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International Journal of Contemporary Business Research (IJCBR) is published by the Faculty of Business, NSBM Green University. It is a journal that promotes critical and creative research in sub-disciplines related to business relationships. It expects to be the voice of scholars and practitioners by providing an international forum to disseminate their knowledge. Promoting excellence by providing a venue for researchers to publish current and significant empirical and conceptual research to enhance the academy of knowledge and wisdom is the core pillar of the perspective mandate of the IJCBR. In order to foster beneficial discussion between traditional and contemporary notions, this journal focuses on original and innovative research, along with novel analysis. The journal promotes original academic research in Management and other related disciplines.

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FROM THE EDITOR

Welcome to the International Journal of Contemporary Business Research (IJCBR), a premier multidisciplinary platform that bridges academia and practice to address the complexities of the global business landscape. Published bi-annually by the Faculty of Business, NSBM Green University, Sri Lanka, IJCBR aims to serve as a beacon of scholarly excellence in the fields of International Business, Marketing, Human Resource Management, Supply Chain, Finance, Economics, General Management, and beyond.

As businesses navigate an era of rapid transformation fuelled by technological advancements, globalization, and shifting consumer expectations, IJCBR remains committed to fostering impactful research that transcends conventional boundaries. Our scope, inherently global in its orientation, is complemented by the diverse expertise of our esteemed editorial board and a growing community of scholars worldwide. By championing empirical, theoretical, and applied research—underpinned by rigorous qualitative, quantitative, and mixed methodologies—the journal aims to generate actionable insights for academia, industry, and policymakers alike.

This edition underscores the journal's dedication to diversity and innovation, with featured studies spanning various disciplines such as Management Accounting and Finance, Marketing Management, Tourism Management, Operations and Supply Chain Management, Decision Sciences, Business Law, and more.

The first study, authored by Mithila and Lingesiya, examines explores the impact of cashless payment methods on Sri Lanka's economic growth, analysing their effect on real GDP using secondary time-series data from 2015 to 2022 and the AutoRegressive Distributed Lag (ARDL) model. It assesses key systems like Real-time Gross Settlement System (RTGS), Sri Lanka Interbank Payment System (SLIPS), and methods such as Internet and Mobile Banking, Credit Cards, and Debit Cards. Findings indicate a positive long-term relationship between RTGS/SLIPS and economic growth, while Internet Banking shows a negative correlation. In the short term, RTGS, Cheques, and Mobile Banking positively correlate with growth. The study underscores the importance of enhancing inefficient systems to drive sustainable economic progress, offering insights for policymakers and financial institutions to optimize payment ecosystems.

The second study by Chamuditha and Colombage investigates the determinants of intention to adopt Buy Now Pay Later (BNPL) services in Sri Lanka. Employing advanced statistical

methods for data analysis, the research highlights the importance of perceived usefulness, social influence, and financial literacy in adoption intentions.

The third study, conducted by Dasanayake et al., explores behavioural intentions toward credit card repayments in Colombo. Using the Theory of Planned Behaviour, the study underscores the influence of perceived behavioural control, subjective norms, and attitudes on repayment behaviours.

Kangara and Eranda, in the fourth study, analyse the adoption of experiential marketing strategies in high-end hotels in Sri Lanka. The study emphasizes personalization, internal changes, and integrated management frameworks for enhancing customer experiences.

Weerasekara and Rajakaruna, in the fifth study, present a conceptual framework for entrepreneurial impact on brand development in the agricultural export sector. The research highlights branding and entrepreneurial actions as drivers of competitiveness.

In the sixth study, Withanaarachchi et al. evaluate the influence of digital marketing, sales promotion, and electronic word-of-mouth (E-WOM) on customer purchase intentions in the Sri Lankan handicrafts industry. E-WOM emerges as the most significant factor.

The seventh study by Jayakody et al. delves into psychosocial drivers of migration intentions among Generation Z in Sri Lanka. It highlights gender-specific factors and workforce implications, offering actionable recommendations for policymakers.

Chandima et al., in the eighth study, explore the role of digital information management in enhancing undergraduate students' digital literacy. The findings suggest that using and finding information are critical dimensions of digital literacy development.

