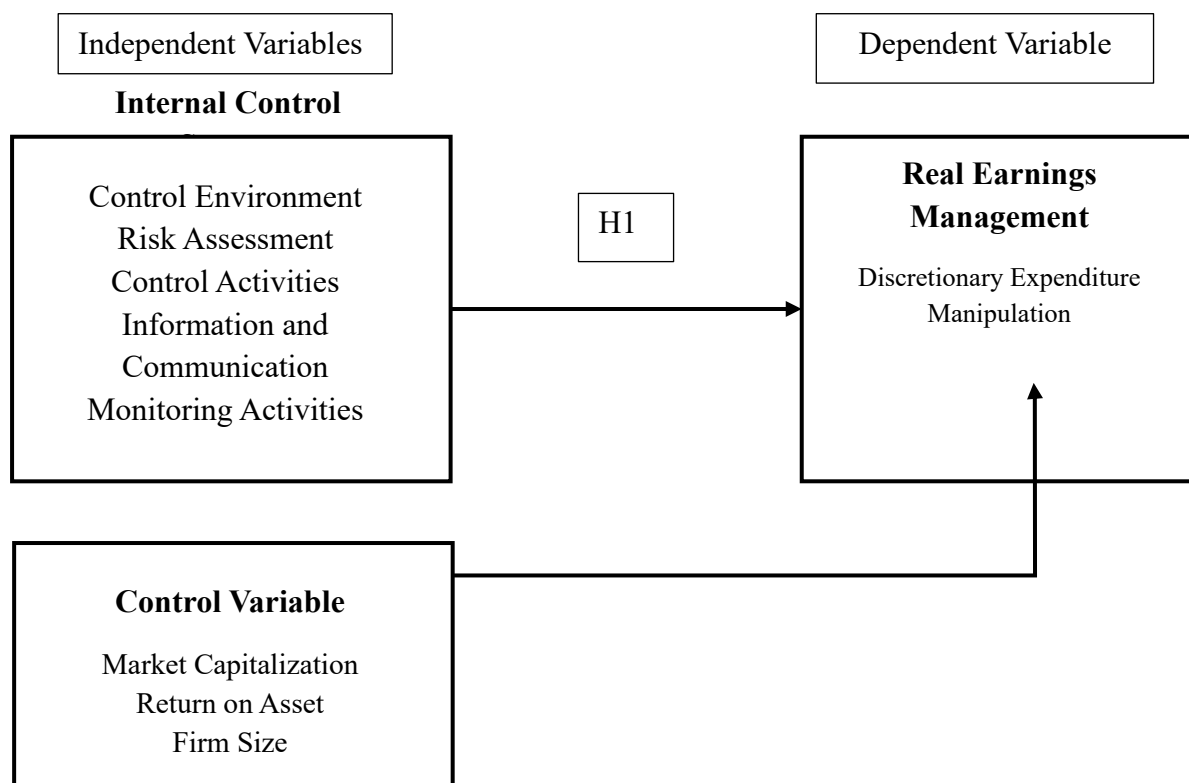


Figure 1. Conceptual Framework

Development of Hypothesis

An effective internal control system promotes transparency and accountability, making it harder for management to use discretion in a manner that reduces long-term economic profitability for short-term advantage.

Accordingly, the research proposes the following hypothesis:

H₁: There is a significant impact of the quality of internal control systems on real earnings management in listed companies in Sri Lanka.

According to these theoretical terms, more effective internal control quality is associated with lower levels of abnormal discretionary expense reductions, indicating less reliance on REM through cost-cutting in discretionary areas. This relationship is explored using firm-level data from annual reports and content analysis techniques to assess internal control quality using COSO principles.

Model specification and Analysis Technique

This study uses quantitative data analysis to explore the effect of internal control quality on REM. Panel data regression models were employed, with Ordinary Least Squares OLS and fixed/random effects determined by the Hausman test.

The regression model is specified as follows:

$$REM = \beta_0 + \beta_1 ICindex + \beta_2 MC + \beta_3 ROA_{t-1} + \beta_4 SIZE + \varepsilon$$

Where:

REM = Real Earnings Management (measured through Abnormal Discretionary Expenditure)

IC_INDEX = Internal Control Index

MC = Market Capitalisation (log value)

ROA_{t-1} = Return on Assets (lagged)

SIZE = Firm Size (log of total assets)

ε = error term

All statistical tests are conducted using EViews, depending on the dataset structure and model requirements. These tools enable robust handling of panel data from listed Sri Lankan companies from 2020 to 2024.

Results and Discussion

The chapter begins with descriptive statistics of the principal aspects of research variables including Abnormal Discretionary Expenditure (REM), Internal Control Index (INTERNAL_), Company size (SIZE), Market Capitalisation (LOGMC), and prior-year profitability (ROA_{t-1}). Several types of diagnostic tests were also performed to ensure the accuracy and goodness of the regression model.

Descriptive Statistics and Diagnostics

Descriptive statistics provide summary measures from large data sets in terms that are easily interpretable and allow researchers to examine various patterns, central tendency, dispersion, and symmetry of data ahead of time before proceeding with inferential analysis (Kaliyadan & Kulkarni, 2019).

Table 1. Summary of Descriptive Statistics

Variable	REM	INTERNAL_	MARKET_C	ROA _{t-1}	SIZE__TA
Mean	-0.006405	13.02530	21.68944	0.033626	22.31382
Median	-0.015064	13.00000	21.60374	0.032151	22.31500
Maximum	0.070107	16.00000	23.89304	0.144999	24.20071
Minimum	-0.061559	10.00000	19.77171	-0.058158	20.63777
Std. Dev	0.041085	2.022333	1.202162	0.238602	0.970343

The average of REM (abnormal discretionary expenses) is -0.006405, suggesting firms make downward adjustments to their discretionary spending. Here, listed firms on the CSE may also cut discretionary outlays such as advertising, R&D, and administration in a bid to control cash flows. These results are consistent with previous observations of Roychowdhury et al. (2006) and Graham et al. (2005) that managers often engage in discretionary expenditure cuts as the form of REM.

The meaning of the Internal Control Index (INTERNAL_) is 13.0253, and it has a range between 10 and 16, indicating that there exists an extensive dispersion in companies' internal control quality. This diversity suggests that some firms have strong internal controls, others weak ones. The means is publicly close to the media (i.e., 13.0000), therefore, the distribution of internal control quality is reasonably balanced. Close results were also presented in the study by Boulhaga et al. (2022) and Ashfaq & Rui (2019), who found that the degree of internal control system varies among firms in developing countries because of the differences in governance mechanisms, governance processes, and compliance enforcement.

The market capitalisation and the size of the firms imply that most of the firms are medium and large, whereas profitability is spread across firms. These aspects are equal to previous literature on earnings management, which indicates that firm-specific heterogeneity plays a role in managerial reporting behaviour.

Regression Analysis

Based on the results of the Hausman specification test and heteroskedasticity diagnostics, the Fixed Effects Model (FEM) was chosen as the most suitable estimation technique to use in this study. The findings of the Hausman test reveal that the independent variables are correlated with firm-specific effects, especially the Internal Control Index, and show that the Fixed Effects Model is consistent and allows unbiased estimates.

Table 2. Summary of Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.156543	0.035254	4.440401	0.0000
Internal_Control_Index	-0.007413	0.000674	-11.00296	0.0000
Market_Capitalization	-0.000800	0.000988	-0.809774	0.4184
Roat _{t-1}	-0.007807	0.013508	-0.577982	0.5635
Size_Total_Asset	-0.002186	0.001383	-1.580038	0.1146

Table 3. R-Squared & F Statistic Analysis

R-squared	0.915409	Adjusted R-squared	0.893748
S.E. of regression	0.013392	Sum squared resid	0.118373
F-statistic	42.26169	Prob(F-statistic)	0.000000
Durbin-Watson stat	1.948972	Log likelihood	2497.248

The regression outcome shows that the model has a high degree of explanatory ability, which points to the fact that the independent and control variables describe a significant percentage of variation in REM. The regression model is significant, and the Durbin-Watson value indicates that there is no autocorrelation.

The statistical significance of the coefficient of the Index of the Internal Control is negative and has significant values at the 1 per cent level. This negative value indicates a high negative association between the quality of internal control and the REM. The level of REM decreases with a rise in the effectiveness of internal control systems.

Market capitalisation, firm size, and lagged profitability exhibit negative, but statistically insignificant, relationships with REM. These findings imply that even though bigger and more profitable companies might be subjected to more governance and control, firm-specific factors do not play a significant role in influencing REM behaviour in Sri Lanka.

The result supports the main hypothesis of the research, which states that the prominent level of internal control quality will lower the real earnings manipulation in the Sri Lankan listed companies. Strong internal controls are used to increase transparency and limit the discretion of the managers to manipulate operating activities.

Result of Hypothesis Testing

The Fixed Effects Regression Results in Table 2 show that the coefficient of the Internal Control Index is -0.007413 with a p-value of 0.0000, indicating significance at the 1% level. This confirms that higher internal control quality is associated with lower levels of REM among Sri Lankan listed companies. Accordingly, stronger internal control systems discourage managers from manipulating earnings through discretionary operational decisions. As the p-value is below the 5% significance level, the null hypothesis is rejected, and the alternative hypothesis is accepted. Therefore, internal control quality has a statistically significant impact on real earnings management in Sri Lankan listed firms.

The regression results further indicate that internal control quality plays a critical role in mitigating REM practices. The strong negative relationship between internal control quality and abnormal discretionary expenditure supports Agency Theory, which posits that effective internal control systems reduce information asymmetry between managers and shareholders and constrain opportunistic managerial behaviour. When internal controls are robust, managers face fewer incentives and opportunities to manipulate operational activities to achieve short-term earnings targets.

These findings are consistent with Roychowdhury et al. (2006) who document that managers engage in operational manipulation, particularly through reductions in discretionary expenditures, under weak governance mechanisms. Similarly, Gunny (2010) finds that firms with strong governance structures are less likely to engage in value-destroying REM practices. The results further align with Boulhaga et al. (2022) and who report that effective internal control systems significantly reduce both accrual-based and real earnings management in emerging markets. This cross-institutional similarity indicates that internal control is an important control mechanism at both market maturity levels.

The insignificant effects of market capitalisation and firm size imply that earnings management behaviour in Sri Lanka is not primarily determined by firm scale or market exposure. This observation supports Zang's (2011) argument that market-based monitoring mechanisms are

less effective in emerging capital markets due to weak enforcement and low investor activism. Moreover, the low correlation between lagged profitability and REM suggests that the previous performance of firms has no strong impact on the manipulation of discretionary operations. This aligns with Cohen & Zarowin (2008) and Gunny (2010), who argue that the effect of profitability on REM is contextual and shaped by broader governance structures.

The findings are further affirmed by diagnostic and specification tests. According to multicollinearity tests, explanatory variables are not too correlated, meaning that the coefficient estimates are dependable. The EGLS estimation is used to deal with cross-sectional heteroskedasticity, thus enhancing the efficiency and validity of the regression results. The similarity of findings between fixed effects and different weighting structures proves that the negative association between internal control quality and REM is model-insensitive. Further, the fixed effects design balances observed firm-specific factors and enables the study to examine within-firm time-specific variation to make better inferences about the relationship between internal control quality and REM.

In the Sri Lankan context, these findings are particularly relevant given past corporate failures such as ETI Finance and Entrust Securities, where weak internal control environments permitted financial manipulation despite existing regulatory frameworks. This highlights that regulatory compliance alone is insufficient without the effective implementation of internal control mechanisms. In general, the findings substantiate the primary hypothesis and underline the significance of internal control systems as an important governance instrument to improve financial reporting quality and investor trust in Sri Lanka.

Conclusion and Implications

Summary of Key Findings

This paper investigated the effect of ICS on REM among non-financial firms listed on the CSE within the years 2020–2024. The analysis was driven by the growing uncertainty on earnings control and flaws in corporate governance that erode the integrity of financial reporting. Although the SEC, the CBSL, and the Code of Best Practices on Corporate Governance (2017) have enforced internal control regulations, several corporate failures and financial scandals in Sri Lanka suggest the lack of effectiveness in implementing the internal controls.

A quantitative research design was employed using secondary data obtained from the annual reports of selected non-financial CSE-listed firms over five years (2020–2024). Real earnings management was estimated using the Roychowdhury et al. (2006) model based on abnormal discretionary expenditure (ADE), which includes differences between actual and normal levels of discretionary expenditure, like advertising, R&D, and administrative expenses. The regression results show a statistically significant negative relationship between internal control quality and REM ($\beta = -0.007413$, $p < 0.01$). The high coefficient of determination ($R^2 = 0.9158$) indicates that internal control quality, together with control variables, explains 91.54% of the variation in REM, demonstrating strong explanatory power.

Theoretical and Practical Implications

The research is grounded in Agency Theory and the COSO (2013) Internal Control Framework. Agency Theory suggests that inadequate monitoring enables managers to act in their own interests, including manipulating financial results to achieve short-term objectives, thereby creating conflicts between managers and shareholders. Conversely, the COSO framework offers a structured basis for evaluating internal control effectiveness through its five components. The findings indicate that strong internal controls across these components reduce managerial discretion and enhance ethical and transparent financial reporting.

Effective ICS reduces information asymmetry between managers and shareholders, thereby limiting opportunistic behaviours like manipulation of operational activities to meet earnings targets. Internal controls and risk assessment, monitoring, and ethical governance can thus prove significant in limiting earnings manipulation, retaining investor trust, and overall financial soundness and stability of the Sri Lankan corporate sector. The findings are consistent with international evidence (Roychowdhury et al. (2006); Cohen & Zarowin (2008); Boulhaga et al. (2022)), confirming that internal control quality is a significant determinant of earnings quality, particularly in developing countries like Sri Lanka.

From a policy perspective, regulators such as the SEC, CBSL, and CA Sri Lanka should enhance enforcement by introducing mandatory internal control reporting requirements. The use of standardised disclosure forms and assurance systems would enhance consistency and comparability of firms. The board of directors and audit committees should also be entrusted with greater responsibility to strengthen the quality of internal control by ethical leadership, frequent internal audit, and increased supervision of high-risk areas such as discretionary expenditures and related-party transactions.

The role of internal audit is also important in governance. Audit companies need to go beyond the areas of statutory financial audits to give assurance of the effectiveness of internal control systems, especially large and listed companies. Besides this, investors and financial analysts ought to use internal control quality in their investment decision-making.

Overall, strengthening internal control systems should be viewed not merely as a compliance requirement but as a strategic investment in organisational integrity and sustainability. Robust internal controls enhance investor confidence, reduce managerial opportunism, and contribute to the development of a more transparent and resilient capital market in Sri Lanka.

Limitation and Future Research Directions

The research only covers non-financial companies listed on the CSE in the years 2020-2024. Future studies can consider a longer time horizon and sectoral coverage to enhance the applicability of the results in general. Financial institutions and state-owned businesses can be considered because they have different regulations and internal control needs.

Other variables of governance that might be included in future research include board characteristics, ownership structure, and quality of audit to determine their interaction with the internal control systems with regard to earnings management. Moreover, qualitative designs

based on interviews or surveys of auditors, regulators, and corporate managers might reveal more about the practical issues surrounding the implementation and monitoring of internal controls, which are impossible to measure quantitatively.

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THE IMPACT OF MANAGERIAL COACHING ON EMPLOYEE PRODUCTIVITY: A STUDY BASED ON BANKING SECTOR EMPLOYEES IN HAMBANTOTA DISTRICT

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Abstract

Purpose: This study investigates the impact of managerial coaching specifically in the task guidance, task feedback, and employee support dimensions on employee productivity in the banking sector in Hambantota District. As organizations place increasing emphasis on human capital development in search of competitive advantage, successful managerial coaching has emerged as an integral tool for influencing employees' performance and organizational success. This research aims to investigate the influence of different dimensions of coaching on employee productivity in the organizational context.

Design/methodology/approach: Embracing a quantitative research design, evidence was collected with the assistance of structured questionnaires administered to a sample of 230 bank employees in selected state and private banks in Hambantota. Data were analyzed in SPSS 26 version using descriptive statistics, ANOVA, correlation, and regression analysis to verify the relationships and determine the strength and significance of each factor's effect on productivity.

Findings: The findings indicate that all three aspects of managerial coaching - task guidance ($r = 0.934$), task feedback ($r = 0.931$), and employee support ($r = 0.932$) have strong positive relationships with employee productivity and multiple regression analysis revealed that the regression model was statistically significant, $F(1, 228) = 2364.304, p < .001$, confirming that the set of independent variables reliably predicts employee productivity. That is, employees who receive clear task-related guidance, constructive performance feedback, and ongoing support from their managers are found to demonstrate higher levels of motivation, efficiency, and goal achievement.

Research limitations/implications: The findings emphasize the need to equip managers with coaching competencies to ensure that coaching practices are not only carried out but done so in a manner that aligns with organizational objectives.

Originality/value: In conclusion, the study contributes to the literature on managerial development and offers practical recommendations for improving employee productivity through structured coaching practices. It highlights that task focused coaching and supportive managerial behaviours are essential for driving employee productivity in service-driven sectors such as banking.

Keywords: Employee Productivity; Employee Support; Managerial Coaching; Task Feedback; Task Guidance

Introduction

Managerial coaching, as a strategy within organizational development, is primarily aimed at promoting employee growth by fostering continuous learning and development (McLean et al., 2005). According to the International Coaching Federation, (2023) coaching is defined as a dynamic partnership that inspires creativity and deep thinking, empowering individuals to achieve personal growth and make meaningful contributions to their organizations. Research by Jaiswal & Dhar, (2015); Ghadi et al., (2013); Zehir et al., (2011) underscores the importance of leaders possessing strong coaching skills to develop and retain talented team members.

Additionally, the study seeks to recognize better practices of coaching programs, particularly in environments where managerial transitions are frequent, such as the banking sector. In the end this study's results will give businesses useful information on how to use coaching to help employees grow, do better work, and be more productive.

While the role of managerial coaching in influencing employee outcomes has been widely recognized globally, there is limited empirical evidence examining how specific dimensions of managerial coaching (such as task guidance, task feedback, and employee support) individually and collectively influence employee productivity, particularly in developing country contexts. Furthermore, in the Sri Lankan context, existing studies have largely focused on general leadership styles rather than examining structured managerial coaching practices in detail. Preliminary research conducted among employees and managers of selected banks in Hambantota District revealed several obstacles in applying coaching practices, including the lack of formal coaching frameworks, insufficient training for managers, time constraints, and a task-oriented culture that prioritizes output over employee development. Staff members reported that while they receive task-related instructions, they rarely receive consistent feedback, encouragement, or personalized guidance from their managers key elements of effective managerial coaching.

Therefore, this study addresses a clear research gap by empirically examining the impact of distinct dimensions of managerial coaching (task guidance, task feedback, and employee support) on employee productivity within the banking sector in Hambantota District. This study also contributes by providing context-specific evidence from a semi-urban Sri Lankan setting - Hambantota which has been largely underexplored in prior research.

In this context, the problem of the study is identified as “What is the impact of managerial coaching on employee productivity in banking sector in Hambantota District?”

The main concern of this study is to examine the impact of managerial coaching on employee productivity in the banking sector in the Hambantota District. Hence, the objectives of the research study are:

1. To determine the level of managerial coaching on employee productivity in banking sector in Hambantota District.

2. To examine the relationship between (i) Task guidance and employee productivity (ii) Task feedback and employee productivity (iii) Employee support and employee productivity in banking sector in Hambantota District.
3. To examine the impact of (i) Task Guidance on employee productivity (ii) Task feedback on employee productivity (iii) Employee support on employee productivity in banking sector in Hambantota District.

This study on the impact of managerial coaching on employee productivity in the banking sector of the Hambantota District holds considerable significance for multiple stakeholders. First, for banks operating in this district, understanding the connection between coaching and employee productivity offers insight into how managerial practices can be optimized to enhance productivity. For bank employees, the results of this study will give an evidence-based guide in infusing managerial coaching into staff development programs.

Literature Review

Employee Productivity

Employee productivity is the effectiveness with which an employee accomplishes their duties aligned with organizational goals. Usually, productivity is captured as an output per employee over a given period of time relative to the given timeframe (time, skills, effort, resources) (Falola et al., 2014). However, in modern industries like services and banking, productivity encompasses even the customer service quality, operational precision, compliance to risk management protocols, and responsiveness to technological change.

From a theoretical perspective, employee productivity can be explained through several organizational behavior theories. The Human Capital Theory suggests that employees' knowledge, skills, and abilities significantly contribute to productivity, emphasizing the importance of development practices such as coaching. Additionally, the Social Exchange Theory (Blau, 1964) explains that when employees receive support, guidance, and feedback from managers, they feel obligated to reciprocate through improved performance. Furthermore, Goal-Setting Theory (Locke & Latham, 1990) highlights that clear guidance and feedback enhance employee focus and performance, thereby increasing productivity. These theories provide a strong foundation for linking managerial coaching practices with employee productivity.

Table 1: Definitions of EP given by different researchers

Author	Definition
<i>Drucker (1999)</i>	Productivity is the balance between all factors of production that will give the maximum output with the minimum effort.
<i>Mathis & Jackson (2010)</i>	Employee productivity is the amount of goods and services generated by an employee

<i>Koopmans et al. (2014)</i>	in a given period of time, with consideration for quality and effectiveness.
<i>Osborne & Hammoud (2017)</i>	Employee productivity is the quantity of work performed by an employee within a specific period of time, with reference to quality, quantity, and time.
<i>Alasadi & Al Sabbagh (2015)</i>	Productivity is the individual contribution with regards to time and effort invested and influenced by job satisfaction and motivation.
<i>Campbell & Wiernik (2015)</i>	Productivity is the effectiveness with which human resources are deployed for the purpose of achieving organizational goals, influenced by training and managerial conduct.
<i>Jagannathan (2014)</i>	Organizational effectiveness behaviors in job performance leads to productivity.
<i>M. Ali et al. (2020)</i>	Employee productivity is a result of employee engagement, reflective of the level to which employees are engaged and motivated towards work goals. Productivity refers to employees' ability to produce quality outputs aligned with organizational demands and motivated by leadership and workplace environment.

Source: Developed by the researchers for the research purpose based on literature by authors

In this study, employee productivity is defined as the effectiveness with which human resources are deployed for the purpose of achieving organizational goals, influenced by training and managerial conduct. (Alasadi & Al Sabbagh, 2015).

Managerial Coaching

In managerial coaching, which is sometimes used interchangeably with manager as coach, managers take on the role of coaching an individual in daily interactions that are solely focused on reaching work goals (Fillery-Travis & Lane, 2020).

The manager serves as a coach by carrying out a number of tasks, including giving subordinates clear instructions and role modeling, providing frequent feedback to improve performance, facilitating development for success, acknowledging their accomplishments and offering just rewards, and offering learning opportunities to advance their knowledge and abilities (Ellinger & Bostrom, 1999; Park, Mclean, et al., 2008).

The concept of managerial coaching is strongly supported by Social Exchange Theory, which suggests that when managers invest time and effort in coaching employees, employees are more likely to respond with increased commitment and higher productivity.

Table 2: Definition of MC given by different researchers

Authors	Definition
<i>Ellinger et al. (2003)</i>	Managerial coaching refers to a set of manager behaviors applied in employee learning and performance improvement.
<i>Hunt (2017)</i>	Coaching is an employee-manager helping relationship offering feedback, skill building, and goal assistance.
<i>Evered & Selman (1989)</i>	Managerial coaching is a change process whereby the manager assists employees in unleashing potential and enhancing performance. Manager coaching comprises managerial activities that develop employees through trust, encouragement, and performance dialogue.
<i>McLean et al. (2005)</i>	Manager coaching involves developmental discussions aimed at developing the skills, confidence, and contribution of employees in the workplace.
<i>Hagen (2012)</i>	Manager coaching is a constant process of questioning, directing, and motivating employees to foster individual and team performance.
<i>Gilley, Gilley, & Kouider (2010)</i>	Managerial coaching describes actions helping employees to learn through empowerment, support, and problem solving in a work team.

Source: Developed by the researchers for the research purpose based on literature by authors

In this study, managerial coaching is identified as a set of manager behaviors applied in employee learning and performance improvement (Ellinger et al., 2003).

Factors Influencing Managerial Coaching

Task Guidance

Guidance, (2008) described Task guidance as the transfer of innovation to bring about the transference of learning related to different ways of offering advice and guidance to those in

employment, which is defined as advice and guidance integrated into the workplace. The proper design and model of task guidance in creative organization enable these workers to develop better knowledge, attitude, and skills competencies. They will be more creative, innovative, and productive to later win in the face of various problems and challenges to get into a better future (Sumardi, 2017). According to Goal-Setting Theory, clear and specific guidance helps employees understand expectations and align their efforts with organizational goals, leading to improved performance and productivity.

Task Feedback

Advice, criticism, or information regarding the significance or usefulness of something or someone's work are all considered forms of feedback. According to Nikolic et al. (2020), goal setting and task feedback have evolved into linked tools for management because they are believed to have both informational and motivating purposes that increase worker productivity. From a theoretical standpoint, Feedback Intervention Theory suggests that timely and constructive feedback helps employees adjust their behavior and improve task performance. This aligns with Goal-Setting Theory, where feedback serves as a mechanism to monitor progress toward goals. Feedback is said to be able to reveal information regarding the appropriateness, precision, and correctness of job activities.

Employee Support (ES)

Employee Support, commonly referred to as organizational support, is thought to be a crucial element in boosting employee performance. This dimension is strongly supported by Social Exchange Theory, which suggests that when employees perceive higher levels of support, they reciprocate with increased effort, commitment, and productivity. According to the findings of a recent study, workers who feel more supported by their organizations typically perform better. Customers see increased productivity as a result of the organization's cooperation and support for each individual employee (Mughal, 2019).

The relationships among variables

Managerial Coaching and Employee Productivity

Employee productivity is the most important outcome of managerial coaching, assert Kim et al. (2015). Improved employee productivity is the result of managers skills including, managerial coaching, relationship-building, active listening, asking insightful questions, accepting employee ideas, emphasizing teamwork, communicating openly with staff, prioritizing each employee's needs, and supporting their growth (Cox et al., 2010). Additionally, Raza et al. (2017) shown that employee productivity is positively impacted by managerial coaching. This study develops the following hypothesis based on the discussion.

H₁: There is a positive and significant relationship between Managerial Coaching and Employee productivity.

Task guidance and Employee Productivity

Shantha, (2019) showed that Sri Lankan bank employees whose supervisors provided clear role delineation and comprehensive guidance performed better in providing services and compliance. In the same way, Bweng, (2015) noted that at the Co-operative Bank of Kenya, specific task guidance reduced operational errors and enhanced employee attention to work. Effiong et al., (2024) indicated that the result revealed that task guidance has positive and significant effect on employee productivity. Therefore, this study develops the following hypothesis.

H_{1a}: There is a positive and significant relationship between Task Guidance and Employee productivity.

Task Feedback and Employee Productivity

According to Sen (2017), task feedback is a technique used to enhance an individual's performance, behavior, or ability. Therefore, in order to enhance their performance and change their behavior, the employees who received the feedback must review each and every one. In addition, the study discovered that the goal of the feedback performance is more attainable when it comes from a trustworthy and knowledgeable source. According to the study, in order to workers to feel more motivated and perform better at work, they require both constructive criticism and positive reinforcement. However, before offering constructive criticism, the management must first provide employees with positive feedback. (Zamri and others, 2021). Further Effiong et al., (2024) indicated that there is a significant positive relationship between task feedback and employee productivity. Based on the discussion, this study develops the following hypothesis.

H_{1b}: There is a positive and significant relationship between Task Feedback and Employee productivity.

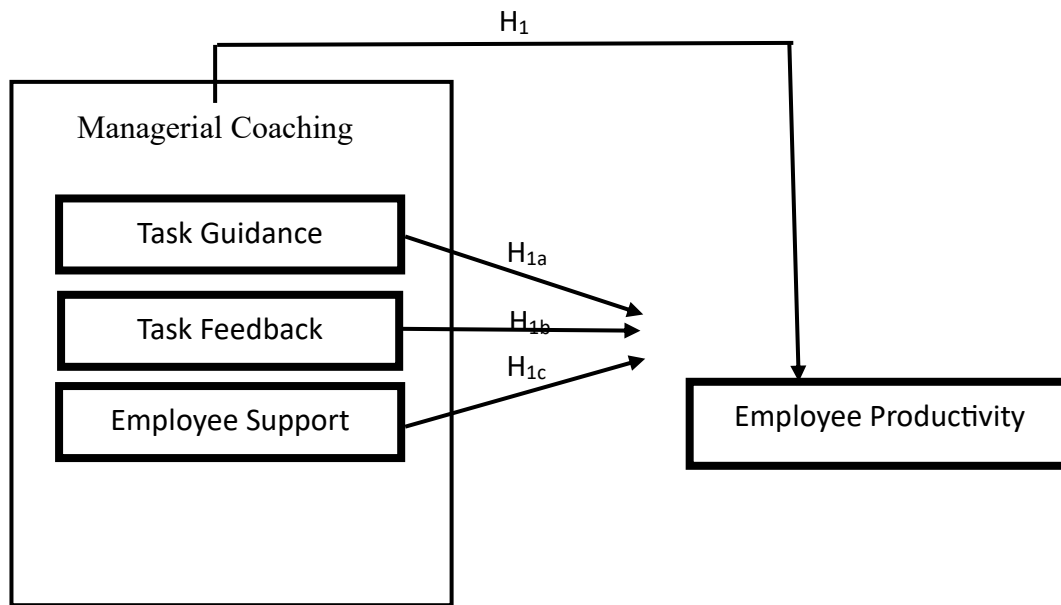
Employee Support and Employee Productivity

Workplace resources and peer support also contribute to productivity by facilitating knowledge sharing and effective task completion. As per research conducted by Chiaburu & Harrison, (2008) employees in supportive team environments demonstrate greater problem-solving capabilities and creativity, resulting in improved performance. In addition, having access to needed tools and technology contributes to productivity by reducing workflow disruptions and improving task efficiency (Demerouti et al., 2001). Staff members who are supported tend to be more committed to their jobs, which results in greater job satisfaction and reduced turnover (Podsakoff et al., 2000). Based on the discussion, this study develops the following hypothesis.

H_{1c}: There is a positive and significant relationship between Employee support and Employee productivity.

To find the operational definitions of the concepts, the following variables and concepts found in the study problems are conceptualized. The independent and dependent variables of this study are conceptualized as indicated in Figure 1.

Figure 4: Conceptual framework



Source: Deduced from the Literature

Research Methodology

This study explores social reality by collecting data in an objective way, primarily relying on quantitative data and utilizing existing literature to develop hypotheses. These elements align with the core principles of positivism, which underpin this research. This research project adopted a deductive approach. Questionnaire was used in gathering data from the sample. The researchers used a quantitative research technique to prove assumptions, predict, and explain events. Data used in the study was obtained over a period of time. This is a cross-sectional study.

The objective of this study is to find the impact of managerial coaching on employees' productivity within the banking sector. Due to the focus, Hambantota District was selected for research. Hambantota is a district within the Southern Province of Sri Lanka, where the financial sector is expanding and growing. The unique economic environment of the district, ongoing infrastructural development, and diverse human resource base provide a rich background to explore the impact of managerial coaching practices on bank productivity.

The targeted population is employees of selected banks in Hambantota district in Sri Lanka. The total population of the study is 566 employees working in the selected banks in Hambantota district. The researchers used simple random sampling since it ensures the representativeness of a sample drawn from a population by offering each member an equal opportunity for selection.

The four banks selected for this study: Bank of Ceylon, People's Bank, Hatton National Bank PLC, and Commercial Bank PLC were selected based on their significant presence and operational capability in the Hambantota District.

According to Krejcie & Morgan, (1970) the recommended sample size is 230. In this research study, a sample of 230 respondents has been selected to collect the required data for the research study. The sample consists of 230 bank employees in Hambantota District.

Equation 1: Weighted Sample Size

$$\text{No of sample Respondents} = \frac{\text{population of the study}}{\text{Total Population of the Study}} \times 230$$

Table 3: Population and weighted sample size

No.	Name of the Bank	Population	Sample
01.	Bank of Ceylon	192	78
02.	People's Bank	223	90
03.	Hatton National Bank PLC	73	30
04.	Commercial Bank PLC	78	32
Total		566	230

Source: Developed by the researchers for the research purpose

Results & Discussion

The researchers used univariate analysis to determine the level of managerial coaching on employee productivity in banking sector in Hambantota district, bi-variate analysis to examine the relationship between (i) Task guidance and employee productivity (ii) Task feedback and employee productivity (iii) Employee support and employee productivity in banking sector in Hambantota District, and multiple regression analysis to examine the impact of (i) Task Guidance on employee productivity (ii) Task feedback on employee productivity (iii) Employee support on employee productivity in banking sector in Hambantota District.

The summary of personal details

Table 4: Summary of personal details

		No. of Respondents	Percentage (%)
Name of the Bank	Bank of Ceylon	78	33.9
	Commercial Bank	32	13.9
	Hatton National Bank PLC	30	13.0
	People’s Bank	90	39.1
Gender	Male	112	48.7
	Female	118	51.3
Age	Less than 25	52	22.6

	26–35	51	22.2
	36-45	53	23.0
	Above 46	74	32.2
Job experience	Less than 5 Years	94	40.9
	5 – 10 Years	67	29.1
	More than 10 years	69	30.0
Education Qualifications	A/L	60	26.1
	Bachelor Degree	62	27.0
	Postgraduates	48	20.9
	professional qualifications	60	26.1
Job positions	Manager	23	10.0
	Assistant Manager	73	31.7
	Executive Officer	55	23.9
	Junior Executive Officer	45	19.6
	Staff Assistant	34	14.8

Summary of research details

This research has two variables, among that Managerial Coaching (task guidance, task feedback & employee support) is the independent variable, and employee productivity is the dependent variable. In order to analyze the objectives of the study univariate analysis, bivariate and multivariate analysis are used. Univariate analysis was used to analyze the first objective; bivariate analysis was used to analyze the second objective and multivariate analysis was used to analyze the third objective of the study.

Univariate Analysis

Objective one: To determine the level of managerial coaching on employee productivity in banking sector in Hambantota District.

In this analysis, descriptive statistics were used in examining the central tendencies, variability, and the nature of distribution characteristics of the four main constructs analyzed in this research: Task Guidance, Task Feedback, Employee Support and Employee Productivity.

Table 5: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Task Guidance	230	1.0	4.8	3.309	0.5841
Task Feedback	230	1.2	4.8	3.301	0.5814
Employee Support	230	1.4	4.8	3.305	0.5754
Employee Productivity	230	1.167	5	3.324	0.5880

Source: Survey Data

Task Guidance suggests that the majority of employees partly agree that their superiors offer them clear, formal instructions and directions in relation to their duties in the line of duties. Its standard deviation is small, implying that most responses clumped around the mean thus there is a common perception by the majority of the participants. Based on this, it may be implied that clarity in carrying out tasks is somehow standardized in managerial performance in the banks researched.

Task Feedback shows moderate agreement among respondents. The accuracy in the responses regarding feedback indicates that employees tend to treat their managers as those who usually give constructive feedback regarding their performance. When it comes to banking, feedback systems have to be consistent to ensure that the quality of its service and the maintenance of regulatory standards remain high given that mistakes in terms of outcomes can be disastrous.

Employee Support responses illustrate some general opinion that managers are rather easily accessible and responsible. Examples of emotional and instrumental support may include resources provision, empathy or adaptability in tasks arrangements. Managerial support can be especially effective in the banking industry where things improve or even deteriorate with one wrong or correct decision and when dealing with customers who at all times are demanding.

Employee Productivity is the variable that recorded the highest mean of 3.324 with standard deviation of 0.5880. This shows that the level of productivity as it is perceived by employees is slightly higher than what they have considered to be managerial behaviors. This may be as a result of a cumulative effect of intrinsic motivation, organizational culture or a familiarity to the job. The findings indicate that, despite the moderate implementation of the coaching practices, the employees have an acceptable level of sense of personal productivity and the effectiveness of their performances.

Bivariate Analysis

Objective two: To examine the relationship between (i) Task guidance and employee productivity (ii) Task feedback and employee productivity (iii) Employee support and employee productivity in banking sector in Hambantota District.

Correlation Between Task Guidance and Employee Productivity.

Table 6: Correlation between task guidance and employee productivity

Variable	Employee Productivity	
Task Guidance	Pearson Correlation	0.934
	Sig (2-tailed)	0.000

Source: Survey Data

According to the table 6, the relationship of Task Guidance with Employee Productivity is very strong and Pearson coefficient came out at $r = 0.934$ ($p < 0.01$). It means that workers who feel more clarity and purpose of the jobs attributed to them have a far higher chance to improve productivity.

Correlation Between Task Feedback and Employee Productivity.

Table 7: Correlation between task feedback and employee productivity

Variable	Employee Productivity	
Task Feedback	Pearson Correlation	0.931
	Sig (2-tailed)	0.000

Source: Survey Data

According to the table 07, there is a strong relationship between Task Feedback and Employee Productivity as indicated by a Pearson coefficient of $r = 0.931$ ($p < 0.01$). This strong relationship emphasizes the value of feedback done with proper timeliness and constructively to influence the way employees behave and produce. High-stress situations encountered in banking institutions are best achieved through frequent feedback loops, which enable staff to make timely corrections of the course, adjust to regulatory and other changes, and provide improved quality of service.

Correlation Between Employee Support and Employee Productivity

Table 8: Correlation between task feedback and employee productivity.

Variable	Employee Productivity	
Employee Support	Pearson Correlation	0.932
	Sig (2-tailed)	0.000

Source: Survey Data

According to Table 08, there is a strong, positive relationship between Employee Support and Employee Productivity ($r = 0.932$, $p < 0.01$). This affirms the fact that managerial support,

whether emotional, instrumental or informational, is critical in employee performance. This situation is specifically applicable in-service heavy industries such as banking where stress among people, the pressure of customers and the intensity of work may often be quite high. Supportive managerial behavior helps to serve as a cushion and enables the employee to cope with difficulties, which is seen to increase productivity.

Multivariate Analysis

Objective 03: To determine the impact of (i) Task Guidance on employee productivity (ii) Task feedback on employee productivity (iii) Employee support on employee productivity in banking sector in Hambantota District.

Simple Regression Between Task Guidance and Employee Productivity

The results indicated a very strong positive relationship between task guidance and employee productivity ($R=0.934$). The model demonstrated excellent explanatory power, accounting for 87.3% of the variance in employee productivity ($R^2 = 0.873$), indicating that the task guidance is a substantial predictor of employee productivity.

The overall regression model was statistically significant, $F(1,228) = 1567.599$, $p < 0.01$, confirming that the task guidance significantly predicts employee productivity at 5% significance level. Further analysis of the regression coefficients revealed that the task guidance had a positive and statistically significant effect on employee productivity ($\beta = .934$, $p < .001$). Specifically, the unstandardized coefficient indicated that a one-unit increase in task guidance was associated with a 0.941-unit increase in employee productivity. The large standardized beta coefficient reflects the strong magnitude of this relationship. Overall, these findings suggest that effective task guidance plays a critical role in enhancing employee productivity.

Simple regression between Task Feedback and Employee Productivity

The findings indicated a strong positive relationship between task feedback and employee productivity, with a correlation coefficient of 0.931. The regression model explained 86.7% of the total variance in employee productivity ($R^2 = 0.867$), suggesting that variations in employee productivity are largely attributable to differences in task feedback. The regression equation was found to be statistically robust, as evidenced by a significant F-statistic, $F(1,228) = 1486.541$, $p < 0.01$. Examination of the regression coefficients showed that task feedback exerted a significant positive influence on employee productivity. Specifically, the unstandardized coefficient revealed that a one unit increase in task feedback resulted in 0.942-unit improvement in employee productivity, while the standardized coefficient ($\beta = 0.931$) indicated a strong effect size.

Simple regression between Employee Support and Employee Productivity

The analysis demonstrated a strong positive relationship between employee support and productivity, with a correlation coefficient of 0.932. The model explained 86.8% of the variance in employee productivity ($R^2 = .868$), indicating that employee support accounts for a substantial portion of differences in productivity among employees.

The regression model was statistically significant, $F(1, 228) = 1498.002, p < .001$, confirming the reliability of the model. The regression coefficients showed that employee support had a significant positive effect on employee productivity. Specifically, a one unit increase in employee support corresponded to a 0.953-unit increase in productivity. The standardized beta ($\beta = .932$) highlights the strong influence of employee support on employee performance. These results emphasize that providing consistent support to employees is critical for enhancing productivity and overall organizational effectiveness.

Multiple Regression Analysis

A multiple linear regression analysis was conducted to examine the collective impact of task guidance (TG), task feedback (TF), and employee support (ES) on employee productivity (EP). The overall model demonstrated an excellent fit, with a multiple correlation coefficient of 0.955, indicating a very strong association between the combined independent variables and employee productivity. The model accounted for 91.2% of the variance in employee productivity ($R^2 = .912$), highlighting the substantial explanatory power of these managerial coaching practices.

The regression model was statistically significant, $F(1, 228) = 2364.304, p < .001$, confirming that the set of independent variables reliably predicts employee productivity. Examination of the regression coefficients revealed that the composite measure of managerial coaching had a significant positive effect on employee productivity ($\beta = .955, p < .001$). This suggests that integrated managerial coaching practices combining task guidance, task feedback, and employee support play a pivotal role in enhancing employee performance.

These findings imply that the effectiveness of managerial coaching lies not in isolated practices, but in a balanced and coordinated application of multiple support strategies. Organizations, particularly in the banking sector, can benefit from investing in leadership development programs that train managers to adopt a coaching oriented approach, including open communication, regular performance discussions, and continuous employee support. Such practices are likely to improve productivity, job satisfaction, and employee retention, ultimately contributing to higher organizational performance.

Conclusion

Based on these analyses, the study yielded several key conclusions.

The findings suggest that there exist coaching practices at an operational level, although there is a considerable margin of improvement. The respondents acknowledged that managers indeed offer some sort of guidance, feedback and display a form of support but these actions are not deeply rooted throughout the organizational culture. Thus, the conclusion on the first objective resolves that the present level of coaching of managers is moderate implying elementary presence and not fulfillment.

Bi-variate analysis implies that as employees are given clear orders and well-organized guidelines by their supervisors, proper and right time performance assessment as well as advice

and emotional, resource-based, and motivational support enhances the employee performance to a high degree in increasing productivity.

Such high correlations confirm the conceptual model suggested in the given study properly and correlate well with the currently existing theories like Transformational Leadership Theory and the Job Demands-Resources (JD-R) Model. Based on these frameworks, proper managerial behaviors accomplish the intrinsic needs of the employees, including competence needs, autonomy needs and relatedness needs and as such, their engagement and output are enhanced. Therefore, the aim draws the conclusion that every parameter of coaching is closely connected to employee productivity and their strategic combination with the everyday work routines of the leadership is crucial to the formation of the high-performance conditions of work.

Regression analysis emphasizes the necessity and urgent role of task-related guidance in the sphere of service where the accuracy of the functioning and compliance are vital.

In Task Feedback, statistics are sufficient to affirm that both the corrective and inspirational forms of feedback are efficient tools of employee performance, as far as it can motivate people working in the company. Feedback, whether in a formal or informal capacity of evaluation or checking in, assists workers to change their input, get into line with organizational demands, and constantly improve.

The regression analysis of the impact of employee support on employee productivity, indicates that the support-based practices like emotional support, provision of resources, and attention have the greatest effect on productivity. Support does not only help to lessen stress in employees but also makes them feel a better part of the company and motivates them especially in customer relations and the pressure industry such as the bank sector.

On top of this, a composite regression that combined all the three coaching dimensions in a single managerial coaching index, showed an R^2 of 0.912, showing that the joint effect of coaching is stronger than that of any one dimension. This is an overall effect that proves that the engagement of an integrated coaching can produce the best productivity results.

Overall, each of the three dimensions of coaching, namely task guidance, feedback, and support, has powerful single influences on the productivity of the employees. However, the most powerful driver was employee support among them.

Following recommendations are suggested by researchers;

In this way, it will be possible to perform longitudinal studies that will determine the cause-effect contextualization regarding coaching behaviors and employee performance within time. And also interviews, focus groups or case studies can be used to supplement the learning of the individual implementation and experience of coaching. It is possible that, in future, a study is performed comparing the implementation of coaching in the various sectors (e.g. manufacture, healthcare, education, IT) to determine the contextual disparities.

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THE IMPACT OF PERCEIVED OVERQUALIFICATION ON YOUTH MIGRATION INTENTIONS IN SRI LANKA: THE MODERATING ROLE OF CROSS-CULTURAL ADAPTATION

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Abstract

Purpose: This paper seeks to examine the presence of perceived overqualification as a major cause of migration intentions among youth in Sri Lanka and the degree to which the relationship between perceived overqualification and migration intentions is moderated by cross-cultural adaptation. It seeks to find out the impact of the discrepancy between the qualifications of the individuals and the job requirements on their intention to migrate and the capacity to adapt to various cultural settings on this relationship as seen in the developing economies.

Design/methodology/approach: The research used a cross-sectional, quantitative research design. Data were gathered using a structured questionnaire that was applied on 216 undergraduate and graduate students in Sri Lanka. The study, based on the Push-Pull Theory of Migration, hypothesized the direct impact of perceived overqualification on migration intentions and the mediating role of cross-cultural adaptation. The moderation analysis, which was based on correlation and regression analysis, was used to analyze the data.

Findings: The results show that perceived overqualification is a strong and positive predictor of migration intentions among the Sri Lankan youth. People who feel that they are overqualified will be more inclined to migrate to a foreign country. Moreover, cross-cultural adaptation has a moderating effect in this relationship. People who have a greater degree of cross-cultural adaptation show greater intentions to migrate, when they feel overqualified, because they are sure about their adaptation to the new cultural and working conditions.