In the study by Rajakaruna et al., the impact of soft skills on IT project success in Colombo, Sri Lanka is examined, focusing on eight skills. Leadership, motivation, adaptability, and effective communication were identified as the most significant factors. The findings highlight the importance of soft skills for better collaboration, conflict resolution, and project outcomes, recommending improved training to enhance Sri Lanka's IT sector competitiveness.

The tenth study, by Pathiranage et al., investigates the adoption of Computerized Accounting Systems (CAS) in SMEs. The study identifies technological capabilities and accounting expertise as significant drivers, while high costs remain a barrier.

Jayathissa et al., in the eleventh study, assess the impact of digital transformation on SME performance in Sri Lanka's hotel industry. Compatibility and cost-effectiveness are identified as key enablers of performance improvement.

The twelfth study, conducted by Aththanayake, investigates revenue management strategies in casual dining restaurants, focusing on pricing and non-pricing techniques for revenue optimization. Using data from 191 restaurants in Sri Lanka's Badulla district, analyzed with SPSS and Smart-PLS software, the study finds that pricing strategies significantly impact revenue more than non-pricing methods like overbooking and capacity management. The research highlights the need for data-driven approaches to refine revenue management and offers actionable insights for restaurant managers to enhance profitability.

The thirteenth study by Dilrangi et al. examines the impact of resilient leadership on employee empowerment in Sri Lanka's private higher education sector. Findings show that leadership resilience fosters a supportive work environment.

The fourteenth study, authored by Mahat, investigates the mediating roles of techno-competence and techno-complexity in digital payment systems within Kathmandu Valley's banking sector. The study provides strategies for optimizing employee productivity.

Perera, in the final study, explores the dynamics of human-AI collaboration in modern workplaces. The research provides insights into enhancing employee productivity and job satisfaction in service sector organizations.

We extend our deepest gratitude to the authors, reviewers, and editorial board members whose tireless efforts uphold the integrity and quality of the *International Journal of Contemporary Business Research*. Your contributions are instrumental in advancing the frontiers of knowledge and fostering dialogue on critical issues shaping modern business.

As you engage with this edition, we encourage you to reflect on the insights presented and consider how they may inform your academic pursuits or professional practices. Let us continue to collaborate, innovate, and inspire action towards a resilient and equitable global business environment.

Prof. Lester Jhonson

Editor-in-Chief

International Journal of Contemporary Business Research

Impact of Non-Cash Payments on the Economic Growth of Sri Lanka

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Abstract

There has been extensive discourse on the topic of cashless payments, and their global adoption has witnessed exponential growth in recent years. Cash transactions pose certain challenges, notably the impracticality of managing physical currency and the restricted accessibility of financial institutions to withdraw cash. Multiple research studies have affirmed the positive influence of cashless payments on economic growth, thus highlighting their crucial significance. The present study aims to examine the effects of cashless payments on the economy of Sri Lanka. In particular, the investigation focuses on the measurement of economic growth using the real Gross Domestic Product (GDP), and the analysis of cashless payment systems through the employment of Real-time Gross Settlement System (RTGS), Cheque (CHE), Sri Lanka Interbank Payment System (SLIPS), and Internet Banking (IB), Mobile Banking (MB), Credit Card (CC), Debit Card (DC) transactions as representative indicators. The data utilized in this study is based on secondary sources in the form of time series data, spanning from quarter 01 of 2015 to quarter 3 of 2022. The AutoRegressive Distributed Lag (ARDL) model is then employed for the purpose of data analysis. Upon conducting an analysis of the long-term impact of various payment methods on economic growth, it is determined that RTGS (94% of total digital transaction) and SLIPS have a statistically significant positive relationship with economic growth. Conversely, IB exhibits a significant negative relationship which requires targeted improvements. Notably, there is no significant impact on economic growth observed with respect to the CHE, CC, DC, and MB indicating the need for technological advancements and integration. In the short run, it can be inferred that there is a significant positive correlation between RTGS, CHE, IB, and MB. Conversely, the analysis indicates a significant negative relationship between the SLIPS and DC payment methods. It is worth noting that the analysis does not reveal any significant association between the CC payment method and economic growth. Hence, this study conclude that digital currencies have on overall positive impact on short and long run in Sri Lankan economic growth and highlights the importance of prioritizing efficient payment systems that foster the economic growth while addressing the challenges with less effective methods. Policy makers and financial institutions can enhance the efficiency of payment ecosystems, ultimately driving sustainable economic growth.

Keywords: Auto Regressive Distributed Lag (ARDL), Cointegration, Error Correction Models, Cashless Payments, Economic Growth, Unit root Test.

1. Introduction

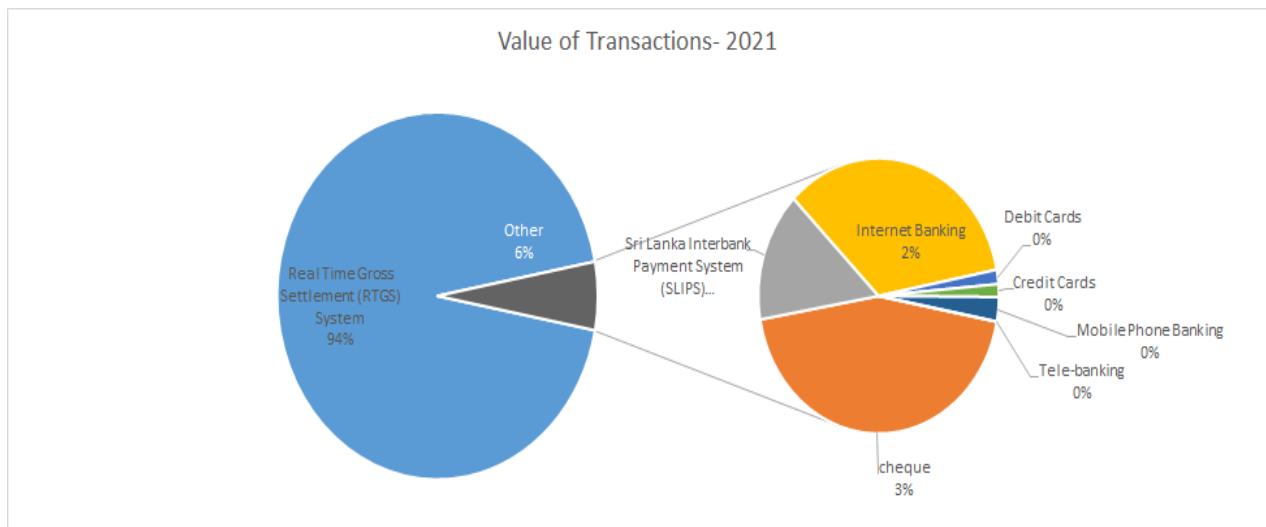
Transactions can be made via cash and non-cash payment mechanisms. Non-cash payments penetrated globally at an exponential growth rate in recent years due to the increasing adoption of smartphones and the widespread availability of internet access (Bagale et al., 2021). Cashless payments refer to transactions that do not consist of physical/hard cash and are made mainly through electronic methods such as mobile wallets, credit and debit cards, and online payment systems (Suhaimi et al., 2022).

Diffusion of innovation theory facilitates understanding the shift from cash to the non-cash payment due to the benefits it brought to society (Krivosheya, 2020). Some of the benefits of cashless payments are reducing transaction costs, increasing efficiency, and promoting financial inclusion. Further, this way of transaction improves the hygiene among food sellers than using physical cash. Physical cash system needs more paper costs, printing, and handling costs while possible theft is high. Further, Jebarajakirthy and Shankar (2021) proved that customers mainly use cashless payments due to convenience which stimulates consumer spending and eventually contributes to economic growth. According to Wong et al. (2020), growth of a country is measured by GDP which is a combination of consumption, private investment, and government expenditure. Through cashless payment, all three transition channels will contribute to the growth of the country.

Parmar (2018) stated that electronic transactions act as audit trails and taxes on transactions can be easily collected as all the transactions are recorded digitally. Maurya (2019) mentioned that besides economic growth, cashless payment contributes to the growth of other sectors such as telecom and e-commerce industries. Further, cashless payment allows an increase the industry productivity and drives toward the sustainability of economic activities (Givelyn et al., 2022). However, there are limitations as well. Losing personal information such as PIN number, passwords, and other sensitive information is one of the major drawbacks of the cashless payment method. Further, the community which has less about the digital platform refuses to use, and limited technological facilities may also deter the usage of cashless payment (Parmar, 2018).