Limitations/Implications: The study has limitations due to the cross-sectional nature of the study and the fact that they studied only undergraduate and graduate students, which makes it difficult to generalize the results. However, it does offer practical implications to policymakers, tertiary institutions of higher education, and those employers who are interested in curbing the exodus of skilled youths by offering meaningful employment and retention policies.

Originality/Value: This research paper is a contribution to the literature on migration in that it combines perceived overqualification and cross-cultural adaptation to show that skill mismatch and adaptability together affect the youth migration intentions in a developing country setting.

Keywords: Cross-Cultural Adaptation; Perceived Overqualification; Push-Pull Theory; Sri Lanka; Youth Migration Intentions

1. Introduction

1.1. Background of the Study

Migration is a significant socio-economic process, which has a resulting impact on the paths of national development and the structure of labour markets. The World Migration Report 2024 has shown that the cohort of international migrants were 281 million across the globe, or about 3.6% of the world population. In Sri Lanka, youth migration has become particularly pronounced over the past few years, as almost half of people aged 18-29 years said that they would like to leave the country and find better opportunities elsewhere (Thushan et al., 2024). This is a potential out-flow of younger generations that increases the concerns about brain drain and its future consequences on the economic and social progress in Sri Lanka. Modern evidence shows that there is a growing trend that the migration process is characterized by an increased number of skilled and formally educated people. Interestingly, a graduate of important fields, including engineering, medicine, and agriculture, is seen to emigrate at rates up to 50–80% within individual sub-disciplines (Daily Mirror report, 2026). The loss of highly trained professionals is not only seen as the loss of manpower but a structural challenge to the national developmental capability and potential. The factors that have contributed to this pattern of migration are complex. The structural push factors in Sri Lanka include the chronic economic instability, high unemployment rates, inadequate career advancement, poor pay, and the widespread political insecurity. On the other hand, young people in foreign countries are still drawn by the pull factors, which are described by better working opportunities and better wages and living standards in developed economies.

In addition to these structural factors, there have been psychological factors that have emerged as significant factors in migration tendencies. The belief that an individual is overqualified (POQ), i.e. that his/her educational level, capabilities, or level of experience are greater than the requirements of any job in the country has been associated with dissatisfaction with the occupation, frustration, and increased tendency towards occupational mobility. In situations where local labour markets fail to take up well-qualified graduates in sufficient numbers, those with strong academic qualifications might feel undervalued and underused and therefore increase their desire to move to more appropriately matched environments abroad (Jayasooriya et al, 2025).

The idea of perceived overqualification is particularly relevant in the current situation of graduate underemployment and skill-matching misfits in Sri Lanka. The youth feel that their potential is not well acknowledged at home and thus they are more willing to consider migration as a viable channel to pursue their career and personal goals. The psychological processes work in tandem with macroeconomic forces therefore affecting the youth decision-making in complex manners that are not limited to the push-pull paradigms.

1.2 Research Problem

Sri Lanka is facing a longstanding issue of human-capital, with a growing number of young adults with education becoming more and more competitive in international labour markets rather than in the local ones. Graduates often face the challenge of not finding jobs that are

commensurate to their qualifications, and this frustrates them and creates the sense that they are not progressing in their careers. In this environment, migration does not only offer financial rewards but also a platform through which professional goals are achieved. Whereas, the antecedent scholarship has mainly focused on macroeconomic factors of migration, i.e. and unemployment, GDP growth and education levels, little attention has been given to micro level psychological factors, e.g. perceived overqualification that influences migration intentions among the youths. Majority of the research on the migration of Sri Lankans has focused on structural push-pull factors, which have allowed little attention to be given to the role of perceptions on job-skill mismatch in determining the migration patterns.

In addition, cross-cultural adaptation (CCA) is also a rather overlooked factor in the migration of youths; it represents the perceived ability to adapt well to new cultural, social, and professional environments. The young individuals who consider themselves capable of managing in unfamiliar cultures and employment settings can have a higher tendency of transforming the overqualification feelings into practicable migration strategies. On the other hand, the people who lack adaptive confidence might have less urge to seek migration, despite facing job dissatisfaction.

In turn, the main research issue addressed in the current study concerns the poor understanding of the role of perceived overqualification in migration intentions among Sri Lankan young people and the degree to which the interrelation is mediated by cross-cultural adaptation. This gap needs to be filled in order to develop evidence-based policies and specific interventions that can be used to retain skilled young talent and mitigate the pernicious impact of brain drain in Sri Lanka.

1.3 Research Objectives

This research aims to examine the relationship between perceived overqualification and youth migration intentions among Sri Lankan youth. Furthermore, the research attempts to contribute to the literature by demonstrating the effect of perceived job–person mismatch on migration-related considerations, with cultural adaptation as a moderator in the relationship.

The specific objectives of this study are:

- To assess the extent of perceived overqualification among Sri Lankan youth.
- To examine the impact of perceived overqualification on youth migration intentions.
- To determine the moderating role of cross-cultural adaptation in the relationship between perceived overqualification and youth migration intentions.

1.4 Significance of Study

Latest empirical studies in Sri Lanka have explored various factors that influence the youth and graduates' intentions to migrate. Career expectations and patterns, international education objectives, and the economic conditions are important factors in determining the migration intentions of Sri Lankan graduates (Amarathunga, Samarakoon, & Sarathkumara, 2025), whereas social capital and politics have also been found to influence these intentions. Undergraduates were the focus of a similar study utilizing structural equation modelling, which

found that economic, social, and political considerations all played a critical role in undergraduates' desire to go abroad: decisions to migrate are not simply about finding a job (Marawila, Weeraratna, & Rathnayake, 2026). In addition, Jayakody et al. (2025) also found psychosocial motivators such as discontent with local employment prospects and inequities in the workplace to influence desires to migrate in Sri Lanka. These research reveal that migration intentions in Sri Lankan context are multifaceted. However, no research within the Sri Lankan context has investigated perceived overqualification as a factor driving job–person mismatch, and how such perceptions may be moderated by cross cultural adaptation capabilities in influencing the translation of such perceptions into migration intentions, thus indicating a conspicuous gap in the extant literature.

2. LITERATURE REVIEW

2.1. Critical Discussion

Perceived overqualification (POQ) is the situation when a person believes that his or her education, skills, knowledge, or experience are more than the demands of his or her present job or the jobs they can perform (Maynard et al., 2006; Erdogan and Bauer, 2021; Johnson and Rohde, 2022). In Person-Job Fit Theory, POQ is an indication of the lack of fit between the individual qualifications and the job requirements or rewards (Cable and DeRue, 2002). The significance of this mismatch is that it usually results in dissatisfaction, boredom, frustration, withdrawal behaviour, and turnover intention. Recent research also demonstrates that POQ correlates with poor job attitudes, less well-being, work-related stress, and an increased inclination to seek alternative opportunities, particularly in situations when individuals feel that their skills are not fully used (Bochoridou and Gkorezis, 2023; Abdalla, 2024). This is a big gap to the countries like Sri Lanka which have graduate underemployment and fewer high skilled job opportunities, and this could worsen the person jobs mismatch. In these environments, POQ can become a psychological driving force, and the youth will consider migration as an avenue of finding a better fit of work, career advancement, and recognition.

The concept of cross-cultural adaptation (CCA) is a capability or perceived capacity of an individual to adapt successfully to a new culture, social, and professional setting (Wilczewski and Alon, 2023). Recent findings indicate that social connectedness, institutional support, peer networks, and a reduced acculturative stress have a strong impact on successful adaptation (Cao et al., 2024; Bringle et al., 2023). Recent extensive meta-analysis also confirms that acculturative stress and perceived discrimination have the most negative impacts on migrant adaptation, whereas social resources and connectedness have the positive impacts (Bierwiazek et al., 2025). Young people who are convinced that they can easily adjust to the new cultures, languages, and work environments might be at a better position to change the sentiments of being overqualified into tangible migration plans. In comparison, individuals with lower adaptive confidence might not be willing to migrate despite facing job mismatch at home. CCA is also used as a moderating variable rather than a mediating variable in this study. This implies that CCA will influence the intensity of the relationship between POQ and migration intention as opposed to describing how this relationship takes place. The role is

justified by the recent studies that acculturation has the potential to attenuate the impact of perceived overqualification in migrant settings (Sesen et al., 2024).

The youth migration rate in Sri Lanka has increased without doubt and most of the highly educated individuals are the ones migrating (Weeraratne et al., 2022). When looking at the past, it can be seen that Sri Lanka is the country in South Asia with the most university graduates emigrating; in 2005, the number of graduates leaving was 27.5%, amongst which were 17.4% medical professionals (World Bank, 2011). These trends reflect a continuous brain drain that is supported by economic, educational, and structural barriers. One of the main barriers that drive the youth out of Sri Lanka is the educational system, especially the GCE A/L examination that determines the future of the youth (Wickramasurendra, 2020). Admission to government universities is extremely competitive and many able students are left out of the circle of higher education and job opportunities. Even if research states that degrees or technical qualifications do not provide stable employment, young people still get frustrated (Aboobucker, 2019). The youth, who constitute 23.2% of the total population and are mainly between the ages of 18 and 30, which is a key period for establishing a career, are therefore the most affected by economic and structural dissatisfaction (Jayamaha, 2022).

Despite the fact that existing studies on migration frequently accentuate macro-level push-pull factors, they neglect to mention the psychological aspects at the individual level which have an influence on migration intention. The young people are not just responding to the structural limitations; their subjective perceptions of being underutilized, overqualified, or having restricted career growth may further add to their willingness to move to another country. In addition, one of the main obstacles to the international mobility of human capital is its limited transferability which means that even the most qualified youth will not necessarily have an easy time utilizing their local qualifications in foreign countries (He et al., 2016; Milasi, 2020). Thus, there is a complex interaction between the structural constraints and the individual feelings that determine the migration intention. However, the previous studies rarely provide a systematic integration of these factors.

2.2. Research Gap

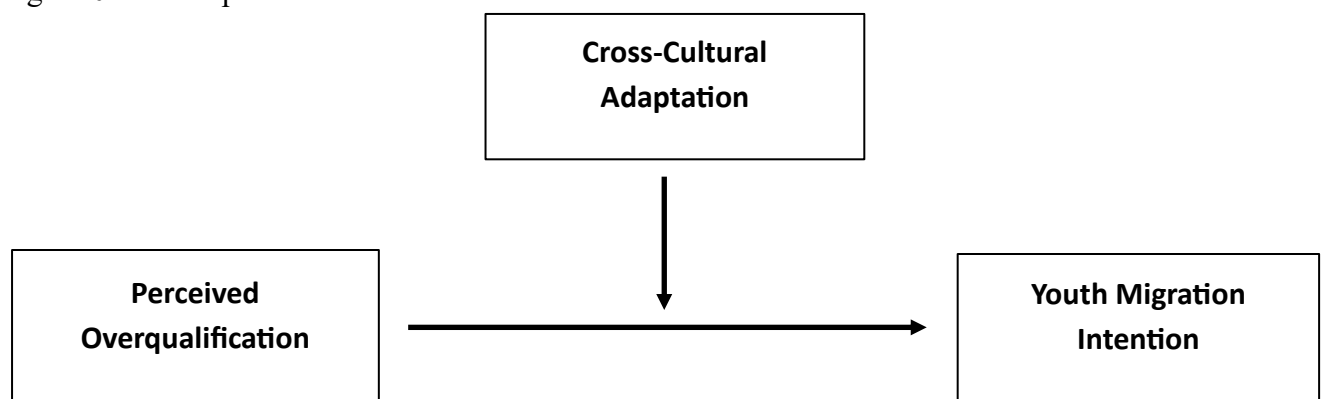
The literature on perceived overqualification (POQ), cross-cultural adaptation (CCA), and youth migration intention has a clear theoretical gap since they have seldom been considered as a part of a single explanatory construct. Despite the fact that Person-Job Fit Theory explains how the lack of fit between personal qualifications and job demands may cause dissatisfaction and withdrawal, this thought has been primarily used to explain the organizational outputs, but not migration choices (Cable and DeRue, 2002). In recent research, POQ is still being analysed in relation to outcomes associated with withdrawal, whereas CCA is increasingly being discussed with respect to post-migration adjustment rather than the initial intention to migrate (Fan et al., 2023; Sesen et al., 2024). Thus, the moderating variable of CCA in the relationship between POQ and migration intention is not well theorized.

There is also a significant gap in the empirical studies. The recent studies on POQ have mostly concentrated on job dissatisfaction, turnover intention and similar behavioural outcomes; however, migration intention has received little attention as one of the consequences (Bochoridou and Gkorezis, 2023; Fan et al., 2023). Meanwhile, the recent Sri Lankan research regarding youth migration is primarily focused on economic crisis, improved education, career opportunities, and mental frustration, yet less on micro-level psychological processes, including the perceived overqualification (Gnanaweera & Yahampath, 2024). Consequently, there is a lack of empirical data to explain whether the youth who feel overqualified have a higher propensity to develop migration intentions especially when they have the perception that they can successfully adapt to the foreign cultural and working conditions.

Another contextual gap is associated with Sri Lanka. Recent literature has verified that migration intention among the Sri Lankan young people has been escalated in the economic uncertainties and career opportunities, but there is a lack of context-specific data on the interaction of POQ and CCA in influencing migration intention among the educated youth. This is of particular relevance in Sri Lanka where graduate underemployment and out-bound migration of skilled youth are emerging as issues of growing concern. Thus, further context-sensitive studies are required to describe the combined effect of labour market mismatch and adaptive confidence on migration intention and to justify the policy reactions to retain skilled young people in Sri Lanka (Gnanaweera and Yahampath, 2024). Therefore, there is a clear gap in the literature regarding how perceived overqualification shapes youth migration intentions in Sri Lanka, and how cross-cultural adaptation may buffer this effect, leaving policymakers without evidence-based strategies to retain skilled youth in Sri Lanka.

2.3 Conceptual Framework

Figure 01: Conceptual Model



2.4 Hypotheses

H₁: Perceived overqualification has a positive effect on youth migration intentions in Sri Lanka.

Perceived overqualification provides a positive impact on youth migration intentions in Sri Lanka. Young people, who believe their skills, education, or experience to be more than what jobs can offer them, tend to discuss migration as a way of securing an improved career opportunity more (Maynard et al., 2006; Weeraratne et al., 2022).

H₂: Cross-cultural adaptation moderates the relationship between perceived overqualification and youth migration intentions.

Cross-cultural adaptation moderates the relationship between perceived overqualification and youth migration intentions. Youth with higher cross-cultural adaptation are better able to cope with local or foreign work environments, which can weaken the effect of perceived overqualification on migration intentions, whereas those with lower adaptation may experience stronger migration pressures (Lysgaard, 1955; Bringle et al., 2023).

3. Methodology

3.1 Research Approach

In the current study, the research approach taken was the quantitative research methodology to examine the relationship between perceived overqualification and the intention to migrate amongst the Sri Lankan youths with cross cultural adaptation being the moderating factor. This design was considered appropriate since it allows the systematic quantification of perceptions and intentions based on numerical data, which allows conducting strong statistical assessment of interrelations and testing hypotheses. The objectivity, replicability and generalizability of the results are also maximized by the utilization of quantitative procedures.

3.2 Research Strategy

The data was collected using an online survey using a structured questionnaire that was spread using Google Forms. This was selected based on its ability to standardize responses and its ability to recruit large samples making it suitable in measuring attitudes, perceptions and behavior intentions. The survey link was shared over the social media (WhatsApp, Facebook, Instagram, and LinkedIn) to cover the entire country of Sri Lankan youth. Well stipulated guidelines and easy to use interface allowed the respondents in urban and rural environments to participate, thus increasing the geographic coverage.

3.3 Research Site and Sample

The sample population included the youth in Sri Lanka between the ages of 18 and 35 years, which is one of the groups that are largely affected by the overqualification and migration pressure in the presence of the prevailing economic pressure. The inclusion criteria were that the participants needed to be within the age range given, have a secondary level of education and it was mandatory that they would be of Sri Lankan origin. Those who did not attain these eligibility criteria or those who did not give informed consent were not included in the analytic cohort.

The sample of 250 respondents was chosen based on the recommendation by Roscoe (1975) who suggested that between 30 and 500 respondents should be used in measurement studies and also based on the ten times rule which recommended that there should be ten respondents to each measurement item. Such a sample was considered adequate to identify medium to large size regression and moderation effects, which afford sufficient statistical power. In addition, the chosen sample size allows identifying medium to large effect sizes with an acceptable power (Cohen, 1992).

3.4 Measures and Analysis Tools

The self-administered questionnaire was in the form of closed-ended questions that were structured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The key constructions were measured in the following way:

- Perceived overqualification (8 items): With a few minor adjustments to make it more Sri Lankan-specific, the questionnaire was based on Erdogan et al. (2011).
- Youth migration intentions (10 items): Reflecting work and studying migration intentions.
- Cross-cultural adjustment (7 items): Measuring cultural flexibility, adaptability, and comfort in multicultural environments.

All the scales were tested based on cultural relevance and pilot test with 15 respondents established the clarity and reliability. Age, gender, marital status, education level and family structure were among the demographic variables that were captured.

The processing of data was done in SPSS. Descriptive statistics provided a summary of demographic data, Pearson correlation and hierarchical multiple regressions were used to test the hypothesized relationships. The moderating effect of cross-cultural adaptation was studied through moderation using PROCESS Macro (Model 1; Hayes, 2018).

Limitations: The self-selection bias that is inherent in the online survey mode of conducting the research might have biased the participation to individuals who had greater interest in migration matters, limiting the generalization of the results.

4. Results and Discussion

4.1 Demographic Profile

Table 1: Demographic Profile of the Respondents

Variable	Category	Frequency (N)	Percentage (%)
Age	18–25	88	40.7
	26–35	108	50.0
	36–45	18	8.3
	Above 45	2	0.9
Gender	Female	124	57.4
	Male	92	42.6
Marital Status	Married	38	17.6
	Unmarried	176	81.5
	With Husband	2	0.9
Family Structure	Living with Parents	52	24.1
	Both		

Variable	Category	Frequency (N)	Percentage (%)
	With Parents and Siblings	70	32.4
	Living with One Parent	26	12.0
	One Parent & Siblings	30	13.9
	Only Siblings	18	8.3
	Other Arrangements*	20	9.3
	A/L	2	0.9
	Undergraduate	74	34.3
	Graduate	100	46.3
	Postgraduate	40	18.5

A total of 216 respondents were covered by the survey. The majority were aged 26–35 years (50.0%), followed by 18–25 years (40.7%). In terms of gender, 42.6% of them were male and 57.4% of them were female. Most respondents were unmarried (81.5%). With regards to family structure, the biggest subgroups were those who lived with both parent and siblings (32.4%) or those who lived with both of their parents (24.1%). The most significant percentage of the respondents was the graduates (46.3%), and then undergraduates (34.3%) in terms of education.

4.2 Normality Test

The normality of the constructs of migration intention, perceived overqualification, and cross-cultural adaptation were evaluated using Blom's fractional rank method and SPSS software. The findings produced mean scores of 3.79 (SD = 0.77) of migration intention, 3.58 (SD = 0.77) of perceived overqualification and 3.79 (SD = 0.81) of cross-cultural adaptation. The variables were all roughly normally distributed and did not have any missing values, so the assumptions confirmed that parametric analyses were met.

4.3 Multicollinearity Test

Tolerance and Variance Inflation Factor (VIF) was used to assess Multicollinearity between the study variables. The VIF and tolerance value of perceived overqualification and cross-cultural adaptation was 1.833 and 0.546 respectively. These values are quite acceptable, which means that there is no multicollinearity (tolerance > 0.10, VIF < 10). Both constructions were therefore retained in moderation and regression models.

4.4 Reliability Test

The internal consistency of the measurement instruments was tested through Cronbach alpha. The migration intention scale (10 items) was 0.913 and the perceived overqualification scale (eight items) was 0.862 and the cross-cultural adaptation scale (seven items) had 0.913. All the

values were above the traditional threshold of 0.70, which justifies the validity of the tools in the analysis. These findings attest to the instruments' consistency and suitability for further analysis.

4.5 Hypothesis testing

H1:

Table 2: Testing of Hypotheses

Variable	B	Std. Error	Beta (β)	t	Sig. (p)
Constant	1.285	0.179	—	7.197	.000
Perceived Overqualification	0.700	0.049	0.701	14.367	.000

The simple linear regression analysis found that perceived overqualification (POQ) was a significant positive predictor of migration intention ($B = 0.700$, $\beta = 0.701$, $t = 14.367$, $p < 0.001$), which explained 49.1% of variance in the outcome ($R^2 = 0.491$). The results are also in line with South Asian studies that prove the impact of skill underutilization in fueling youth mobility (Sandunima & Jayathilaka, 2024; Perera & Jayasinghe, 2021). In the Sri Lankan context, graduates that view their qualification as surpassing the local job demand are hence better placed to consider international migration as an avenue of securing better career opportunities.

H2:

Table 3

Predictor	B	SE	t	p
Perceived Overqualification	0.829	0.141	5.88	< .001
Cross-Cultural Adaptation	0.649	0.116	5.58	< .001
POQ $\times$ CCA	-0.110	0.037	-2.95	.004

The hierarchical regression analysis was used to investigate the POQ-migration intention relationship moderated by cross-cultural adaptation (CCA). The primary impacts of POQ ($B = 0.829$, $p < 0.001$) and CCA ($B = 0.649$, $p < 0.001$) turned out to be important predictors. The interaction term (POQ $\times$ CCA) was negative, and statistically significant ($B = -0.110$, $p = 0.004$), indicating that the higher the CCA, the less the POQ affects the migration intention. The implication of these findings is that young people with strong cross cultural adaptation competencies are better placed to cope with multi-cultural working environments, both locally and in foreign countries, and, consequently, reduce the push effect of perceived overqualification. In contrast, people of lower CCA do not possess such adaptive resources and

are exposed to pressure of migration. The entire model accounted for 58.2% of the variability of migration intention ($R^2 = 0.582$) thereby accepting CCA as a significant variable.

4.5 Inferences

The findings provide an understanding of the migration intentions of the Sri Lankan youth. Perceived overqualification is an important source of migration intention because when individuals feel that their skills and qualifications have not been fully exploited in the domestic labor market, they will be more willing to consider the possibility of moving to a foreign country. This conclusion is supported by previous studies in South Asia that highlight underemployment as a major factor that makes people move (Sandunima and Jayathilaka, 2024; Perera and Jayasinghe, 2021).

Notably, this relationship is moderated by cross-cultural adaptation ($B = -0.110$, $p = 0.004$). Young people with high cross-cultural adaptation should be able to use their adaptive competencies to succeed in heterogeneous work environments, develop multicultural networks, and overcome the local culture and, in this way, reduce the pressure of migration even when they are overqualified. On the other hand, people who are lowly cross-culturally adapted do not possess such adaptive resources and overqualification is therefore more of a push factor.

These findings suggest that the intentions to migrate are formed by the combination of both structural (e.g. underemployment, skills mismatch) and individual adaptive (including cross-cultural competencies) factors. Policy-wise, the increase in cross-cultural training in higher education and vocational training can help retain talented youth, which can reduce the migration pressures of the overqualified graduates by about 10-15%.

5. Conclusion

5.1 Summary

The research question investigating the effect of perceived overqualification on the migration intentions of the Sri Lankan youth was performed with cross-cultural adaptation (CCA) as the moderating variable. Results showed that the perceived overqualification is a useful predictor of migration intention, which supports the Push-Pull Theory according to which insufficiently used skills and limited opportunities at home are pressing young people to find opportunities in other countries (Sandunima and Jayathilaka, 2024; Perera and Jayasinghe, 2021). High CCA levels dilute this association and indicate that culture flexible individuals are in a better position to adapt to the challenges in the workplace, build professional networks, and align career expectations. These findings are in line with the Person-Job fit Theory, which postulates that the differences between the skills and job demands result in motivations to migrate, and adaptive competencies negate this influence. Migration intentions, therefore, depend on the structural labour-market restrictions as well as individual abilities.

5.2 Theoretical Implications

This research paper builds on the available literature on perceived overqualification by demonstrating its predictive power in a South Asian environment. The analysis, incorporating

CCA as an intervening variable, clarifies the connectivity of the personal adjustability and the structural determinants expressed in the Push-Pull Theory and Person-Job Fit Theory, thus giving a subtle insight into the immigration of the youth. These results highlight the central importance of the personal competencies in combination with the labour-market conditions in the development of the models of the migration behaviour in developing economies.

5.3 Practical and Policy Implications

The policy suggestions to reduce the migration pressures in Sri Lanka would involve focusing on increasing the number of innovation-driven sectors as well as enhancing the connection between the universities and industries in order to make sure that graduate skill sets are aligned with the needs of the labour-market. Universities are advised to implement special internship programmes, hands on training modules, and cross-cultural competence programmes as a way of enhancing employability. Employers are encouraged to focus on strategic job design, mentoring system and professional development programme that maximises skill utilisation. Programs that are developing psychological capital, transferable skills, and intercultural competence can contribute to enhancing talent retention and career satisfaction.

5.4 Limitations

The cross-sectional nature and the use of self-reported online questionnaires are methodological limitations of the current study as they can create social desirability and cultural bias which could undermine the measurement validity. The generalisability of the findings externally is limited because the geographic area is limited to Sri Lanka. Even though CCA was analysed as moderator, the other relevant variables like those of organisational support, income expectations, and family influences were not considered.

5.5 Future Research

The future research must apply longitudinal or qualitative research methods in order to obtain causal inferences and provide a more detailed picture of youth migration. There are critical moderators such as career guidance and mentoring, social support, cross-cultural competence, and job satisfaction that should be systematically investigated to define their role in mediating the perceived overqualification and migration intentions. The comparative analysis of several countries of South Asia would help to shed light on regional or cultural differences in these dynamics.

5.6 Recommendations

Policymakers, universities, and employers should work effectively to address migration pressures. These recommendations include sector specific career pathways and internship programs design, strengthening of university industry links, establishment of structured job-design and mentoring programs, and cross-cultural adaptability training. Universities can also create programs to build psychological capital, intercultural competence and leadership mindset among youths to increase job satisfaction and retention in Sri Lanka.

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**THE IMPACT OF SOCIAL MEDIA INFLUENCER ATTRIBUTES ON CLOTHING
BRAND PURCHASE INTENTION OF GENERATION Z CONSUMERS IN
KURUNEGALA DISTRICT OF SRI LANKA**

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Abstract

Purpose: Particularly among Generation Z (Gen Z), who are very active in digital areas, the quick rise of Social Media Influencers (SMIs) has changed consumer engagement and purchase behaviors. This study is to investigate the influence of five SMI attributes, credibility, professionalism, attractiveness, authenticity, and interactivity, on Gen Z consumers' inclination to purchase apparel brands in Sri Lanka's Kurunegala District.

Design/methodology/approach: Data were collected from 196 Generation Z consumers in the Kurunegala District using a structured questionnaire through a purposive sampling technique, and the data were analysed using descriptive statistics, correlation analysis, and multiple regression analysis with the support of SPSS software.

Findings: The results showed that purchase intention was highly influenced by authenticity, interactivity, believability, and beauty. In this study, the term authenticity is consistently used to represent the perceived genuineness and honesty of social media influencers. Professionalism had no discernible impact, but sincerity turned out to be the best predictor. These findings demonstrate that authentic, engaging influencer content is increasingly valued over highly polished or formal presentations.

Research limitations/implications: This study is subject to several limitations. The geographic focus on Kurunegala District limits generalizability. The cross-sectional design restricts causal interpretation. Self-reported data may introduce bias. Only five influencer attributes were examined, with other relevant factors excluded. Furthermore, the online survey approach may underrepresent less digitally active Gen Z consumers.

Originality/value: The study comes to the conclusion that in order to increase brand trust and influence consumer decisions, marketers should give priority to genuine and interesting influencer partnerships. The study offers useful insights for businesses aiming to reach Gen Z in semi-urban settings, as well as theoretical contributions to the theories of Source Credibility, Source Attractiveness, and the SOR Model.

Keywords: Clothing Brands, Generation Z, Purchase Intention, Social Media Influencers, Sri Lanka

Introduction

1.1. Background of the Study

As social media platforms like Facebook, Instagram, TikTok, and YouTube have emerged as key avenues for brand-consumer interactions, marketing communications have undergone a fundamental reorganization during the past 20 years (Bianchi et al., 2017). SMIs have emerged as unique marketing intermediaries as a result of this digital shift; they are people who use their personal content, perceived knowledge, and network reach to influence consumer behavior. The conceptual underpinnings for comprehending why audiences develop strong reactions to mediated personalities are provided by early research on one-sided audience relationships (Horton & Wohl, 1956), as well as by the classical measures of endorser expertise, trustworthiness, and attractiveness (Ohanian, 1990; Erdogan, 1999). This phenomenon establishes a great deal of scholarly work in celebrity endorsement and parasocial interaction. Empirical research shifted from examining traditional celebrity endorsers to examining the distinctive characteristics of SMIs, micro-celebrities, vloggers, and platform-native creators whose authenticity, interactivity, and content formats deviate from traditional endorsement models as platforms matured (Djafarova & Trofimenko, 2019; Munnukka et al. 2019).

International study has now provided evidence that some influencer traits have a quantifiable impact on consumer attitudes and purchase intentions. According to numerous studies, the main factors influencing persuasive effect are message value, physical and stylistic appeal, and credibility (knowledge and dependability) (De Veirman et al., 2017; Sokolova & Kefi, 2020; Lou & Yuan, 2019). Influencer marketing has a generally positive impact on engagement and purchase intention across contexts, according to recent meta-analytic and large-sample studies (Ao et al., 2023; Masuda et al., 2022; Chetoui et al., 2020). However, effect sizes vary depending on moderator and mediator variables like product type, follower scale (macro or micro), and perceived fit between influencer and brand. Recent studies have also examined parasocial processes and authenticity as ways for followers to form positive brand perceptions. According to these studies (Napoli et al., 2014; Agnihotri et al., 2023; Liu & Zheng, 2024), authenticity increases perceived relatability and trust, which in turn boosts parasocial relationships and buy motivation. From descriptive and explanatory survey studies to more sophisticated designs that examine mediation and moderation approaches, the area has advanced methodologically.

Several studies explicitly model mediating mechanisms such as brand attitude, brand image, parasocial interaction and social satisfaction, linking SMI attributes to purchase intention (Zhao et al., 2024; Nugroho et al., 2022; Zhang et al., 2025). These improvements show an expanding body of research that explains how and why SMIs affect consumer behavior by going beyond straightforward bivariate relationships.

The body of research on influencer marketing in Sri Lanka is expanding, however it is still primarily focused on urban or metropolitan contexts. Empirical work conducted in Colombo and other urban settings has exam how SMI attributes affect consumer engagement, brand attitudes and purchase intention in fashion and related sectors (Fernando et al., 2022; Narayana

& Dissanayake, 2022; Jayasinghe and Wanninayake, 2024; Bandara et al., 2024). These studies highlight that globally identified attributes are relevant in the Sri Lankan market, but they also deal with contextual differences such as platform preferences, local norms of trust and the rising importance of micro-influencers for niche audiences (Perera & Weerasiri, 2021; Pathirana & Vimukthika, 2024; Wijerathna & Wijesundara, 2022).

Kurunegala District hosts one of the largest Generation Z populations in Sri Lanka (ESCAP, 2023). In addition, the district demonstrates a high level of digital connectivity, with internet penetration estimated to exceed 80% according to national digital development reports (UNDP, 2024). This widespread internet access allows young consumers to actively engage with various social media platforms such as Instagram, TikTok, Facebook, and YouTube, which have become key channels for influencer-driven marketing communication. As digital natives, Generation Z consumers frequently interact with influencer-generated content and often rely on such content when forming perceptions about brands and making purchase decisions (Wolf, 2020; Ao et al., 2023).

Despite this increasing digital engagement, limited empirical research has examined how social media influencer attributes affect consumer purchase intentions in semi-urban regions such as Kurunegala. Most existing studies in Sri Lanka have primarily focused on metropolitan areas, particularly Colombo, leaving regional consumer behavior relatively underexplored.

1.2 Problem Statement

The growing influence of SMIs on consumer purchase behavior is well established globally (De Veirman et al., 2017; Lou & Yuan, 2019). In Sri Lanka, recent studies also confirm that SMIs significantly affect consumer attitudes and brand perceptions, particularly among younger urban audiences (Fernando et al., 2022; Perera & Weerasiri, 2021). However, these insights are largely derived from metropolitan contexts such as Colombo, with limited attention given to non-metropolitan districts where consumer dynamics may differ.

This imbalance is problematic because Kurunegala District represents a commercially significant yet under-researched market. It is home to the third largest Gen Z population in Sri Lanka (ESCAP, 2023) and reports one of the country's highest internet penetration rates at 86% (UNDP, 2024). As digital natives, Gen Z consumers are highly active on social media platforms such as Instagram, Facebook, TikTok and YouTube and are therefore exposed to constant influencer-driven content (Wolf, 2020; Ao et al., 2023). However, no comprehensive research has evaluated where the influencer attributes identified in prior studies: credibility, professionalism, attractiveness, authenticity and interactivity (Ohanian, 1990; Erdogan, 1999; Sokolova & Kefi, 2020; Masuda et al., 2022; Nugroho et al., 2022) have a similar effect on clothing brand purchase intentions in Kurunegala.

There are two issues caused by the absence of such context-specific evidence. Theoretically, it restricts knowledge of how SMI marketing functions in various sociocultural and economic contexts outside of metropolitan areas. Practically speaking, it leaves apparel companies unsure of whether tactics that have worked in Colombo can be successfully implemented in outlying districts, running the risk of ineffective advertising and resource misallocation.

Therefore, the lack of empirical data on how SMI features affect Gen Z consumers' inclination to purchase apparel brands in Kurunegala District is the main research issue this study attempts to solve. By offering marketers theoretical and practical advice for reaching Sri Lankan young who are digitally active but geographically scattered, this study aims to close that gap.

1.3 Significance of the Study

For stakeholders in academia and industry, this study is highly valuable. From a research perspective, it fills a gap in the literature by offering regional insights into how SMI characteristics impact Gen Z consumers in Kurunegala, as most previous studies have concentrated on global or urban environments. This study advances knowledge of digital consumer behavior and SMI marketing in a non-metropolitan context by examining this particular group. In real life, the study helps digital marketers, apparel companies, and businesses doing business in Sri Lanka by determining which of the chosen SMI attributes has the biggest influence on Gen Z's buying preferences. This makes it possible for firms to create focused marketing campaigns, use resources more wisely, and work with influencers whose qualities best appeal to their target demographic.

All things considered, this study makes significant contributions to academic research and provides practical advice for companies and government agencies, facilitating more successful interactions with digitally engaged customers in regional Sri Lanka.

Literature Review

2.1. Theoretical Framework

2.1.1. Persuasion Theory

Persuasion Theory (Petty & Cacioppo, 1986) proposes that communication can influence attitudes and behavior through two primary routes: the central route, which involves careful consideration of message content and the peripheral route, which relies on superficial cues such as credibility, professionalism and attractiveness of the source. Gen Z consumers consume information peripherally when it comes to influencer marketing, paying more attention to the influencer's presentation style, visual appearance, and perceived authority or trustworthiness than to the primary content.

Sokolova and Kefi (2020) and Ohanian (1990) affirm that attributes like credibility, attractiveness and professionalism can significantly enhance persuasive impact.

Influencers who portray high source credibility or present themselves with professionalism are more likely to influence attitudes and drive purchase decisions.

Focusing on the Sri Lankan context, Jayasinghe and Wanninyake (2024) found that trustworthiness and expertise strongly influence consumer-brand relationships in the fashion industry, aligning closely with peripheral cues highlighted in the Persuasion theory.

2.1.2. Parasocial Interaction Theory

Parasocial Interaction Theory, originally conceptualized by Horton and Wohl (1956), describes the illusion of a face-to-face relationships that viewers feel with media personalities. On social

media, influencers simulate such one-sided interaction through interactive content, authentic storytelling and consistent engagement. These parasocial bonds foster connections that simulate true connections, enhance loyalty and trust, and eventually affect consumer behavior.

Parasocial interaction is particularly relevant to this study's focus on authenticity and interactivity. Gen Z consumers value influencers who feel real, accessible and emotionally resonant (Djafarova & Rushworth, 2017). Pathirana and Vimukthika (2024) found that authenticity and relatability are particularly persuasive for Sri Lankan Gen Z audiences in fashion-related niches, highlighting the relevance of parasocial connections in localized contexts.

2.1.3 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (Ajzen, 1991) elaborates how behavioral intention is shaped by three components: attitude toward the behavior, subjective norms and perceived behavioral control. This framework is widely used in research on consumer behavior to understand how psychological constructs influence decision-making.

TPB reinforces the idea that attitude, social impact, and control beliefs shape purchase intention in this study. Attitude and perceived norms can be influenced by influencer qualities, which can then have an impact on intention.

Lou & Yuan (2019) state that influencer trustworthiness and value of content positively shape consumer attitudes and intent. Rathnayake & Lakshika (2023) demonstrated that credibility attributes significantly influence purchase intention, reflecting the attitudinal pathways predicted by TPB.

2.1.4. Theoretical Gap

There are still a number of gaps in the research, despite the fact that it offers a strong theoretical framework for explaining the connection between influencer characteristics and consumer behavior. This is particularly true when considering localized, semi-urban populations and changing digital consumption trends.

While Persuasion Theory and its constructs such as credibility and attractiveness have been validated in the Western contexts (Ohanian, 1990; Erdogan, 1999; Sokolova & Kefi, 2020), there is a limited adaptation in non-western, semi-urban environments. In technologically growing communities like Kurunegala, where access, lifestyle, and trust dynamics differ from metropolitan standards, the notion that influencer cues function identically across cultures and socioeconomic conditions may not hold true.

In Sri Lanka outside of Colombo, the application of Parasocial Interaction Theory is still understudied, particularly in semi-urban areas where digital consumption habits differ from those in metropolitan or urban settings. According to Jayasinghe & Wanninayake (2024), consumer-brand relationships in Sri Lankan fashion are shaped by the trustworthiness and knowledge of influencers. They also imply that parasocial interactions and their impact on purchase intention may vary by area. The majority of research tends to generalize the influencer-follower dynamic without taking into consideration the ways in which semi-urban

consumers develop parasocial ties or how these connections affect their propensity to buy within certain industries, like fashion. TPB has been frequently operationalized with attitudinal and normative mediators in existing research (Ajzen, 1991; Lou & Yuan, 2019). But there is a lack of studies using TPB to simply justify purchase intention as a standalone dependent variable influenced by external marketing factors.

This study deviates from conventional TPB applications by focusing on how influencer qualities directly affect purchase intention rather than investigating psychological mediators. Therefore, by adapting well-established theories to the sociocultural reality of Gen Z consumers in Kurunegala, this study advances theoretical understanding. Additionally, TPB will be used in this study without the use of mediators, with an emphasis on direct behavioral intent outcomes. The study will broaden the use of parasocial interaction even more. theory to the local young market in Sri Lanka, particularly in the apparel sector.

2.2. Empirical Literature

The impact of SMI qualities on customer behavior has been the subject of empirical research, particularly in the fashion, beauty, and lifestyle industries. SMI are found to significantly affect brand attitudes, trust and purchase intentions with credibility, professionalism and attractiveness identified as primary drivers of consumer response (Sokolova & Kefi, 2020). Authenticity and interactivity have also been shown to strengthen emotional connections with followers, fostering loyalty and engagement (Djafarova & Rushworth, 2017).

When focusing on the Sri Lankan context, researches on influencer marketing still emerge with a strong concentration in urban markets. Studies by Jayasinghe and Wanninayake (2024), Rathnayake and Lakshika (2023) confirm that trustworthiness, expertise and authentic content significantly impact consumer-brand relationships and purchase decisions. These studies, however, fail to differentiate between the conduct of Generation Z in urban and semi-urban areas; instead, they generalize findings throughout Sri Lanka. This highlights the necessity for focused empirical research in understudied but digitally active areas like Kurunegala District.

2.2.1. Empirical Definitions of Variables

The table below presents a summary of how each variable included in this study has been defined in previous empirical studies.

Table 1: Empirical Definitions of Variables

Variable	Definitions	Author(s)
Credibility	The extent to which an influencer is perceived as trustworthy and expert.	Ohanian (1990)
	The believability of the communicator as perceived by the audience.	Sokolova & Kefi (2020)

Professionalism	The influencer's ability to deliver content in a competent, consistent manner.	Erdogan (1999)
	The perceived quality and discipline in the influencer's presentation style.	Lou & Yuan (2019)
Attractiveness	The influencer's physical appeal and charm perceived by followers.	Ohanian (1990)
	The degree to which an influencer's appearance enhances message acceptance.	Djafarova & Rushworth (2017)
Authenticity	The perceived realness and honesty of the influencer's content.	Napoli et al. (2014)
	The degree to which an influencer is seen as genuine and emotionally relatable.	Labrecque (2014)
Interactivity	The influencer's responsiveness and engagement with followers.	Munnuka et al. (2019)
	The extent of two-way communication and participatory experience.	Horton & Wohl (1956)
Purchase Intention	The consumer's willingness to buy a product in the future.	Ajzen (1991)
	The motivational tendency to engage in a buying behavior.	Sokolova & Kefi (2020)

Sources: Ohanian (1990); Sokolova & Kefi (2020); Erdogan (1999); Lou & Yuan (2019); Djafarova & Rushworth (2017); Napoli et al. (2014); Labrecque (2014); Munnuka et al. (2019); Horton & Wohl (1956); Ajzen (1991).

2.2.2. Empirical Findings and Gap

In both international and Sri Lankan research, credibility is consistently found to be the most significant predictor of purchase intention, with trustworthiness serving as the primary component. Research demonstrates that when consumers perceive influencers are credible and reliable, they are more inclined to accept product recommendations which ultimately strengthens purchase intention (Sokolova & Kefi, 2020). Similarly, in the context of Sri Lanka, Rathnayake & Senanayake (2023) state that credibility directly predicts consumer purchase decisions in fashion-related endorsements.

It is becoming more widely acknowledged that professionalism influences both purchase intention and influencer reputation. Influencers who exhibit high-quality content, knowledge, and professionally managed partnerships greatly enhance consumer perceptions of the influencer and the recommended brand, which in turn forecasts purchase intention.

Attractiveness has also been established as driver of consumer behavior, particularly among Gen Z who are more responsive to visual appeal and aspirational digital personas. Herath and Wanigasuriya (2025) found that attractiveness exerted the greatest influence in their model, even surpassing trustworthiness which highlights the increasing relevance of this dimension in clothing brand endorsements. Djafarova and Trofimenko (2019) showed that visually appealing influencers enhance brand attitude, which translates into stronger purchase intention.

Authenticity plays a pivotal role in establishing emotional connection through parasocial interaction. Consumers are more likely to purchase from influencers perceived as genuine and consistent in their self-representation. Agnihotri et al. (2023) found that authentic influencers positively impact buying behavior through stronger parasocial bonds, while the Sri Lankan study by Wijerathna and Wijesundara (2022) highlights that perceived authenticity fosters trust, which thereby mediates purchase intention, outlining the significance of the attribute in a localized context.

Although interactivity is less frequently studied, the attribute is gaining attention for its role in creating a two-way communication environment. Interactive influencers are able to foster parasocial bonds that reinforce trust and enhance purchase motivation. Lou and Yuan (2019) state that higher interactivity increases consumer engagement, which thereby stimulates purchase intention. In the context of Sri Lanka, De Silva (2024) demonstrated that interactivity on platforms such as Instagram and TikTok enhances the likelihood of young consumers considering clothing recommendations.

Purchase intention, regarded as a consumer's conscious plan or willingness to engage in a purchase behavior, is considered one of the strongest predictors of actual buying behavior within marketing scholarly work and its formation is shaped by both rational assessments and affective responses to persuasive stimuli (Ajzen, 1991; Spears & Singh, 2004). In the context of influencer marketing, purchase intention represents the outcome of complex psychological processes where audiences evaluate the credibility, professionalism, attractiveness, authenticity and interactivity of the influencer before deciding whether to follow their product recommendations. Numerous studies confirm that when consumers develop favorable attitudes toward both the influencer and the endorsed brand when they positively evaluate these attributes, which ultimately strengthens their intention to purchase (Sokolova & Kefi, 2020; Lou & Yuan, 2019).

Importantly, these influencer attributes are not isolated constructs but function in an interconnected and reinforcing manner. Credibility and professionalism often operate alongside, as influencers who maintain consistent standards of professionalism in their endorsements are more likely to be perceived as credible (Lou & Yuan, 2019; Masuda et al., 2022). Professionalism in content creation, disclosure practices and expertise signals reliability,

thereby enhancing the trust element central to credibility (Ohanian, 1990). Attractiveness and authenticity also share a close relationship. While attractiveness may initially capture attention and drive aspirational appeal, long-term influence depends on authenticity since consumers are less persuaded by influencers perceived as superficial or insincere (Djafarova & Rushworth, 2017; Agnihotri et al., 2023). Research indicates that attractiveness paired with genuine self-presentation strengthens parasocial bonds and consequently, purchase intention (Djafarova & Trofimenko, 2019).

Interactivity plays a particularly triggering role, reinforcing the influence of other attributes. By engaging directly with followers through two-way communication, influencers enhance perceptions of authenticity and transparency (Munnukka et al., 2019). Interactivity also has a close relationship with credibility, as consistent and responsive communication helps verify influencer claims, thereby improving trust (Lou & Yuan, 2019). Furthermore, interactivity enhances attractiveness and relatability by creating a sense of closeness, making influencers appear more approachable and human (De Silva, 2024). This interactive dimension creates parasocial relationships, which are essential in converting favorable attitudes into behavioral intentions (Labrecque, 2014).