In Sri Lanka, the usage of non-cash payments increased in recent periods (Central Bank of Sri Lanka, 2021). Non-cash payments are supported by large and retail value payment systems. Real Time Gross Settlement system (RTGS) is the only payment system that exists under large value payments system while main cheques clearing system, Sri Lanka Interbank Payment System (SLIPS), Internet Banking, Credit card, Debit card, ATM terminals, POS terminals, Mobile phone banking and Tele banking represent the retail value payments systems. In 2021, out of total value transaction of LKR 302 trillion, 94% was produced from RTGS while remaining was produced from retail value payments systems as shown below in the figure 01. (Central Bank of Sri Lanka, 2021).

Figure 1: Value of Transactions (2021)



Source: Central Bank, Sri Lanka.

Research on digitalized finance and its impact on economic growth has gained momentum in recent years. The emergence of cashless payment systems in Sri Lanka has shown rapid growth, making it an interesting area for empirical study to measure the impact of such systems on economic growth. The objective of this study is to identify the impact of cashless payments on the economic growth of Sri Lanka.

To measure the non-cash payment mechanism, the value of transactions of the Real Time Gross Settlement System (RTGS), Cheque, Sri Lanka Interbank Payment System (SLIPS), Internet Banking (IB), Mobile Banking (MB), Credit Card (CC), and Debit Card (DC) are considered. To measure economic growth, Gross Domestic Product (GDP) of Sri Lanka is considered.

The study samples are taken on a quarterly basis from the 1Q 2015- 3Q of 2022. This paper intends to contribute to the understanding of the impact of cashless payments on economic growth in Sri Lanka, providing insights into how these payment systems can support economic development in the country. The significance of the study is as stated above, non-cash payments are essential to enhance the economic growth in a theoretical point of view (Noman et al., 2023; Agustiwati et al., 2023; Grzelczak & Soliwoda, 2023; Givelyn et al., 2022; Wong et al., 2020; Zandi et al., 2013; Hasan et al., 2012). However, this must be proven empirically in Sri Lanka to enhance the validity of the statement. Hence this study focuses on finding what type of digital payments significantly supports to growth of economy. Therefore, the findings of this paper can be used by Central bank of Sri Lanka, government, businessmen, economists and other researchers for the growth of country and to bring new knowledge on this topic area.

The following section provides a comprehensive review of both theoretical and empirical literature, followed by a detailed exposition of the methodology, including model specification and data

collection. The subsequent section presents the results and subsequent discussion, culminating in concluding remarks that provide limitations of the study and scope for future research.

2. Literature Review

Many researchers studied the impact of cashless payments on economic growth. This paper focuses on the impact of cashless payment on economic growth of Sri Lanka. Theoretically many theories support this concept. The payments systems theory suggests that payments systems play an essential role to carry out the economic transaction which eventually enhances economic growth of the country by reducing the transaction costs, increase the security and speed of transactions. Another theory which is the technology adoption theory indicates that implementing new technology increases productivity and efficiency which therefore reduces the costs of carrying out business activities and ensures economic growth. Further, financial inclusion theory suggests that to stimulate economic growth and reduce the poverty level, access to financial services is a key requirement. Further network externalities theory suggests that when many people use, there will be an increase in the value of technology and services which contributes to economic expansion. Diffusion of Innovation theory explains how new ideas, products, and technologies spread through society. This theory is particularly relevant in the context of non-cash payment systems, where the adoption of new payment technologies and practices is essential for the growth and development of the financial sector. On top of these theories, the endogenous growth theory indicates that technological advancement is a crucial component of the economic growth process, resulting in amplified returns to scale.

The diffusion of Innovation theory introduced by Roger in 1995 was referred to study the link between electronic payments and economic expansion (Grzelczak & Pastusiak, 2020). In this study, Western, Central and Eastern European countries were taken for the analysis from 2005 to 2018 and found that there is a positive link between cashless payment and economic growth in Western European regions while due to lack of penetration, in Central and Eastern European, only card payments indicated a positive relationship.

Based on empirical literature review, contradicting views were obtained. However, most researchers support the positive relationship between cash-less payments and the economic growth of the countries in the long run. (Wong et al., 2020; Zandi et al., 2013; Givelyn et al., 2022; Hasan et al., 2012). Conversely, Ravikumar et al., (2019) confirmed insignificant relationship in long run in between cashless payments and economic growth. Others confirmed that only in long run the relationship was existed (Tee and Ong, 2016; Narayan, 2019).

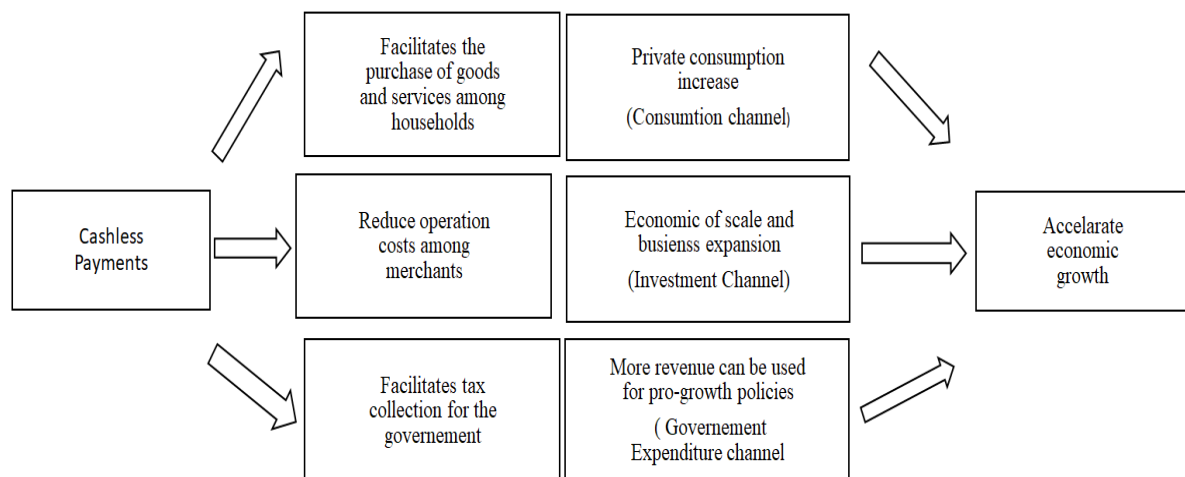
Wong et al., (2020) found a statistically significant strong positive relationship in between cashless payments and the economic growth of OECD countries by using Generalized Method of Moments (GMM). Further this study revealed countries which generate higher level of income, have more

developed information and communication technologies, and have a higher levels of financial development possess a stronger relationship between these variables. Another study carried out by Givelyn et al., (2022), also supported the positive relationship in Indonesia market. By using data from the period of January 2018 to December 2022, Auto Regressive Distributed Lag (ARDL), researchers confirmed before and during the COVID-19 pandemic, a strong relationship was found and during the pandemic the relationship was bigger. Further, another study carried out based on 56 countries confirmed that move towards electronic payment methods increases the economic growth through rapid growth in consumption (Zandi et al., 2013).

In another study, researchers investigate the relationship between economic growth and electronic retail payments in 27 European countries from 1995 to 2009. The authors discover a positive correlation between real economic indicators and digital retail payment technology. The empirical finding demonstrates that electronic retail payments can boost economic productivity, consumption, and trade while also accelerating trade and economic growth. Additionally, the same study comes to the realization that card payments have the most favourable effects on economic growth (Hasan et al., 2012).

According to Wong et al., (2020), economic growth can be stimulated by cashless payments as through three channels of consumption, investment and government expenditures as follows.

Figure 2: Cashless Payments' Impact On Economic Growth Channels



Source: Wong et al., (2020).

In this chart, cashless payments allow customers to possess instant cash, thereby accelerating consumption. The resultant effect of this would be a stimulation of household consumption, thereby fostering economic growth (Zandi et al., 2013). Brzoska and Hjelm (2020) conducted a study on the influence of cashless payment systems on consumption patterns and found that there exists a strong correlation between on-the-go personal consumption and cashless transactions within the Swedish

market. Furthermore, the adoption of cashless transactions has the potential to reduce the costs associated with paper-based transactions, resulting in lower operational expenses and increased efficiency, which in turn facilitates business expansion and investments, and contributes to overall economic growth (Hasan et al., 2012). Another study revealed that the cost of digital payments is lower than non-digital payments by 53% for small and medium enterprises in 2018 and increased revenue by 8% after having digital operations in the USA (Visa, 2018). There is evidence that cashless transactions make it easier to collect value-added taxes which can be used to balance the budget and spend more, thereby fostering the growth of the economy (Kearney A.T & Schneider F., 2013).