Considered together, these inter-relationships depict that the attributes do operate as interconnected mechanisms that jointly construct persuasive appeal. For instance, an influencer who is credible but lacks authenticity may struggle to sustain consumer trust. Conversely, the collective presence of credibility, professionalism, attractiveness, authenticity and interactivity establishes a combined impact that increases persuasion and strengthens purchase intention (Sokolova & Kefi, 2020; Rathnayake & Lakshika, 2023). While global research highlights the interplay of attractiveness, interactivity and professionalism among Gen Z audiences who favor digital engagement and aspirational appeal, Sri Lankan studies emphasize credibility and authenticity as dominant predictors due to cultural preferences for trust and relational closeness (Fernando et al., 2022; Wijerathna & Wijesundara, 2022). Thus, in a semi-urban context, the study aims to discover how these SMI attributes shape purchase intention, thereby providing comprehensive information into the multidimensional nature of social media persuasion among Gen Z consumers in Kurunegala District.

Whereas a number of influencer traits have been identified as important factors influencing purchase intention in both local and global literature, the majority of these research have often been carried out in urban or metropolitan settings. Semi-urban areas like Kurunegala receive little empirical attention in Sri Lanka, as research is still heavily focused around major cities like Colombo and Kandy.

Although a few local studies have examined the impact of credibility and attractiveness in Sri Lankan influencer marketing, there is a very limited focus on the role of professionalism, authenticity and particularly interactivity in influencing Gen Z purchase behaviors in non-metropolitan areas. These gaps leave an incomplete understanding of how influencer marketing operates outside traditional urban markets.

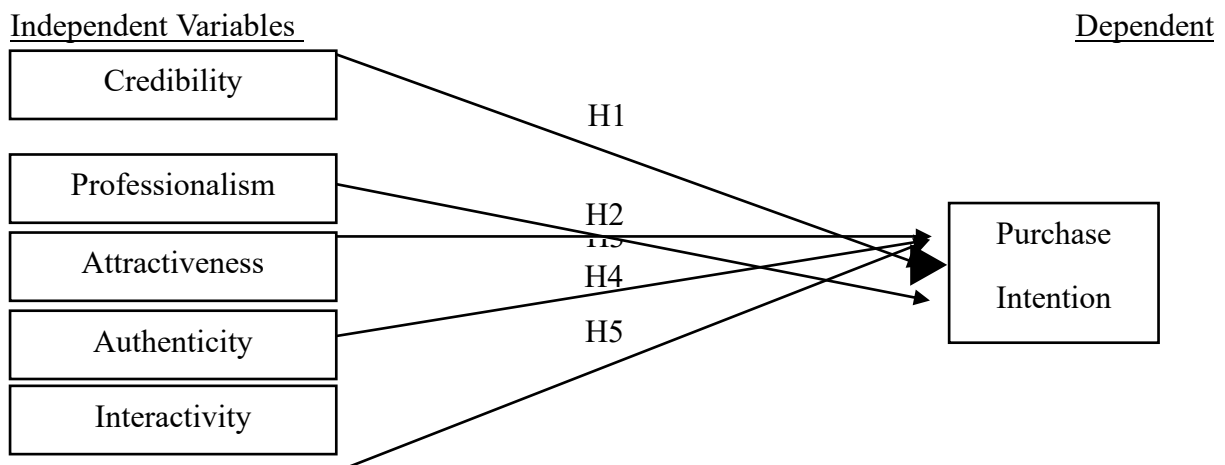
Additionally, while Parasocial Interaction Theory is increasingly acknowledged in international studies, it remains underutilized in Sri Lankan empirical research when explaining how emotional connection and interactivity influence purchase behavior. This indicates a missed opportunity in understanding influencer-follower dynamics among Sri Lanka's digitally native youth.

Therefore, this study seeks to bridge these gaps by investigating the direct influence of five specific influencer attributes: credibility, professionalism, attractiveness, authenticity and interactivity on clothing brand purchase intention of Gen Z consumers in the Kurunegala District, providing region-specific insights into an increasingly influential marketing strategy.

2.3 Conceptual Framework

The below conceptual model is developed specifically to the semi-urban Gen Z population in Kurunegala District, integrating theoretical insights with observed empirical patterns to frame a testable and context-relevant hypothesis structure.

Figure 1. Conceptual Framework



Source: Compilation by Author

To achieve research objects, researchers have developed four hypotheses as follow as;

H1: Social media influencer credibility has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.

H2: Social media influencer professionalism has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.

H3: Social media influencer attractiveness has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.

H4: Social media influencer authenticity has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.

H5: Social media influencer interactivity has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.

Methodology

This study adopted a quantitative, positivist approach to examine the impact of social media influencer (SMI) attributes on clothing brand purchase intention among Generation Z consumers in the Kurunegala District of Sri Lanka. A cross-sectional, deductive design was employed, with data collected through a purposive sample of 384 active social media users. The questionnaire, developed from established theoretical frameworks and prior studies, included demographic questions, items measuring five independent variables (credibility, professionalism, attractiveness, authenticity, and interactivity), and purchase intention as the dependent variable, all assessed on a 5-point Likert scale. Content validation by experts and a pilot test ensured reliability and clarity. Data were analyzed using SPSS, employing descriptive statistics, Pearson correlation, and multiple linear regression. Ethical procedures included informed consent, confidentiality, and the right to withdraw, while purposive sampling and self-reported data were acknowledged as potential limitations.

3.1 Operationalization

The process of translating the theoretical constructs of SMI attributes and purchase intention into measurable variables is referred to as operationalization. The operationalization table outlines how each variable has been defined and measured in practical terms for this study.

Table 2: Operationalization of Variables

Variable	Dimensions	Indicators	Scale	Sources
SMI attributes (Independent variables)	Credibility	• Knowledge of clothing products	5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree)	Nugroho et al. (2022); Sokolova & Kefi (2020); Zhao et al. (2024); Chetioui et al. (2020); Masuda et al. (2022)
		• Honest communication		
		• Accurate and reliable information		
		• Fashion expertise		
		• Trustworthiness		
	Professionalism	• Professionally presented content	5-point Likert scale	Zhao et al. (2024); Bandara et al. (2024); Masuda et al. (2022); Guruge (2024); Chetioui et al. (2020)
		• Consistent and organized delivery		
		• Expertise in promotion		
		• Clear and professional communication		

		Professional appearance		
	Attractiveness	- Visual appeal - Stylish appearance - Fashionable style - Charming personality - Appealing overall look	5-point Likert scale	Sokolova & Kefi (2020); Chetoui et al. (2020); Jin & Ryu (2020); Masuda et al. (2022); Bandara et al. (2024)
	Authenticity	- Genuine and honest opinions - Relatable personality - Personal storytelling - Sincere recommendations - Trustworthy content	5-point Likert scale	Jin & Ryu (2020); Wolf (2020); Sokolova & Kefi (2020); Masuda et al. (2022); Zhao et al. (2024)
	Interactivity	- Engagement with followers - Responsiveness - Interactive content - Live sessions / Q&A - Community building	5-point Likert scale	Ao et al. (2023); Bandara et al. (2024); Jin & Ryu (2020); Erwin et al. (2023)
Purchase Intention (Dependent Variable)	-	- Consider buying - Willingness to purchase - Increase purchase interest - Intention to follow suggestions - Intention to recommend		Nugroho et al. (2022); Zhao et al. (2024); Chetoui et al. (2020); Bandara et al. (2024); Chun et al. (2018)

Sources: Nugroho et al. (2022); Sokolova & Kefi (2020); Zhao et al. (2024); Chetioui et al. (2020); Masuda et al. (2022); Bandara et al. (2024); Guruge (2024); Jin & Ryu (2020); Wolf (2020); Ao et al. (2023); Erwin et al. (2023); Chun et al. (2018).

Results and Discussion

The following table shows the demographic profile of the respondents, offering a clear overview of their gender, age, educational level, income, and divisional distribution relevant to the study.

Table 3: Demographic and Social Media Profile of Respondents

Variable	Category	Frequency	Percentage (%)	Cumulative Percentage (%)
Age Range	13-18	57	14.8	14.8
	19-22	139	36.2	51.0
	23-28	188	49.0	100.0
Gender	Male	216	56.3	56.3
	Female	168	43.8	100.0
Most Frequently Used Social Media Platform	Instagram	181	47.1	47.1
	Facebook	73	19.0	66.1
	TikTok	100	26.0	92.2
	YouTube	30	7.8	100.

Note: N=384

Source: Survey Data (2025)

The above processed data shows that the majority of respondents (49%) belong to the age group of 23-28 years. Next the age range of 19-22 take up to 36%, followed by the age range 13-18 at 15%. This distribution depicts that the sample predominantly consists of Gen Z consumers, aligning with the target demographic objectives. The sample is slightly male dominated in terms of gender composition, with 56.3% male and female taking up to 43.8%. This distribution provides a balanced perspective for analyzing social media behaviors and purchase intentions across genders.

In regard to social media usage patterns, Instagram is labelled as the most frequently used platform with 47.1% of respondents selecting it as their preferred platform. TikTok accounts for 26% while Facebook and YouTube take up to 19% and 7.8% respectively.

4.1 Reliability and Validity Test

4.1.1. Reliability Testing

The results of the reliability test depicted that all constructs in the study recorded Cronbach's Alpha values above 0.80, indicating strong internal consistency across the measurement scales. The table below presents the reliability statistics for each construct.

Table 4: Reliability Statistics of Study Variables

Variable	Cronbach's Alpha	Number of Items
Credibility	0.835	5
Professionalism	0.819	5
Attractiveness	0.827	5
Authenticity	0.824	5
Interactivity	0.826	5
Purchase Intention	0.832	5

Source: Survey Data (2025)

The above results confirm that all constructs employed in the study achieved good reliability, ensuring that the measurement scales are dependable for further analysis in the subsequent sections.

4.1.2. Validity Test

Table 5: KMO and Bartlett's Test Results of Constructs

Variable	KMO	Approx. Chi-Square	df	Sig.	Interpretation
Credibility	0.822	690.154	10	0.000	Sample adequate, factorable
Professionalism	0.819	614.011	10	0.000	Sample adequate, factorable
Attractiveness	0.804	692.729	10	0.000	Sample adequate, factorable
Authenticity	0.824	660.506	10	0.000	Sample adequate, factorable
Interactivity	0.812	656.902	10	0.000	Sample adequate, factorable
Purchase Intention	0.808	706.833	10	0.000	Sample adequate, factorable

Source: Survey Data (2025)

The KMO values for all constructs range from 0.804 to 0.824, indicating that the sample is adequate for factor analysis while the Bartlett's Test of Sphericity is significant ($p < 0.05$) for all constructs, confirming that the correlations between items are sufficiently large for factor analysis.

4.2 Descriptive Statistics

This section presents the descriptive statistics of the study's independent variables and dependent variable.

Table 6: Descriptive Statistics of Study Variables

Variable	Minimum	Maximum	Mean	Standard Deviation
Credibility	1	5	4.4333	0.38501
Professionalism	1	5	4.3354	0.35957
Attractiveness	1	5	4.4417	0.38202
Authenticity	1	5	4.3406	0.36335
Interactivity	1	5	4.3297	0.36154
Purchase Intention	1	5	4.3667	0.37288

Source: Survey Data (2025)

The descriptive results indicate that all variables recorded mean scores above 4.3, suggesting that respondents generally agreed with the items measuring each construct.

4.3 Correlation

Table 7: Correlation Matrix of the Study's Variables

		CRE	PRO	ATT	AUTH	INT	PI
CRE	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	384					
PRO	Pearson Correlation	.437**	1				
	Sig. (2-tailed)	.000					
	N	384	384				
ATT	Pearson Correlation	.605**	.356**	1			
	Sig. (2-tailed)	.000	.000				
	N	384	384	384			
AUTH	Pearson Correlation	.474**	.659**	.444**	1		
	Sig. (2-tailed)	.000	.000	.000			
	N	384	384	384	384		
INT	Pearson Correlation	.568**	.621**	.459**	.696**	1	

	Sig. (2-tailed)	.000	.000	.000	.000	
	N	384	384	384	384	384
PI	Pearson Correlation	.479**	.467**	.436**	.592**	.554**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	384	384	384	384	384

** Correlation is significant at the 0.01 level (2-tailed).

Note: CRE (Credibility), PRO (Professionalism), ATT (Attractiveness), AUTH (Authenticity), INT (Interactivity), PI (Purchase Intention)

Source: Survey Data (2025)

According to the above established correlation results, the significance value (p) is .000 for all variable relationships, which is below the threshold of 0.05. This demonstrates clear statistical evidence to conclude that significant relationships exist among the variables.

4.4. Regression Analysis

Regression analysis is performed to examine the predictive power of independent variables on a dependent variable. In the context of this investigation, regression is applied to examine how the SMI attributes.

The model summary presents the overall power of the regression model.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651 ^a	.424	.417	.28478

a. Predictors: (Constant), INT, ATT, PRO, CRE, AUTH

b. Dependent Variable: PI

Source: Survey Data (2025)

The correlation coefficient ($R = 0.651$) suggests a moderately strong positive association between the independent variables: credibility (CRE), professionalism (PRO), attractiveness (ATT), authenticity (AUTH) and interactivity (INT) and the dependent variable, purchase intention (PI). The coefficient of determination ($R^2 = 0.424$) shows that 42.4% of the variation in purchase intention can be explained by the combined effect of the influencer attributes. The adjust R^2 value (0.417) confirms the model's stability by accounting for the number of predictors included. The standard of error of the estimate (0.28478) shows that the predicted values of purchase intention are reasonably close to the actual observed values. These results

indicate that the regression model has a satisfactory explanatory power in predicting Generation Z consumers' purchase intention based on the selected SMI attributes.

ANOVA

The overall significance of the regression model is tested by the ANOVA results. The table below presents the ANOVA statistics.

Table 9: ANOVA Statistics

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.598	5	4.520	55.730	.000 ^b
	Residual	30.655	378	.081		
	Total	53.253	383			

a. Dependent Variable: PI

b. Predictors: (Constant), INT, ATT, PRO, CRE, AUTH

Source: Survey Data (2025)

The F-value obtained is 55.730 with a significant level of $p = 0.000$, which is well below the threshold value of 0.05. This indicates that the model is statistically significant and that at least one of the independent variables has a meaningful influencer upon purchase intention. The regression sum of squares (22.598) compared to the residual sum of squares (30.655) further shows that a considerable proportion of variation in purchase intention is explained by the proposed model.

Coefficient statistics examine the individual contribution of each independent variable in explaining the dependent variable. While the regression model as a whole shows the overall significance, the coefficient table presents insights into which SMI attributes have a meaningful impact.

Table 10: Coefficient Statistics

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.864	.220		3.933	.000
	CRE	.138	.052	.142	2.632	.009
	PRO	.047	.057	.046	.836	.404
	ATT	.109	.049	.112	2.218	.027
	AUTH	.341	.062	.332	5.517	.000
	INT	.167	.063	.162	2.658	.008

a. Dependent Variable: PI

Source: Survey Data (2025)

As per the obtained results, the constant value is 0.864, suggesting the baseline level of purchase intention when all independent variables are held at zero. Among the variables, credibility ($B = 0.138$, $p = 0.009$), attractiveness ($B = 0.109$, $p = 0.027$), authenticity ($B = 0.341$, $p = 0.000$) and interactivity ($B = 0.167$, $p = 0.008$) all indicate statistically significant positive effects on purchase intention as their p-values are below 0.05. Authenticity is considered to be the most influential attribute in shaping Gen Z consumer's clothing brand purchase decisions. Credibility, interactivity and attractiveness also contribute meaningfully, yet at a comparatively lesser degree.

Professionalism ($B = 0.047$, $p = 0.404$) on the contrary, is not statistically significant as its p-value exceeds 0.05. This indicates that professionalism does not play a notable role comparatively, in influencing clothing brand purchase intention of Gen Z consumers in Kurunegala District, within the context of this study.

4.5 Discussion

Based upon the coefficient analysis, the hypotheses of the study can be evaluated. A hypothesis is supported if the respective predictor indicates a statistically significant effect ($p < 0.05$) in the regression analysis. The results are shown in the table below.

Table 11: Summary of Hypotheses Testing

	Hypothesis	Unstandardized B	Sig.	Result
H1	H5: Social media influencer credibility has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.	.138	0.009	Accepted
H2	H5: Social media influencer professionalism has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.	.047	0.404	Not Accepted
H3	H5: Social media influencer attractiveness has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.	.109	0.027	Accepted
H4	H5: Social media influencer authenticity has a significant impact on clothing brand purchase	.341	0.000	Accepted

	intention of Generation Z consumers in Kurunegala District of Sri Lanka.			
H5	H5: Social media influencer interactivity has a significant impact on clothing brand purchase intention of Generation Z consumers in Kurunegala District of Sri Lanka.	.167	0.000	Accepted

Source: Survey Data (2025)

Thus, credibility, attractiveness, authenticity and interactivity significantly impact the clothing brand purchase intention among Gen Z consumers in Kurunegala District while professionalism does not have a significant effect. Among all attributes, authenticity indicate the strongest impact, which suggests it as the most crucial SMI attribute in shaping consumer decisions within the study's context.

This study examines the impact of SMI attributes (credibility, professionalism, attractiveness, authenticity and interactivity) on the clothing brand purchase intention of Gen Z consumers in Kurunegala District. Primary data was collected from 384 Gen Z respondents residing in Kurunegala through a structured questionnaire, fulfilling the requirement determined through Cochran's (1977) formula for an unknown population. The demographic profile depicted that the majority of the respondents were between 23-28 years (49%), followed by those aged 19-22 years (36.2%), while the rest fall under the age group of 13-18 years. The sample was slightly male dominated (56.3%) while Instagram was the most frequently used platform (47.1%). 49.5% of the respondents actively use all four platforms associated with the study: Instagram, Facebook, TikTok and YouTube.

Reliability and validity tests confirmed that all constructs were reliable and valid for further analysis. Descriptive statistics revealed that all attributes recorded mean values above 4.3 on a 5-point Likert scale, signaling favorable perceptions of the participants. Attractiveness (4.4417) and credibility (4.4333) indicated the highest mean values while interactivity (4.3297) had the lowest. Purchase intention, the study's dependent variable also showed a high mean value (4.3667). Standard deviations across all variables were low, indicating consistency among responses.

Correlation analysis indicated that all SMI attributes were significantly and positively correlated with purchase intention. Authenticity ($r = 0.592$) and interactivity ($r = 0.554$) showed the strongest associations. Regression analysis further showed that credibility ($p = 0.009$), attractiveness ($p = 0.027$), authenticity ($p = 0.000$) and interactivity ($p = 0.000$) each had significant positive impact on purchase intention while professionalism ($p = 0.404$) did not portray statistically significant effect. Authenticity emerged as the most influential predictor of clothing brand purchase intention among the associated attributes.

The findings confirm that credibility, attractiveness, authenticity and interactivity significantly impact the clothing brand purchase intention among Gen Z consumers in Kurunegala, with authenticity being the most critical predictor. Professionalism was not found to be a significant

determining factor of purchase intention in this localized context, although the attribute is often highlighted in influencer marketing researches.

Conclusion and Recommendations

Conclusion

The study's conclusions show that SMI characteristics do have a significant influence on Gen Z consumers' intentions to buy apparel brands in the District of Kurunegala. In addition to Gen Z's distinctive digital consumer behaviors which are described as brand mindful, authenticity-driven, and highly interactive the research was spurred by the notable expansion of SMIs as persuasive marketing agents in the apparel sector. Based on TPB, Parasocial Interaction Theory, and Persuasion Theory, the study examined the effects of five influencer qualities attractiveness, professionalism, authenticity, credibility, and interactivity the intention to buy apparel brands.

In the framework of this study, data analysis demonstrated that four attributes aside from professionalism affect purchase intention, highlighting the dynamic interaction between influencer traits and customer decision-making. Authenticity was labelled as the strongest predictor highlighting that Gen Z consumers in Kurunegala value genuine, relatable and transparent influencer communication over polished but impersonal promotional content. This depicts a broader shift in marketing effectiveness, where perceived relatability, honesty and personal storytelling resonate more deeply than traditional professionalism. Credibility, attractiveness and interactivity also emerged as predictors with significant positive effects demonstrating that consumers are more inclined to purchase when they perceive influencers as knowledgeable, visually appealing and actively engaging with their audience. These findings align with prior studies that outlines the growing importance of authentic and interactive marketing strategies in digital environments.

As mentioned earlier, professionalism did not register a statistically significant effect on purchase intention within the context of this study. Although professionalism is well acknowledged in literature as a valuable dimension, the lack of significance here indicates that Gen Z in Kurunegala District may perceive overly formal, structured or corporate-like fashion influencer content as less persuasive. Instead, they value conversational, casual and community-oriented influencer behavior. This signals an evolving consumer psychology, where traditional markers of professionalism may hold diminishing weight compared to more humanized, participatory influencer practices.

Because the impact of influencer traits differs depending on how consumers perceive value in digital interactions, this study's aims give empirical evidence that these attributes cannot be viewed as equally beneficial. The research conducted in Kurunegala District also contributes to a better knowledge of Sri Lankan regional consumer behavior.

In conclusion, the study demonstrates that authenticity, credibility, attractiveness and interactivity are decisive attributes that marketers, clothing brands and influencers must prioritize when producing content for clothing brand promotions targeting Gen Z consumers in

Kurunegala District. The rejection of professionalism is a significant scenario which further emphasizes that brands should not invest in polished promotional strategies excessively. While fulfilling the research objectives, these insights also contribute to the growing body of knowledge on influencer marketing by contextualizing global theories within a Sri Lankan setting.

5.2 Limitations of the Study

Although the investigation provided significant findings, the study has several limitations that should be acknowledged. First, the research was geographically limited to Kurunegala District of Sri Lanka. While the district possesses high Gen Z population, the findings may not fully generalize to other districts or metropolitan contexts such as Colombo due to the differences in media consumption and fashion trends. Next, the study employed a cross-sectional design which enables to capture responses at a single point in time. Due to this, causal relationships between the SMI attributes and purchase intention cannot be firmly established. Longitudinal designs could better illustrate how perceptions and purchase intentions evolve over time. The study also relied on data produced through a self-reported questionnaire. Such data collection instruments can be subjected to common method bias and social desirability effects, especially considering Gen Z's sensitivity to social media image. The next limitation to list would be the sole examination of five attributes (credibility, professionalism, attractiveness, authenticity and interactivity) only. Other crucial attributes such as consistency, popularity, similarity, novelty, emotional appeal and content quality were excluded, potentially constraining the explanatory power of the model. Finally, the sample was restricted to an online survey although the study achieved a 100% response rate. This may have excluded less digitally active Gen Z consumers, leading to a sample skewed towards more socially engaged respondents.

5.3 Recommendations

Based on the findings from the study, the below recommendations can be presented for clothing brands, influencers, digital marketers, campaign managers and social media platform strategists operating in Kurunegala or similar semi-urban Sri Lanka contexts.

Authenticity in influencer collaborations should be prioritized. As authenticity was found to be the most powerful predictor of clothing brand purchase intention, brands should choose and brief SMIs to emphasize honest communication and genuine storytelling. From a practical perspective, this could mean requesting influencers to share personal experiences with the brand, produce behind-the-scenes content rather than using staged ads. Influencers could use concrete examples and disclose sponsorships transparently as this can be perceived to be honest and true. Progress can be measured using engagements such as sentimental comments and conversion-linked indicators such as trackable links tied to authentic posts.

Marketing campaigns on clothing brands should be designed to maximize two-way interactivity. Given the significance of interactivity, content formats that invite follower participation should be prioritized. This can be done through live sessions, polls, interactive stickers, Q&A sessions and AMA (ask-me-anything) sessions. Evaluation can be done through

the monitoring of live attendance, poll participation, average replies per post and engagement-to-follower ratios.

Strengthening SMI credibility through the demonstration of expertise and accurate information is yet another recommendation. Credibility significantly influences purchase behavior and should be discussed in campaign briefings. Influencers must be asked to portray ideal product knowledge. They should clearly explain the related materials, guide the followers in regard to sizes, and compare the brand / product with alternatives in an honest manner. By providing product samples and short technical meetings, influencers can speak confidently and accurately. The progress can be tracked by comparing conversion rates for posts that include accurate product information with posts that have purely visual elements.

It also recommended to utilize attractiveness strategically while maintaining relatability. Although attractiveness had a smaller impact than authenticity, it still positively affects purchase intention and recorded the highest mean in this study's context. Visually appealing content can be leveraged (high quality images, styled shoots, etc.) while avoiding exaggerated aesthetics that reduce relatability. SMIs can be encouraged to combine aspirational visuals with authentic captions or unedited segments. Instagram and TikTok formats should be emphasized for platform selection, given their preference among participants. To track which visual style works best, click-through and engagement rates can be monitored.

Adopting multi-platform tactics can also be recommended. Majority of the respondents use multiple platforms and therefore, implementing cross-platform campaigns with tailored content for each channel would bring in more content exposure.

5.4 Suggestions for Future Research

Based upon the identified limitations of the study, several directions for future studies can be suggested. First, researchers should expand the geographical scope beyond Kurunegala to include urban, sub-urban and rural regions in order to improve generalizability of findings and to allow cross-comparison of regions. Secondly, adapting a longitudinal or experimental study design would facilitate establishing stronger causal inferences and capture how the impact of SMI attributes on purchase intention may vary with repeated exposure. Next, future studies could use behavioral measures such as click-through rates, actual purchase records or engagement analytics from social media platforms to reduce bias from self-reported data. Future research could consider broadening the study's framework by incorporating additional SMI attributes such as consistency, popularity, similarity, novelty, posting frequency and content quality in order to expand the explanation of Gen Z's purchase behavior. As the fifth suggestion, comparative studies could examine platform specific effects to identify which SMI attributes resonate most strongly on each medium. Finally, incorporating mediating variable such as trust, attitude toward the brand and perceived brand value and moderating variables like gender or income would enrich the explanatory power of the model and refine theoretical contributions made by study.

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**THE MEDIATING ROLE OF CULTURAL INTELLIGENCE IN THE
RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND CROSS-
CULTURAL ADJUSTMENT OF SRI LANKAN STUDENTS STUDYING ABROAD**

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Abstract

Purpose: The objective of this research is to explore the mediation effect of cultural intelligence between emotional intelligence and cross-cultural adjustment of Sri Lankan international students. It will discuss the poor knowledge of how emotional intelligence correlates with the adjustment outcomes in the Sri Lankan context and how emotional competencies can be used to enable efficient adjustment in new settings.

Design/methodology/approach: A quantitative research design was adopted where a structured online questionnaire was used in the study where 102 international students of Sri Lanka were used in the study through a snowball sampling. The tool was used to measure emotional intelligence, cultural intelligence and cross-cultural adjustment with validated scales. Data analysis was conducted with the help of SPSS where descriptive statistics and Pearson correlation were used to test the relationship between variables. Direct effects were measured using the multiple regression analysis and mediating role of cultural intelligence using the mediation analysis.

Findings: The findings show that there are great positive correlations between emotional intelligence, cultural intelligence and cross-cultural adjustment. The results show that cultural intelligence is positively related to cross-cultural adjustment with a strong positive relationship partially mediated by Cultural intelligence between emotional intelligence and cross-cultural adjustment. These results indicate that with increased emotional intelligence, one is more likely to acquire cultural awareness and adaptive behavioral competencies and thus increase their adjustment in cross-cultural environments.

Limitations/implications of the research: The sample size is also a limitation of the research as it is rather small and the authors use self-reported data that can influence the generalizability. Future studies should also incorporate the use of larger samples and designs over time. Practically, universities can develop special courses and they will enable students to adjust by acquiring emotional and cultural skills.

Originality/value: This study contributes to the literature in the following ways: It provides empirical evidence of the mediating role of cultural intelligence among Sri Lankan international students who are underrepresented. It offers practical insights to teachers and policy makers to create interventions to improve cross-cultural adaptation and academic performance in cross-cultural contexts.

Keywords: Cross-Cultural Adjustment; Cultural Intelligence; Emotional Intelligence; International Students; Sri Lanka

1. Introduction

1.1. Background of the Study

The arrival at a foreign university may be accompanied by a lot of excitement when it comes to pursuing academic ambitions; nevertheless, a lot of students are faced with the social norms, classroom expectations, and communication styles that make their integration difficult. Cultural congruence in a new environment is a major challenge to many Sri Lankan students. In 2022, there were 6.9 million students studying abroad in the world, which proves the rapid growth of international higher education (UNESCO, 2024). By 2023, Sri Lanka was sending 31,000 students abroad, the majority of them to the United States, Canada, Australia, and the United Kingdom (UNESCO, 2024; Madawala and Kulaweera, 2023). These figures underscore the need to understand how students adapt to new academic and cultural environments especially in the context of domestic economic limitations and institutional capacity.

In order to succeed students have to negotiate the psychological, social and intellectual pressures of the host culture which is usually termed as cross-cultural adjustment (CCA) (Black and Stephens, 1989). CCA involves day-to-day activities, intercultural communication, and performance at work or school. The shift of the society with high power distance and collectivism into the individualistic Western cultures, with the principles of egalitarianism and open communication as the dominant ones, presents certain difficulties to the Sri Lankan learners. This cultural dissonance may lead to stress, stopping social integration, and negative academic performance.

The Social Learning Theory (Bandura, 1977) argues that new behaviors are learned through observation, modeling, and imitation of actions of other people around them, thus, explaining the mechanisms of psychological adaptation. The identification and control of one affective state are examples of emotionally intelligent practices which can help in the development of culturally appropriate reactions amongst international students. Similarly, cultural intelligence can be used to aid the effective assimilation of students and their adaptation to new social and academic issues by allowing the appreciation, understanding, and imitation of host-culture standards.

Emotional intelligence (EI) as a skill to identify, understand, and control emotions (Mayer and Salovey, 1997) will help students to cope with the stress, culture shock and create supportive social networks. However, EI might not be enough to be able to successfully operate in a new cultural environment. Cultural intelligence (CQ) as the extension of EI that allows learners to notice and act upon new cultural signals in a proper manner (Earley and Ang, 2003) can be seen as a comprehensive framework that encompasses metacognitive, cognitive, behavioral, and motivational aspects of emotional awareness that can be converted into action that is appropriate within a given culture.

Empirical studies support the applicability of CQ: Chu and Zhu (2023) have reported that CQ improves the psychological resilience of international students, and Zhang et al. (2024) have discovered that behavioral CQ increases academic participation and outcomes in multicultural classrooms. In spite of these observations, there are still great gaps. South-Asian students have

been underrepresented particularly those of Sri Lanka in the studies where most of the research is done on western or expatriate groups. The research on student mobility in Sri Lanka tends to focus on the academic and economic factors and overlook the psychological mechanisms of cultural integration (Madawala and Kulaweera, 2023). Furthermore, not many studies focus on EI, CQ, and CCA at the same time in order to explain their inter-relationship in influencing successful acculturation.

The current gaps are filled in this study through the exploration of the mediating position of cultural intelligence between emotional intelligence and cross-cultural adaptation of Sri Lankan students in foreign countries. The results show that emotional intelligence is a source of internal capability that led to the improvement of cultural intelligence which, in turn, leads to the successful acculturation to the host culture, which can be explained with the help of Social Learning Theory. To institutions of higher learning, counseling providers and policymakers who work with the Sri Lankan students in foreign settings, an understanding of this developmental pathway provides both theoretical and practical suggestions.

1.2. Problem Statement

The accelerated globalization of higher education has significantly increased the number of international students moving across countries, as over 25,000 Sri Lankan students join foreign institutions on an annual basis (IIE, 2024). Although this growth opens up great learning opportunities, cross-cultural adjustment (CCA) is a problem that is often faced by international students. Such difficulties have a negative impact on academic achievements, mental health, and accommodation of students into the social life of host nations.

Emotional intelligence (EI) empowers people to manage emotions and maintain interpersonal relationships across cultural borders (Salovey and Mayer, 1990; Miao et al, 2020), but cultural intelligence (CQ) empowers people to read cultural signals and change behaviors in multicultural settings (Ang et al, 2007; Presbitero, 2016). The recent meta-analyses confirm that EI and CQ are strong predictors of CCA (Zhang et al., 2022). However, the current studies have shown that there are some crucial flaws: a strong reliance on cross sectional designs, an overemphasis on Western and Chinese students, and a limited emphasis on high power distance settings, like Sri Lanka (Hofstede, 2011).

So far, there has been no quantitative study that has investigated mediating role of CQ in EI-CCA relationship of South Asian students. The current research will overcome these population, methodological, and theoretical weaknesses by examining the mediation of the relationship between emotional intelligence and cross-cultural adjustment by cultural intelligence in the context of Sri Lankan international students.

1.3. Research Objectives

1. Analyze the impact of emotional intelligence on the cross-cultural adjustment among international students
2. Investigate the role of cultural intelligence in mediating the relationship between emotional intelligence and the cross-cultural adjustment among international students.

1.4. Significance of the Study

The study looks into the way foreign students deal with different cultural adjustments through the types of Cultural Intelligence (CQ) and Emotional Intelligence (EI). It points out the higher population of foreign students and highlights the need to understand the different aspects that lead to positive adaptation in new, diverse, cultural settings. The study analyzes the role of CQ in the cross-cultural adjustment process and stresses that the scope of adjustment is more than the academic sphere, and also includes the psychosocial, and integrative comfort. The results may assist in the refinement of the international student assistance programs to mitigate the psychosocial effects of foreign student loneliness, and adjust the focus of programs that foster CQ through EI, to enhance the cross-cultural adjustment experience of the foreign students.

2. Literature review

2.1. Critical Discussion

This speed of the global mobility of students has provoked the increased academic interest to the factors of the effective cross-cultural adjustment. Cross-cultural adjustment refers to psychological comfort, social effectiveness, and behavioral adjustment that individuals attain when they interact in a new cultural environment (Black, Mendenhall, and Oddou, 1991). To the international students, adjusting to new cultural norms, forms of communication and academic demands is essential to academic achievement and psychological comfort. However, the available studies have mostly been descriptive in nature with their focus being on the identification of individual competencies connected with adjustment without much explanation of how these competencies affect adjustment.

Emotional intelligence (EI) has been referred to as the ability to recognize, understand, manage, and use emotions both in others and on oneself (Salovey and Mayer, 1990). The individuals with high scores in EI are often recorded to possess excellent interpersonal skills and greater ability to cope with emotional pressures (Goleman, 1995). In the context of intercultural situations, emotionally intelligent people are expected to be in a better position to deal with situations like culture shock, homesickness, and communicative barriers. Empirical studies support the fact that EI is helping to regulate emotions and sustain positive social interactions in culturally diverse settings (Miao, Humphrey, and Qian, 2021).

Despite these findings, researchers have questioned whether emotional intelligence is adequate in the determination of cross-cultural adaptation. One argument is that emotional intelligence is majorly interested in affective control and inter-personal sensitivity, whilst effective intercultural functioning requires the acquisition of particular cultural information and behavioral flexibility. Other researchers also argue that emotional intelligence can perhaps even overlap conceptually with some aspects of cultural intelligence, especially the metacognitive aspect which involves the monitoring and evaluation of the cultural interactions (Ang et al., 2007). In turn, the fact that emotional intelligence is studied in isolation without considering other intercultural competencies can provide an incomplete picture of how people adapt to culturally diverse settings.

To address these constraints, cultural intelligence (CQ) has been proposed as a supportive ability that helps one to work in a culturally diverse environment. CQ refers to the ability of an individual to adjust effectively to culturally different environments and can be defined in four dimensions that are interreligious, namely metacognitive, cognitive, motivational and behavioral (Ang et al., 2007; Ang and Van Dyne, 2008). These elements enable them to understand cultural differences, maintain the drive to interact with culturally different counterparts, and change their behavior to suit the existing cultural norms. Empirical studies always indicate that people with high cultural intelligence levels enjoy better psychological and sociocultural adjustment in intercultural settings (Presbitero, 2016; Chu and Zhu, 2023).

Even though emotional intelligence and cultural intelligence have been widely mentioned as the predictors of intercultural effectiveness, prior research has mostly assumed that these two constructs are independent variables, thus not considering the process by which emotional intelligence could lead to the enhancement of cultural intelligence. Ideationally, emotionally intelligent persons are described to have an excellent level of empathy, interpersonal understanding, and emotional regulation, which may positively impact the interpretation of emotional and social clues that emanate during intercultural interactions. The competencies can help to learn the intercultural experiences more efficiently and, in the long term, enable the gradual development of cultural intelligence (Bücker & Furrer et al, 2014).

The Social Learning Theory provides a solid theory to explain this development process. According to Bandura (1977), people learn new behaviors and skills by observing, imitating and reinforcing them in sociocultural settings. On entering a new cultural environment individuals will note the behavioral repertoires, the patterns of communication and the normative expectations of the members of the host culture and will then adjust their own behavior in line with those. Emotional intelligence may complement this observational learning in that it is able to help one identify the affective cues, correctly interpret social interactions and correctly manage their emotional responses that may otherwise hamper the learning process. By having intercultural interaction on a frequent basis, people get to learn that behavior that is culturally approved thereby becoming culturally intelligent. The cultural intelligence, in its turn, assists individuals in getting the cultural differences properly understood and modify their behavior more effectively, which ultimately will help them to adapt to a foreign culture effectively.

Nevertheless, other theoretical approaches can also serve explanatory concepts on cross-cultural adaptation. Indicatively, John W. Berry developed the acculturation model which states that people employ different adaptation strategies; that is, integration, assimilation, separation or marginalization, based on how they handle relationships between their home and host cultures. In this perspective, cross-cultural adjustment is not only conditioned by personal capabilities, but also by more general cultural orientations and contextual factors. This highlights the importance of investigating psychological capabilities like emotional intelligence and cultural intelligence in their respective cultural background.

The context of the Sri Lankan students studying abroad offers a very relevant context of studying the interrelations. The culture of Sri Lanka is commonly described as collectivistic with respect to the hierarchical structure and strong interpersonal connection. These cultural features could influence the way students interpret emotional signals, engage in intercultural interactions, and extract learning out of the culturally diverse experiences. An example is that the students with collectivist backgrounds might focus on interpersonal harmony and this might enhance the contribution of emotional intelligence in enabling the intercultural learning processes. Therefore, cultural intelligence can be a key process in which emotional intelligence plays a role in cross-cultural adaptation among Sri Lankan students.

Based on this theoretical explanation, the current research assumes that cultural intelligence mediates the correlation between emotional intelligence and cross-cultural adjustment among Sri Lankan international students. Emotional intelligence improves the ability of individuals to decipher both emotional and social signals in intercultural exchanges, which facilitates the process of cultural intelligence acquisition through observational learning processes. The cultural intelligence in order will help people to understand the cultural norms, adjust their behaviors and interact effectively with other people of different cultures. This mediational relationship can be empirically investigated with the help of validated measurement tools, including the Wong and Law Emotional Intelligence Scale (Wong and Law, 2002), the Cultural Intelligence Scale created by Ang et al. (2007), and the cross-cultural adjustment scales (Black et al., 1991), which are widely used.

2.2. Spotting the Gap

Critical gaps are revealed from current literature. Despite the annual mobility of the Sri Lankan population of more than 25,000 students worldwide, no studies have been conducted on the mediation of EI-CQ among South Asian students (IIE, 2024). Research ignores a high-power distance culture such as Sri Lanka (PDI=80) and overrepresents Chinese (38%) and Western (29%) populations (Hofstede, 2011). The major methodological faults include self-report bias, focus on short duration, and 89% cross-sectional study design, which are not compatible with Sri Lanka 24-month programs. The hierarchical norms and emotional restraint are not validated by the EI/CQ assessments done in the West in Sri Lanka. No study is looking into the EI-CQ route of those pupils of hybrid context, while the offshore education in the underdeveloped countries is rising (Paige, 1990; Lin & Yi, 1997). This work addresses population, methodological, measurement, and theoretical loopholes by providing for the first time quantitative measurement of CQ mediation between EI and CCA for international students from Sri Lanka.

2.3. Hypotheses

H1: Emotional Intelligence positively influences Cross-Cultural Adjustment of Sri-Lankan students studying abroad.

Emotional intelligence (EI) also helps individuals to perceive, manage, and use emotions in the intercultural setting, thus, allowing them to cope with culture shock and communication

difficulties more efficiently and allowing them to adapt to the new culture better (Salovey and Mayer, 1990; Miao, Humphrey and Qian, 2020).

H2: Emotional Intelligence positively influences Cultural Intelligence of Sri Lankan students studying abroad.

Cultural intelligence (CQ) is another skill that is deemed necessary to learn and adjust in culturally diverse settings and EI helps in developing it through the skills of empathy, social awareness, and emotion regulation (Ang et al., 2007; Bückner, Furrer, and Peeters, 2021).

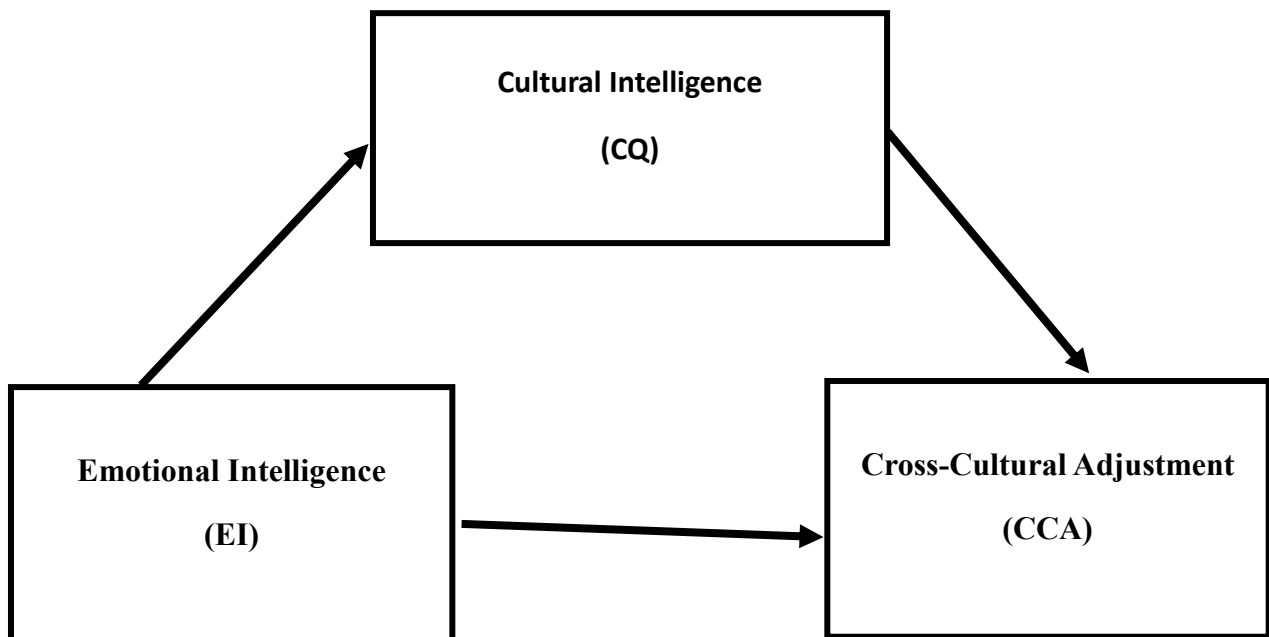
H3: Cultural intelligence is positively influences cross-cultural adjustment of Sri Lankan students studying abroad.

People with greater CQ levels have more opportunities to comprehend the cultural differences, adapt behaviors, and participate in intercultural communication more effectively, thus attaining a high quality of cross-cultural adjustment (Presbitero, 2021; Chu and Zhu, 2023).

H4: Cultural Intelligence mediates the relationship between Emotional Intelligence and Cross-Cultural Adjustment of Sri Lankan students studying abroad.

Therefore, CQ is hypothesized to mediate the linkage between EI and cross-cultural adjustment since students who are characterized by high levels of EI acquire CQ via observation and social learning, which eventually increases their ability to adapt to new cultural settings (Bandura, 1977; Ang et al., 2007).

2.4 Conceptual Framework



2.5. Research Approach

This study used a deductive approach to test hypotheses about cultural intelligence (CQ) acting as a mediator between emotional intelligence (EI) and cross-cultural adjustment (CCA). This decision is consistent with what previous research indicates. Although inductive approaches are helpful for developing theory from the ground up, they lack the framework required for reliable hypothesis testing. That's why this study went with deductive.

3. Methodology

3.1. Research Strategy

The research selected the survey method with the questionnaires being administered online. This study adopted valid Likert-scale instruments—the Wong and Law EI Scale for EI, the Cultural Intelligence Scale for CQ and the Sociocultural Adjustment Scale for CCA. This approach run solid statistical analyses on correlations and mediation effects. It trumped case studies (which don't generalize), action research (which is focused on intervention), and ethnography, which is consigned to small, qualitative samples.

3.2. Research Site and Sample

In order to guarantee genuine cross-cultural exposure and maintain research representativeness, this study focused on Sri Lankan students who had at least completed a full semester abroad in several different countries. This study used the snowball sampling method to recruit 100 participants: begin with a few contacts who referred us others in their networks. Although it is a non-probability sampling technique, it is ideal for a dispersed group such as this one. The study overview was given to everyone first (with full anonymity and consent).