On the other hand, Tee and Ong (2016) investigated the connection between the cashless payment and economic growth by using Pedroni residual cointegration and Panel Vector Error Correction Model (VECM) for the period of 2000-2012 in five selected European countries. The Study discovered that adoption of one method of cashless payment affects other one in short run and impact on economic growth can be witnessed in the long time period only. Narayan (2019) reconfirmed this by investigating the connection between financial technology and Indonesia's economic growth between 1998 and 2018. This study demonstrates that fintech has a delayed positive impact on economic growth, with less impact in the first year but large economic contributions starting in the second. However, contradicting result found by Ravikumar et al., (2019). According to the study's findings, short-term economic growth is greatly impacted by digital payments. But, in the long run, digital payments have insignificant impact on economic growth. The research was conducted for the periods of 2011 to 2019 in India by using Ordinary Least Square regression, auto regressive distributed lag, co-integrated approach, and ARDL bound tests.

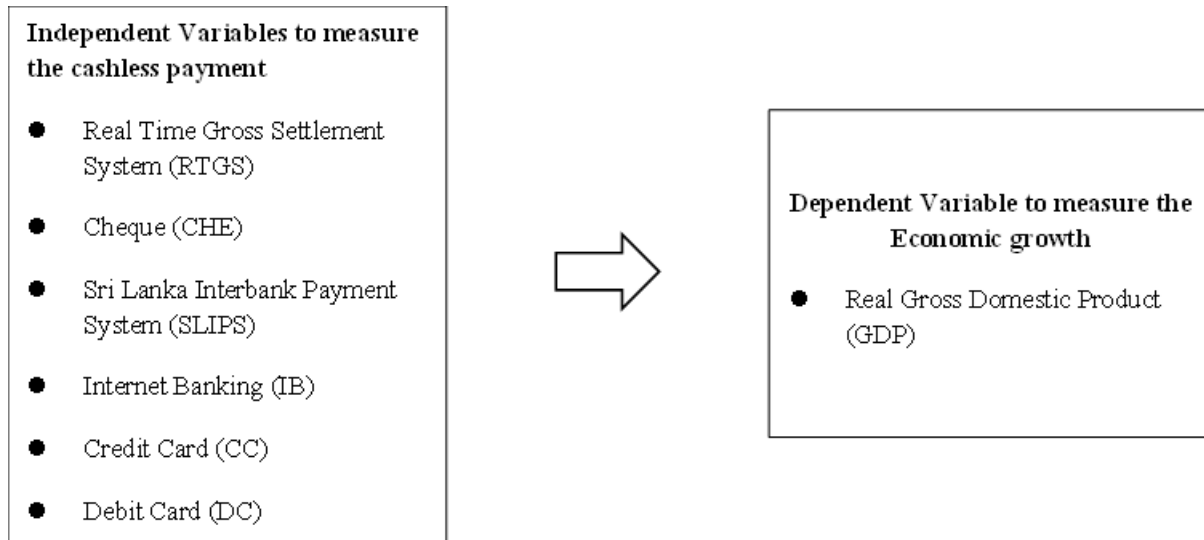
According to Aldaas (2020), when an economy shifts from developing stage to developed stage, usage of cashless transactions will also grow. The researcher found that relationship between electronic payments and economic growth varied by country. While Australia and Canada showed a negative correlation, the UK and Saudi Arabia showed a positive one. In Saudi Arabia, the impact is strong in long run, but it weakens short term in Jordan. Hence, there is a need to do the analysis country wise before bringing a policy change rather than just following the global trends.

After conducting a literature review, it has been confirmed that there are conflicting results among different researchers. As a result, the following conceptualization has been developed with the support of the review.

2.1 Conceptualization

Following chart illustrates the conceptual framework of the study after studying the literature review.