3.3. Research Measures and Analysis

EI was assessed on factors such as emotional awareness and regulation; CQ knowledge, motivation, and metacognition; and CCA psychological, social, and academic fit with the host country — all scales were adapted and administered in a brief anonymous online survey that also collected demographics. This study did it all in SPSS with regression and the PROCESS macro for those mediation paths. SPSS triumphed for its flexibility, graphing capabilities, and for handling the EI-CQ-CCA relationships with less of a learning curve.

4. Results and Discussion

4.1 Data Description

Snowball sampling approach was employed to collect data for this research using an online questionnaire. In order to investigate the mediating role of Cultural Intelligence (CQ) in the relationship between Emotional Intelligence (EI) and Cross-Cultural Adjustment (CCA), the target sample consisted of international Sri Lankan students studying overseas. For the final analysis, 102 valid responses were obtained.

The questionnaire consisted of two sections. The first section collected demographic information such as gender, age, level of education, host country, duration of stay in the host country, and previous overseas experience. The second section measured the main research

variables: Emotional Intelligence, Cultural Intelligence, and Cross-Cultural Adjustment. Each construct was measured using seven items on a five-point Likert scale.

The sample showed that the respondents were predominantly female (58.8%), and most participants were between 25 and 29 years of age (52%). In terms of educational level, the sample showed an equal representation of Master's and PhD students (43% each). Regarding international exposure, 80.4% of respondents reported that they had no previous overseas experience, while 43.1% had stayed in the host country for one to two years. The majority of the participants were studying in countries such as Canada, the United Kingdom, and Australia.

According to the descriptive statistics, respondents demonstrated moderate to high levels of Emotional Intelligence ($M = 3.93$, $SD = 0.72$), Cultural Intelligence ($M = 3.73$, $SD = 0.82$), and Cross-Cultural Adjustment ($M = 3.68$, $SD = 0.75$). Overall, the data set was considered reliable and appropriate for conducting correlation and mediation analyses to examine the hypothesized relationships among Emotional Intelligence, Cultural Intelligence, and Cross-Cultural Adjustment.

4.2. Analysis

4.2.1. Reliability Analysis

Table 1: Reliability for Study Scales

Scale	No of Items	Cronbach's Alpha
Emotional Intelligence	7	0.888
Cultural Intelligence	7	0.893
Cross-Cultural Adjustment	7	0.899

Reliability analysis was conducted to evaluate the internal consistency of the measurement scales. The results of Cronbach's alpha indicated high reliability for all constructs: Emotional Intelligence ($\alpha = 0.888$), Cultural Intelligence ($\alpha = 0.893$), and Cross-Cultural Adjustment ($\alpha = 0.899$) exceeded the recommended threshold of 0.70. These results indicate that the measurement instruments demonstrate strong internal consistency and are suitable for further statistical analyses.

4.2.2. Correlation Analysis

Table 2: Correlations Among Study Variables

		Emotional Intelligence	Cultural Intelligence	Cross-Cultural Adjustment
Emotional Intelligence	Pearson Correlation	1	.706**	.754**
	Sig. (2-tailed)		.000	.000
	N	102	102	102
Cultural Intelligence	Pearson Correlation	.706**	1	.731**
	Sig. (2-tailed)	.000		.000
	N	102	102	102
Cross-Cultural Adjustment	Pearson Correlation	.754**	.731**	1
	Sig. (2-tailed)	.000	.000	
	N	102	102	102

Pearson correlation analysis was conducted to examine the relationships among the study variables. The results revealed significant positive relationships between all variables. Emotional Intelligence was significantly positively correlated with Cultural Intelligence ($r = 0.706$, $p < 0.01$) and Cross-Cultural Adjustment ($r = 0.754$, $p < 0.01$). In addition, Cultural Intelligence was significantly positively correlated with Cross-Cultural Adjustment ($r = 0.731$, $p < 0.01$). These findings indicate that higher levels of Emotional Intelligence and Cultural Intelligence are associated with better Cross-Cultural Adjustment among international Sri Lankan students studying overseas.

4.2.3. Regression Analysis

Table 3: Regression Analysis for Study Variables

Regression Weights	Beta Coefficient	R ²	F	P-value
EI → CCA	0.754	0.568	131.410	0.000
CQ → CCA	0.731	0.534	114.752	0.000
EI → CQ	0.706	0.499	99.511	0.000

Regression analysis was conducted to examine the predictive relationships among the study variables. The results indicated that Emotional Intelligence significantly predicts Cross-Cultural Adjustment ($\beta = 0.754$, $R^2 = 0.568$, $p < 0.001$), explaining 56.8% of the variance in Cross-Cultural Adjustment. Similarly, Cultural Intelligence was found to be a significant predictor of Cross-Cultural Adjustment ($\beta = 0.731$, $R^2 = 0.534$, $p < 0.001$), explaining 53.4% of the variance in Cross-Cultural Adjustment.

Furthermore, Emotional Intelligence significantly predicts Cultural Intelligence ($\beta = 0.706$, $R^2 = 0.499$, $p < 0.001$), accounting for 49.9% of the variance in Cultural Intelligence. These findings indicate that Emotional Intelligence and Cultural Intelligence play significant roles in explaining Cross-Cultural Adjustment among international Sri Lankan students studying overseas.

4.2.4 Mediation Analysis

Table 4: Mediation Analysis for Study Variables

Effect	Path	β	SE	T-value	P-value	95% of Confidence Interval	
						Lower	upper
Direct	EI→CCA	0.506	0.090	5.611	0.000	0.327	0.684
Indirect	EI→CQ→CCA	0.299	0.127	4.700	0.000	0.069	0.568
Total	EI→CCA	0.805	0.070	11.463	0.000	0.665	0.944

Mediation analysis was conducted to examine whether Cultural Intelligence mediates the relationship between Emotional Intelligence and Cross-Cultural Adjustment. The results indicated that both the direct effect of EI on CCA ($\beta = 0.506$, $p < 0.001$) and the indirect effect through CQ ($\beta = 0.299$, $p < 0.001$) were significant. Since the direct effect remained significant alongside the indirect effect, partial mediation was confirmed. The total effect of EI on CCA was substantial ($\beta = 0.805$, $p < 0.001$), indicating that Emotional Intelligence influences Cross-Cultural Adjustment both directly and indirectly through Cultural Intelligence.

4.3 Hypotheses Testing

The outcomes of correlation, regression, and mediation analysis were used to test the study hypotheses.

Hypothesis 1 (H1) proposed a positive relationship between Emotional Intelligence (EI) and Cross-Cultural Adjustment (CCA). This was supported by the results, which showed that EI significantly predicted CCA ($\beta = 0.754$, $p < 0.001$) and had a significant positive correlation with CCA ($r = 0.754$, $p < 0.01$).

Hypothesis 2 (H2) proposed a positive relationship between Emotional Intelligence and Cultural Intelligence (CQ). The findings confirmed this, with EI significantly predicting CQ ($\beta = 0.706$, $p < 0.001$) and showing a significant positive correlation with CQ ($r = 0.706$, $p < 0.01$).

Hypothesis 3 (H3) proposed a positive relationship between Cultural Intelligence and Cross-Cultural Adjustment. CQ significantly predicted CCA ($\beta = 0.731$, $p < 0.001$) and was positively correlated with CCA ($r = 0.731$, $p < 0.01$), supporting H3.

Hypothesis 4 (H4) examined the mediating effect of Cultural Intelligence on the relationship between EI and CCA. Mediation analysis revealed that EI had a significant direct effect on

CCA ($\beta = 0.506$, $p < 0.001$) and a significant indirect effect through CQ ($\beta = 0.299$, $p < 0.001$). Both effects being significant confirms partial mediation, supporting H4.

Overall, all four hypotheses were supported, indicating that Emotional Intelligence and Cultural Intelligence contribute positively to Cross-Cultural Adjustment among international Sri Lankan students studying overseas.

4.4 Inferences

The results of this research highlight the central importance of emotional intelligence (EI) and cultural intelligence (CQ) in cross-cultural adjustment of Sri Lankan international students. Empirical findings show that EI has a statistically significant positive relationship with cross cultural adjustment, which means that students who have high levels of emotional awareness and regulation are in a better position to overcome difficulties associated with culture shock, communicative barriers, and social adjustment in foreign settings. These findings support the previous studies which define EI as an alleviating factor to psychological adaptation and interpersonal efficacy in an intercultural context (Miao, Humphrey, and Qian, 2020).

The research also shows that there is a very strong positive correlation between EI and CQ. Such an observation suggests that people with the higher ability to understand and regulate emotions are more effective in decoding social stimulation and acquiring knowledge during intercultural experiences. The same results have been reported in previous studies which indicate that affective competencies provide contribution to the process of acquiring cultural intelligence (Ang et al., 2007).

In addition, CQ was determined to have significant effect on cross-cultural adjustment. The participants who had high CQ showed improved capability of identifying cultural divergences, adjusting their behaviors to suit them, and interacting well in multicultural environments. This finding corresponds to the previous literature which emphasizes CQ as an effective indicator of effective intercultural adjustment (Presbitero, 2016; Chu and Zhu, 2023).

The mediation analysis also clarified that CQ partially mediates the relationship between EI and cross-cultural adjustment which implies that EI influences the adjustment directly and indirectly by boosting CQ. This trend is in line with the Social Learning Theory (Bandura, 1977), according to which, people develop new competencies through the process of learning by observing and interacting in social contexts. Taken together, the research highlights the fact that emotional and cultural competencies work together to promote successful cross-cultural adaptation of international students.

5. Conclusion

5.1 Summary

This study examined the relationship between emotional intelligence, cultural intelligence and cross-cultural adjustment among Sri Lankan international students studying overseas. The findings found out that emotional intelligence has a strong effect on cross-cultural adjustment directly and through cultural intelligence. The association between cross-cultural adjustment and emotional intelligence was mediated by cultural intelligence which means that emotional competencies support the development of cultural adjustment skills that can enable effective adjustment in a foreign environment.

This fact highlights that students with high emotional intelligence have a better ability to overcome the adjustment issues associated with cultural transitions, but cultural intelligence allows them to decode culturally relevant norms and adjust their behavior. All these skills together enhance the capacity of the students to address academic, social, and cultural demands in the host countries. Altogether, the paper contributes to the academic literature on cross-cultural adaptation by supplying empirical data obtained with the help of Sri Lankan international students, who has been comparatively underrepresented in previous studies.

5.2 Recommendations

Based on the findings, it is recommended that universities implement targeted programs on emotional intelligence (EI) and cultural intelligence (CQ) to the Sri Lankan international students, as the data show that EI directly influences cross-cultural adjustment as well as through a mediating effect on cultural intelligence (CQ). The aspects of seminars should include interpersonal communication, stress management, empathy, and emotional awareness. The process of orientation must incorporate CQ development in terms of cultural-awareness activities, intercultural communicative competencies, and communication with different peers. Both academic and social integration should be promoted by peer mentoring of local or senior students with the help of social and cultural events and counseling services. Pre-post intervention surveys of the effect of EI and mediating role of CQ should be used to determine the effectiveness of the program.

5.3 Implications

This research demonstrates CQ as a mechanism for enhancing the effect of emotional intelligence (EI) on cross-cultural adjustment (CCA). Emotional Intelligence (EI) is the emotional aspect of intelligence and Cultural Intelligence (CQ) provides a person with the cultural knowledge and skills needed to effectively utilize emotional information, especially among students with relatively monocultural and collectivist backgrounds like Sri Lanka. Such a point of view adds to the adaptation theories by illustrating how individuals with low prior exposure bridge culture gaps.

Practically, South Asian newcomers should be provided with peer-mentoring in conjunction with workshops on EI/CQ centered on emotional regulation, empathy, and local norms, which should be implemented in the host universities. The resilience to cultural shock can be

enhanced through the pre-departure orientations of the scholarship providers and government ministries, whereas the personalized support given by counseling services can effectively help to cope with homesickness and intercultural challenges, which will also facilitate the mental and academic wellbeing abroad.

5.4 Limitations

However, the findings of this study need to be considered with the following limitations in mind. Snowball sampling biases the sample and generalizability are limited as participants recruit others like themselves. The small sample size of 102 is not demographically diverse; a larger one would enhance findings. Further, the cross-sectional nature of the study does not allow for monitoring of changes in emotional intelligence (EI), cultural intelligence (CQ), and cross-cultural adaptability (CCA) over time and observation of causal relationships or effect of adjustment.

5.5 Future Research

Studies on international students in the future should adopt a larger sample size in order to increase the accuracy of the result and make it generalizable. It is suggested that longitudinal designs be utilized to observe Emotional Intelligence (EI), Cultural Intelligence (CQ), and Cross-Cultural Adjustment (CCA) in temporal perspective to identify causal relationships and dynamics of adaptation. It is essential for researchers to use stratified or mixed sampling to anticipate more generalizable and representative results. Other factors including personality traits and language proficiency and prior international exposure may also provide further insight into the process of cross-cultural adjustment.

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**THE ROLE OF STORE IMAGE ON PURCHASE INTENTION: MEDIATING ROLE
OF CONSUMER ATTITUDE TOWARDS PRIVATE LABEL BRANDS
SUPERMARKET INDUSTRY IN THE WESTERN PROVINCE OF SRI LANKA**

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Abstract

Purpose: This study investigates how store image influences consumers' purchase intention towards Private Label Brands (PLBs) in Sri Lankan supermarket industry. It also examines the mediating role of consumer attitude towards store image & purchase intention. This study utilizes cue utilization theory. Thus, prevailing drastic competition between national brands and private label brands this study aims to foster insignificant insights to uplift store brands.

Design/methodology/approach: A quantitative, positivism, deductive cross-sectional survey design applies by targeting 384 supermarket consumers in Sri Lanka's Western Province, using convenience sampling. Unit of analysis of the study, consumers who visit to supermarkets in the western province of Sri Lanka. Data were collected via a structured questionnaire through online with five-point Likert-scale items. Data primary data & secondary data utilize in this study. Data analysis conducted through SPSS, AMOS software. All Reliability items values exceed the accepted (Cronbach's $\alpha > 0.7$) threshold level .and validity KMO values exceeds 0.5 level and Process macro use for mediation testing

Findings: Descriptive statistics showed positive perceptions of store image and PLBs. Correlations indicated strong positive links between store image dimensions, attitude, and purchase intention ($p < 0.001$). Regression model fit R square value indicates 0.700. Merchandising, Layout dimensions was the most influencing factor towards purchase intention, merchandise ($B = 0.427$), layout ($B = 0.232$). Consumer attitude partially mediated direct effect indicates 0.4886 and indirect effect reveals 0.4085 value. For the brand managers, marketers and various policy makers these insights provide valuable information on enhancing store image of private label brands.

Research limitations/implications: Convenience nonprobability sampling limits generalizability. Enhanced geographical proximity beyond Western Province. Thus, this study mainly focus on supermarket industry can apply for various other contexts and fields, also this adopted quantitative research design much more in deep insights cannot grab future focusing more on qualitative aspects provides insignificant insights as well future studies could use probability sampling and longitudinal designs & other scales and variables in align to research study. Thus, this study provides Implications to retailers, marketers, brand managers and policy makers to further enhanced store image of private label brands.

Originality/value: This study empirically tests store image various dimensions impact on PLB purchase intention in Sri Lanka by utilizing consumer attitude as mediation. Thus, most of studies conducted in global context limited studies found in Sri Lankan context therefor this study provides valuable insights specially in the supermarket industry. This also emphasis various research gaps and future research avenues as well.

Keywords: Consumer Attitude; Private Label Brands; Purchase Intention; Store Image

1. Introduction

1.1 Background of the Study

Store brands are owned by a retailer or wholesaler also known as "private label brands" (Hyman et al., 2010). Previously studies have shown that store brands are owned by a single retailer and have been developed as low-cost alternatives to national brands (Jin, 2005). But private label brands are gaining importance nowadays. Nowadays, private labels are store brands owned by retailers, challenging manufacturers or national brands, whether global or country-specific (Muszynka, 2019). And also Today, retailers are constantly improving the quality of PLB to attract customers. They do not follow a low-cost or low-quality strategy (Betreuende, 2014). Store image functioning a critical role in influencing consumers' perceptions and purchasing intention of private label brands (Jayakrishan,2016). It encompasses the overall impression that a customer forms about a retail store brand based on factors such as store layout, product assortment, service, pricing, cleanliness, employee behavior, and promotional activities. A favorable store image can significantly enhance consumer trust and loyalty toward the retailer's offerings, including their private label brands (Diallo, 2012).

In emerging markets like Sri Lanka, where consumers are becoming increasingly price-sensitive and value-conscious due to economic pressures, store image becomes more vital factor (Jayakrishan,2016). In Sri Lanka context past scholars De Silva and Dissanayake (2017) highlight that improvements in store image can significantly enhance consumer confidence and positively influence on store brands. Thus, in Sri Lanka's evolving retail sector, store image has emerged as a crucial factor influencing the purchase intention of Private label brands. Therefore, managing and communicating a strong store image can help Sri Lankan supermarkets strengthen consumer attitudes and ultimately increase private label brand purchase intentions. National Brands also treated as manufacturer brands, are products marketed under a brand name owned by a manufacturer who sells these products through various retailers. They are typically well established, widely advertised brands that command consumer loyalty and usually have a perceived higher quality and premium positioning compared to private labels brands (Sethuraman and Raju, 2013). It is generally recognized that consumers use store image dimensions layout, merchandise, service as cues to make inference about store brands purchase behavior (Richardson et al., 1994). Today, people's lifestyles have changed rapidly due to busy lifestyles, therefore, retailers have created the "supermarket industry concept" to enable consumers to meet all their needs in one place (). the Supermarket penetration increased from 5% in 2005 to 8% in 2012 In 2007, supermarket penetration in Sri Lanka was about 16% compared to regional peers with similar social and economic characteristics (Ranasinghe et al. (2017)). Among those supermarket chains in terms of market share, Keells, Cargills, Arpico and Lanka Sathosa are the dominant supermarket chains in the supermarket industry. Most supermarkets in Sri Lanka are currently located around the Western Province (Piumali & Rathnayake,2020).

1.2 Research Problem

Past research emphasis that consumers mostly associate store brands with low quality to National brands (Bao et al, 2011; Sprott and Shimp, 2004), and thus this becomes challenging for retailers to establish a loyal customer base. And also, price of a private label brand is lower compared to other brands, consumers perceive it as lower quality (Kalyanaram and Weiner, 2022). But in recent times, the retailers have been trying increasingly to increase their PLBs both in terms of sales quantity as well as quantity of gaining a reputation for quality products in the market (Akcura et al, 2019, Abril and Rodriguez-Cánovas, 2016; Cuneo et al, 2019). There are many studies on private label branding in global countries such as Malaysia, Egypt, Africa, India, Nigeria, and Indonesia. Furthermore, private label branding applies to various product categories such as FMCG products, food products, hypermarkets, grocery stores, retail Canovas, clothing, etc. However, there is a lack of significant studies on Sri Lankan consumer intention to purchase store brands (Fernando, 2021). Store brands have been more investigated in developed nations but this hasn't been studied more in the developing countries. The literature indicates that more studies on private label brands conducted in developed nations rather than developing countries (Hyman et al., 2010; Ndlovu, 2019).

Sri Lanka as a developing nation investigating store image in relation to private label brands purchase intention is a vital factor. Similarly, research has not been conducted for private label brands with store image as an independent variable especially in the Sri Lankan context but in the global context store image is taken as an independent variable in relation to private label brands. The literature on private label brands has been enriched by studies, unfortunately this focus has mainly been on developed countries at the expense of developing countries (Hyman et al., 2010; Ndlovu, 2019). Due to this gap in the literature on store brands in developing countries, and the lack of management implications that guide retailers on how to improve consumers' attitude towards store brands has led to low private label penetration.

1.3 Research Questions & Objectives

1.3.1. Main Research Question

What is the impact of store image on purchase intention with the mediating role of consumer attitude towards private label brands in relation to the supermarket industry in the western province of Sri Lanka?

1.3.2 Specific Objectives

To examine the impact of the store image on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka.

To examine the impact of layout, merchandise and service on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka.

To examine the impact of store image on consumer attitude towards private label brands with special reference to the private label brands supermarket industry in the western province of Sri Lanka

To examine the impact of consumer attitude towards private label brands on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka

To examine the mediating effect from the consumer attitude towards private label brands towards the relationship between store image and purchase intention with the special reference to the private label brands supermarket industry in the western province of Sri Lanka

Motivation for the Study

The research related to private label brands is mostly investigated in related to western countries. But in the Sri Lankan context, limited research conducted in related to private label on consumer purchase intention s (Fernando, 2021). According to past scholars (Gielens & Dekimpe, 2001) indicates private label brands improve profit margins, build loyalty and differentiate retailers, but they are no such evidence to prove these things in Sri Lanka context. In international context private label brand discuss purchase intention and utilizing mediating role consumer attitude (Siti-Nabiha, 2018). In the Sri Lanka context private label brand research discuss on private label brands impact on brand loyalty no any mediating role consumer attitude.). Similarly, research has not been conducted for private label brands with store image as an independent variable. This study adopted cue utilization theory. Cue Utilization Theory suggests that consumer choice is based on direct and indirect cues such as store image dimension as Layout, Merchandise and Service. But most of researches in private labels brands in Sri Lanka has taken individual dimensions of cue utilization theory, but inclusion of all three dimensions at once are not being investigated in the Sri Lanka context.

2. Literature review

2.1 Store Image

Private label brands different to national brands in align to that consumer attitude that their image are influenced by the positioning of the store that markets them more user-friendliness (Ailawadi and Keller, 2004; De Wulf et al., 2005; Kapferer, 2008). Store image first introduced by Martineau (1958) he defines store image as the way a consumer pictures the store in their mind, influenced by functional attributes and psychological qualities. Overall quality of products offered, product assortment, services provided, physical facilities, layout, and internal environment are examples of attributes contributing to store image (Grewal et al, 1998; Anselmsson et al., 2007). Some scholars indicate Store image as the overall attitude or impression consumers derive from the intrinsic and extrinsic characteristics of the store (Devlin et al., 2003; Wu et al., 2011). When consumer consists of positive evaluation of the store's image, it directly drives positive influence towards purchasing on private labels products (Wu et al., 2011) and willingness to buy (Grewal et al., 1998; Vahie and Paswan, 2006). Following Beristain and Zorrilla (2011) and Vahie and Paswan (2006) it can be indicates that a better store image leads to a greater perception of private label brand image; along with a higher overall quality evaluation (Semeijn et al., 2004; Beristain and Zorrilla, 2011). The study defines store

image as a set of commercial brand affiliations that pertain to the outlet in the consumer's mind (Beristain and Zorrilla, 2011).

Store image is considered as a source of competitive advantage which has gained the attention of both industries and academics. Several recent studies have studied the store image as a general construct (Elseidi & Metawie, 2017; Mostafa & Elseidi, 2018; Konuk) and its influence on consumer purchases. Past studies have revealed that the store image is the strongest factor that influences purchase intention towards private label brands, with many researchers reporting such a positive association (Wu et al., 2011; Erdil, 2015; Muruganantham & Priyadharshini, 2017; M.L.Z et al., 2019; Ramadhan & Muthohar, 2019). Additionally, past scholars have argued that in a retail context, extrinsic cues such as store image play a major role in consumer purchase intention and consumer decision making (Xiao et al. 2019). (H1: There is a significant impact of store image on purchase intention)

A store's layout is a significant factor in retail identity since it affects how and what customers purchase (Levav and Zhu (2009). A store's layout is crucial because it affects customer flow, the atmosphere customers feel comfortable in, purchasing decisions, and overall efficiency. Past researchers have repeatedly emphasized that store design and layouts have psychological and sociological impacts on customer purchase intention. The store's layout directly influences consumers' preferences, and purchase intention (Donovan & Rossiter (1982) in the retail sector. The layout of a store has been found to have a major impact on consumer behavior in both traditional and online settings (Krasnikov et al., 2018)). (H1a: There is a significant impact of layout on purchase intention).

Merchandising includes both product merchandising provided by the shop, consisting of PLBs and NBs (Collins-Dodd and Lindley 2003, quoted by Vahie and Paswan 2006). Merchandising theory explains the PLB's products displayed by the retailer in his store. According to Huddleston et al. (2015), merchandise display has the ability to drive customer purchase intention and improve the shopping experience for customers. Merchandise displays may employ a variety of cues to capture customers' attention, including color, lighting, music, ease of movement, information signs, and price tags (Behe et al., 2013), which foster customer purchase intention. In the eyes of customers, merchandise display enhances the store's appeal and perceived image, Color and lighting combinations have a major impact on purchasing intention (Behe et al., 2013). (H1b: There is a significant impact of merchandise on purchase intention)

According to Brady, (2002), revealed that there is a relationship between overall service quality and behavioral intention. Quality of service is one important factor in consumer decision process and purchase intention. Good service will generate behavioral positive customer perception, intention and increasing buying interest from consumers so that eventually the consumer will increase the frequency of visits to the store (Carriliat, 2009; Cronin and Taylor, 1992; Fornell, 1992; Szymanski and Henard, 2001; Zeithaml., 1996). Finally, this indicates intention and when a store provides a good service excellence automatically customer satisfaction with the store increases, and purchasing decisions towards private label products

will increase as well it will support to enhance loyalty customers and purchase intention. (H1c: There is a significant impact of service on purchase intention).

2.2 Purchase Intention

Purchase intention has been employed by numerous studies in order to forecast the purchase intention of goods or services (Shao et al, 2004). Past scholars said that Purchase intention is a predisposition to purchasing the product (Wu et al. 2011). And (Lin and Lu 2010) indicates that where purchase intention is the possibility of consumers considering purchasing activities, representing what people want to buy in the future, including searching for information about the desired product, to the consumer's decision to make a repurchase. Past studies on private label and purchase behavior integrate major theories such as Theory of planned behavior by Ajzen (1991) to explain the purchase behavior antecedents. And also, theory of planned behavior purchase intention is influenced by attitude, subjective norm and perceived behavioral control. (Schiffman and Wisenblit, 2015) said that Purchase intention is a form of planned behavior by prospective customers that allows it to be passed on to purchase behavior. And also Cue Utilization theory was another prominent theory which used in align to private label brands purchase intention.

2.3 Attitude Towards Private Label Brands

Goldsmith (2010) indicates that consumer attitude towards Private label brand is a “the understanding of private brand products that aids the consumer’s decision-making process”. on other hand Burton et al. (1998) said that attitudes toward Private label brand is “a predisposition to respond in a favorable or unfavorable manner to private label brand owing to product evaluation and purchase evaluation and self-evaluation associated with store brand grocery products”. Attitude is feeling or experience which give rise to tendency to act towards person and situation According to (Diallo et al., 2013) Attitude play role in to ones' decision whether to accept or not accept the product based on ones' experience and personal view. The previously studied Ajzen and Fishbein's (1980) said that theory of reasoned action for measuring the antecedents and consequences of attitude towards Private label brands

2.4 Cue Utilization Theory

Cue Utilization theory is a statement that consumer purchasing behavior is founded upon the assessment of the probable performance of the product via a series of both direct and indirect composite cues. The direct cue includes the texture and taste of the product. the indirect cues are Store the customers' attitude towards the brand, including buying experience, store environment, packaging and price. Cue Utilization Theory has been previously used in the private label brand (Bodur et al., 2016; Kinney and Xia, 2017; Konuk, 2018; Yan et al., 2019). The relationship between the independent and dependent variables of this research are bonded by the Cue Utilization theory. The direct and indirect cue variables selected from the past studies to be examined are store image. Store image was included in the theoretical model under the proposed based on the suggestion of Liu and Wang (2008) and Semijin et al. (2004).

Research Hypotheses

H1: There is a significant impact of store image on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka

H1a: There is a significant impact of layout on purchase intention with special reference to the private label brands supermarket industry in the western province Sri Lanka

H1b: There is a significant impact of merchandise on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka

H1c: There is a significant of service on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka

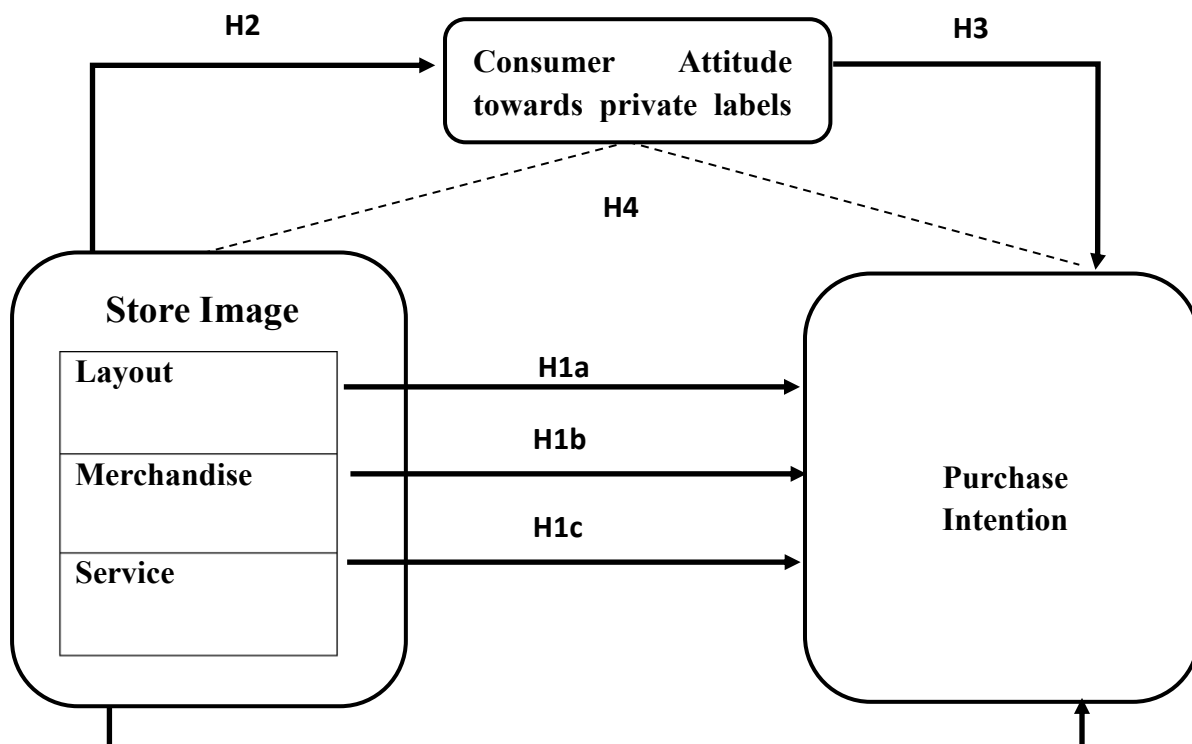
H2: There is a significant impact of store image on consumer attitude towards private label brands with special reference to the private label brands supermarket industry in the western province of Sri Lanka

H3: There is a significant impact of attitude towards private label brands on purchase intention with special reference to the private label brands supermarket industry in the western province of Sri Lanka

H4: There is a significant impact of store image on purchase intention with the mediating role of consumer attitude towards private label brands with special reference to the private label brands supermarket industry in the western province of Sri Lanka

Conceptual Framework

Figure 5: Conceptual Framework



3. Research Methodology

The study follows a deductive approach, where in hypotheses are first developed based on existing theories and are then tested through empirical data collection. This ensures that the research will be rooted in established theory as cue utilization theory. The deductive approach is a research method that involves the development of a hypothesis or theory and the subsequent testing of this hypothesis through empirical observation and data analysis. This approach allows the researcher to start with a theoretical framework or existing knowledge about store image, consumer attitude towards private label brand, and purchase intention.

This study use “survey” method was selected as the research strategy. Survey research is mainly the collection of data through online research questioner.

The study's unit of analysis is the consumers who visit to supermarkets in the western province of Sri Lanka. The research studies consumer understanding and involvement with respective private label brand in supermarket industry.

The population of the study would be the Sri Lankan people who are visiting supermarket industry in western province of Sri Lanka. The sample size was determined to be 384 participants out of an estimated population of 6113,698 in the Western province of Sri Lanka in 2024(Department of census and statistics report, 2024). The use of a sample size of 384, as determined by the Morgan Chart, Krejcie & Morgan (1970). In this study, researcher selected the convenience sampling technique because the target population consisted of supermarket consumers in the Western Province, and it was practically difficult to access the entire population due to time and resource limitations. The researcher already distributes online research questioner to 535 people but how every 384 people response to the questioner.

The research strategy that the author used was the primary data, collected through structured questionnaires, allows the researcher to gather specific and targeted information directly from individuals within the industry. Perception from respondents is to be extracted using a 5-point Likert scale. Distribution will be conducted through online for better response rates. And also, this research study also utilizes secondary data sources such as articles, previous research studies, industry insights, and books, among others.

There are two types like descriptive statistics and inferential statistics. Descriptive statistics is a technique that helps us simplify a bunch of data points in a sample into useful summary values and visuals. It's all about describing the important traits of both a whole population and a smaller sample, making it easier for understand the key aspects of the data. Descriptive statistics include Mean, Median, Mode, Standard Deviation, Range, and Frequency Table. Inferential statistics is like making big predictions about a whole group based on studying just a part of it. Inferential statistics involves things like Hypothesis testing, Regression, Correlation, ANOVA, and more. The analysis of data shall use SPSS and AMOS.

4. Results & Discussion

4.1 Reliability and Validity Analysis

Table 7: Reliability Statistics

	No of Items	Cronbach's Alpha Value
LAYOUT	3	0.931
PROD	3	0.922
SERV	3	0.936
PI	4	0.923
CATPLB	4	0.921

All constructs demonstrate excellent reliability, with Cronbach's Alpha values surpassing the recommended threshold of 0.70. Specifically, the dimension PROD shows the highest reliability with an alpha of 0.922, followed closely by CATPLB at 0.921 and PI at 0.923, indicating strong internal consistency.

4.2 Multicollinearity

All VIF values fall below the commonly accepted threshold of 5, ranging from 2.351 to 3.062, while all Tolerance values are above 0.2, ranging from 0.327 to 0.425. These results indicate that there is no severe multicollinearity among the independent variables. Each predictor contributes unique explanatory power to the model without being excessively correlated with the others.

4.3 Validity

Table 8:KMO and Bartlett's Test for each dimension and variable

Variable Code	KMO Value	Sig.
LAYOUT	0.881	0.000
PROD	0.918	0.000
SERV	0.861	0.000
PI	0.913	0.000
CATPLB	0.921	0.000

All items LAYOUT (0.881), PROD (0.918), SERV (0.861), PI (0.913), and CATPLB (0.921) have high loadings, indicating that they strongly relate to the underlying factor. These values, all above 0.85, suggest that the items are well grouped under one component.

4.4 Correlation Analysis

Table 9: Correlations

Correlations		LAYO UT	PROD	SERV	PI	CATPL B	SI
LAYO UT	Pearson Correlation	1					
	Sig. (2-tailed)						
PROD	Pearson Correlation	.775**	1				
	Sig. (2-tailed)	.000					
SERV	Pearson Correlation	.692**	.732**	1			
	Sig. (2-tailed)	.000	.000				
PI	Pearson Correlation	.741**	.801**	.722**	1		
	Sig. (2-tailed)	.000	.000	.000			
CATPL B	Pearson Correlation	.754**	.812**	.736**	.832**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
SI	Pearson Correlation	.904**	.924**	.891**	.833**	.847**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

The results, as shown in the correlation matrix, reveal that all variables are positively and significantly correlated at the 0.01 level ($p < 0.01$), indicating strong linear relationships among them. The strongest correlation is observed between store image (SI) and merchandise (PROD) with a coefficient of $r = 0.924$, followed by SI and Layout (LAYOUT) at $r = 0.904$, and SI and Service (SERV) at $r = 0.891$. These high correlations suggest that improvements in store image are strongly associated with better layout, merchandise and service.

4.5 Regression Analysis

Table 10:Model Summary

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837 ^a	.700	.698	.35778

a. Predictors: (Constant), SERV, LAYOUT, PROD

b. Dependent Variable: PI

The regression model summary provides insight into the overall fit and explanatory power of the model predicting Purchase Intention (PI) based on independent variable dimensions as LAYOUT, PROD, and SERV. The multiple correlation coefficient (R) is 0.837, indicating a strong positive linear relationship between the dependent variable and the predictors. The R Square value is 0.700, signifying that 70.0% of the variance in Purchase Intention is explained by the three predictors included in the model.

Table 11:ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	113.577	3	37.859	295.764	.000 ^b
	Residual	48.642	380	.128		
	Total	162.219	383			

a. Dependent Variable: PI

b. Predictors: (Constant), SERV, LAYOUT, PROD

The ANOVA table shows the overall significance of the regression model in predicting the dependent variable, Purchase Intention (PI). The F-statistic is 295.764 with a significance level (p-value) of .000, indicating that the model is highly statistically significant. This means that the independent variables LAYOUT, PROD, and SERV collectively have a meaningful impact on Pathe Regression Sum of Squares (113.577).

Table 12:Coefficients

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.437	.132		3.318	.001
	LAYOUT	.232	.047	.230	4.941	.000
	PROD	.427	.046	.454	9.226	.000
	SERV	.226	.042	.231	5.370	.000

a. Dependent Variable: PI

The coefficients table presents the individual contribution of the predictors—LAYOUT, PROD, and SERV to the dependent variable, Purchase Intention (PI). All three predictors are statistically significant, as their p-values are below the 0.05 threshold, confirming that each variable meaningfully influences purchase intention. Among the predictors, PROD (merchandise) has the strongest effect on PI, with a standardized Beta value of 0.454 and a t-value of 9.226 ($p = 0.000$).

Mediation Testing

Table 13:Mediation Testing

Total effect of X ON Y					
Effect	se	t	p	LLCI	ULCI
0.8971	0.0305	29.4105	0.0000	0.8371	0.9571
Direct effect of X on Y					
Effect	se	t	p	LLCI	ULCI
0.4886	0.0518	9.4236	0.0000	0.3867	0.5905
Indirect effect(s) of X ON Y					
Effect	BootSE			BootLLCI	BootULCI
CATPLB	0.0492			0.3070	0.4998
0.4085					

A mediation analysis was conducted using Hayes' PROCESS macro (Model 4) to examine the effect of Store image (SI) on Purchase Intention (PI), with Customer Attitude Toward private label brand (CATPLB) as the mediating variable. The results indicate that SI significantly predicts CATPLB ($\beta = 0.9437$, $p < .001$), suggesting that individuals influenced by store image are more likely to develop favorable attitudes towards private label brand. In turn, CATPLB

significantly predicts PI ($\beta = 0.4329$, $p < .001$), indicating that positive attitudes increase the intention to purchase. Since the direct effect 0.4886 exceeds the indirect effect of 0.4085 this indicates partial mediation effect.

Hypothesis Testing Summarization Table

Table 14:Hypothesis Testing Summarization Table

Hypothesis	Correlation			Regression		
	r Value	sig Value	Decision	B Value	sig Value	Decision
SI → PI	0.833	0.000	Accepted	0.897	0.000	Accepted
LAYOUT → PI	0.741	0.000	Accepted	0.232	0.000	Accepted
PROD → PI	0.801	0.000	Accepted	0.427	0.000	Accepted
SERV → PI	0.722	0.000	Accepted	0.226	0.000	Accepted
SI → CATPLB	0.847	0.000	Accepted	0.943	0.000	Accepted
CATPLB → PI	0.832	0.000	Accepted	0.432	0.000	Accepted
CATPLB, Mediate SI → PI				0.408	0.000	Accepted

According to Hypothesis testing table correlation R value figures and significant values drive from systematic analysis on correlation. based on correlation it highlights the relationship and impact of each variable on another variable. Correlation analysis revealed statistically significant and strong positive relationships between each of the predictor variables and PI. Specifically, SI exhibited a high correlation with PI ($r = 0.833$, $p < 0.001$), suggesting that enhanced store image is associated with increased customer purchase intentions.

According to the study gender demographic analysis shows that the majority of the respondents in the study were female, accounting for 69% of the total sample, while male respondents made up 31%. The age distribution of the respondents shows that the majority (55.5%) were between 22–29 years old, followed by 31.8% in the 30–39 age group. A smaller portion, 9.6%, were aged 40–49, while only 3.1% were between 18–21 years. The occupational analysis shows that the majority of respondents work in the public sector (38.5%), followed by 29.9% in the private sector. The income level analysis indicates that the largest group of respondents (27.1%) earn between 75,001–100,000, additionally, 18.8% earn above 100,000, 18.5% fall within the 50,001–75,000 range,

The analysis of supermarket visitation frequency in the Western Province shows that the largest group of respondents (41.4%) visit supermarkets every three weeks. This is followed by 22.7% who visit every two weeks, 18.8% who visit weekly, and 17.2% who visit monthly. The analysis reveals that a significant majority of respondents have a strong purchasing tendency toward

private label brands (PLBs) when shopping. Specifically, 50% stated they "often" buy PLBs, while 32.3% "always" do so. Additionally, 15.6% purchase them "sometimes," and only a small fraction (2.1%) "rarely" buys PLBs

Inferences

This study examines the influence of store image on consumers' purchase intention toward private label brands (PLBs), with consumer attitude as a mediating variable, in supermarkets in Sri Lanka's Western Province. Data from 384 supermarket shoppers were analyzed using SPSS and Hayes' PROCESS macro. The sample was dominated by educated, middle-income female consumers who shop frequently. Descriptive statistics showed high mean values for store layout, merchandise, service quality, consumer attitude, and purchase intention, indicating favorable perceptions. Reliability and validity tests confirmed robust measurement scales. Correlation and regression analyses revealed strong positive relationships among store image dimensions, consumer attitude, and purchase intention, with merchandise exerting the strongest influence. The model explained 70% of the variance in purchase intention.

5. Conclusion

5.1 Summary

This study highlights the significant influence of store image on consumers' purchase intention toward private label brands (PLBs) in the supermarket industry of Sri Lanka's Western Province, addressing a notable gap in local marketing literature. The findings confirm that store layout, merchandise quality, and service level have significant positive effects on purchase intention, both directly and indirectly through consumer attitude. Merchandise and service emerged as the most influential dimensions, indicating consumers' strong sensitivity to product assortment and service quality. While consumer attitude was found to mediate the relationship between store image and purchase intention, the reduction in the direct effect suggests a relatively weak partial mediation. All hypotheses were empirically supported, and regression results demonstrated strong explanatory power.

5.2 Recommendations

This study proposes several practical and research-oriented recommendations to enhance purchase intention toward private label brands (PLBs) in Sri Lanka's supermarket sector. Supermarket managers should prioritize improving store image elements such as layout, merchandise quality, and customer service, as these factors positively influence consumer attitudes and purchase intentions. Marketing strategies should actively communicate the value, quality, and reliability of PLBs through loyalty programs, in-store promotions, and targeted branding initiatives to strengthen favorable consumer attitudes and trust. Positioning PLBs as credible and affordable alternatives to national brands, while incorporating customer feedback, can further encourage adoption. Additionally, segmenting customers based on loyalty and price sensitivity may enable more personalized marketing efforts. From a research perspective, future studies should employ larger and more diverse samples, extend analysis across regions

and demographics, and use mixed methods and longitudinal designs to enhance generalizability and deepen understanding of store image and attitude effects on PLB purchasing behavior.

5.3 Research Implications

5.3.1. Theoretical Significance

Theoretically, the research advances understanding by empirically validating the mediating role of consumer attitudes in the relationship between store image and purchase intention a relationship that had received limited attention in the Sri Lankan context. By grounding the conceptual model in Cue Utilization Theory and supporting it with robust statistical evidence, the study contributes to the broader literature by showing how environmental cues and psychological factors interact to drive consumer decision-making in emerging markets.

5.3.2 Practical Implications

In practical terms, the results underline actionable strategies for supermarket managers: enhancing store image attributes and prioritizing positive consumer attitudes can jointly boost private label sales and brand equity. Attention to merchandising, impeccable service, and store aesthetics, coupled with campaigns that elevate attitudes toward PLBs, are recommended to capture market share in an increasingly competitive 72 supermarket landscape. Additionally, the research fills an empirical gap in the Sri Lankan retail sector, where limited studies had previously examined these interrelationships.

Supermarket chains in Sri Lanka can directly apply the findings of this research to improve their private label brand strategies. Through knowledge of the factors that determine purchase intentions and attitudes, supermarkets can streamline their product development, pricing, and in-store promotional campaigns. In addition, the study emphasizes the need to maintain a positive store image and ensure consistent quality of PLB products. Supermarkets that can find ways to build customer trust and satisfaction with PLBs can gain a competitive advantage over traditional national brands, thereby improving customer loyalty and long-term profitability.

Limitations of the study & Suggestions for future researches

This study was conducted in the supermarket industry of Sri Lanka. Future studies may be conducted for private label brand in other product categories such as Sri Lankan cosmetics, clothing, services, etc. As the supermarket industry has seen an increase in private-label brand offerings and improved store facilities, a study could be conducted on the impact of store reputation on private-label branding. In addition, other aspects of the store, such as design, store environment, cleanliness, etc., can affect the credibility of the private label brand. Also, to controllable factors such as price and quality of private label brands, several uncontrollable factors such as economic factors are important factors to examine on the intention to purchase private label brands. That is, economic downturns can influence consumers to switch from purchasing a national brand to a private label brand. Factors such as socio-economic, demographic, and proximity to retail outlets can also influence purchase intention.

Future research should expand the geographical scope of this study beyond Sri Lanka's Western Province to include other provinces, rural and urban contexts, and international markets to

improve generalizability and enable cross-cultural comparisons. Adopting qualitative or mixed-methods approaches, such as interviews and focus groups, would provide deeper insights into consumer motivations and attitudes toward private label brands (PLBs). Longitudinal studies are recommended to examine whether changes in store image and marketing strategies produce sustained effects on purchase intention over time. Future researchers should also explore demographic and psychological variables including age, income, trust, perceived value, and brand loyalty as potential mediators or moderators.

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