Figure 3: Conceptual Framework



2.2 Operationalization

Table 1: Summary Statistics of the variables

Variables	Indicators	Measurement	Sources
Dependent Variable			
Real Gross Domestic Product (GDP)	Real Gross Domestic Production value	Log of Real Gross Domestic Production value	Ahmad et al., 2021; Lee et al., 2022
Independent Variables			
Real Time Gross Settlement System (RTGS)	Total Value Transactions	Log of Real Time Gross Settlement total transaction value	Aldaas, 2021; Central Bank of Sri Lanka, 2021; Agustiwati et al., 2023)
Cheque (CHE)	Total Value Transactions	Log of Credit Card transaction value	Aldaas, 2021; Central Bank of Sri Lanka, 2021; Noman et al., 2023

Sri Lanka Interbank Payment System (SLIPS)	Total Value Transactions	Log of Sri Lanka Interbank Payment System	Aldaas, 2021; Central Bank of Sri Lanka, 2021; Agustiawati et al., 2023
Internet Banking (IB)	Total Value Transactions	Log of Internet banking transaction value	Aldaas, 2021; Central Bank of Sri Lanka, 2021
Mobile Banking (MB)	Total Value Transactions	Log of Mobile banking transaction value	Aldaas, 2021; Central Bank of Sri Lanka, 2021
Credit Card (CC)	Total Value Transactions	Log of Credit Card transaction value	Lee et al., 2022
Debit Card (DC)	Total Value Transactions	Log of Debit Card transaction value	Lee et al., 2022

2.3 Research Hypotheses

The following hypotheses are formulated by the researcher to test the objective of the research based on the previous literature and theoretical understanding.

H1: There is a short run causal impact of cashless payments on economic growth.

H2: There is a long run impact of cashless payments on economic growth.

3. Methodology

The philosophical assumptions underpinning this research can be analysed in terms of their ontological, epistemological, and axiological dimensions. The ontological stance taken in this study is one of objectivism, which assumes that there is a universal truth regarding the impact of cashless payments on economic growth. The knowledge produced in this study is gathered through the application of the Autoregressive Distributed Lag (ARDL) method using Stata to understand the relationship. In addition, the research approach adopted in this study is one of detachment, wherein the researchers dissociate themselves from the research process. This study adheres to the value-free axiological assumptions, which entail a commitment to neutrality and objectivity.

Considering the philosophical assumptions outlined above, this research aligns with the positivist research paradigm and adopts a deductive research approach. Accordingly, the methodology employed in this study is quantitative in nature, which is well-suited to examining the impact of cashless payments on the economic growth of Sri Lanka. The secondary data was acquired from reputable source, the

Central Bank of Sri Lanka statistic data which is widely recognized for its accuracy, reliability, and comprehensiveness for the periods of Quarter 01 2015 to Quarter 03 2022.

The analytical approach adopted in this study is the Autoregressive Distributed Lag (ARDL) method, which is a popular econometric technique used to estimate the long-run relationships among variables. ARDL is particularly useful in situations where the variables under analysis may be non-stationary, meaning that they may exhibit trends, cycles, or other forms of systematic variation over time. ARDL is also capable of modelling the short-run dynamics between variables, which can provide valuable insights into the causal relationships among them.

Non-cash payments are facilitated by two distinct payment systems in Sri Lanka, namely large and retail value payments systems. Within the large value payments system, the Real Time Gross Settlement system (RTGS) remains the sole payment system in operation. Meanwhile, the Sri Lanka Interbank Payment System (SLIPS), Cheque, Internet Banking, Credit card, Debit card, ATM terminals, POS terminals, Mobile phone banking, and Telebanking represent the retail value payments systems. According to recent data from the Central Bank of Sri Lanka (2021), in 2021, the RTGS system accounted for 93% of the total value transactions, while the remaining 7% was facilitated by the retail value payments systems. This amounts to a total value transaction of LKR 302 trillion, highlighting the significant contribution of the RTGS system to the non-cash payments ecosystem.

3.1 Model Specifications The present study centres on a thorough examination of the effect of cashless payment systems on the economic growth of Sri Lanka. The investigation is based on a time series analysis spanning from the first quarter of 2015 to the third quarter of 2022 to determine the extent of the impact.

The following time series regression model is specified for this paper.

$$\text{LnGDP} = f(\text{LnRTGS}, \text{LnCHE}, \text{LnSLIPS}, \text{LnCC}, \text{LnDC}, \text{LnIB}, \text{LnMB}) \quad (1)$$

Where,

LnGDP = natural logarithm of real Gross Domestic Product

LnRTGS = natural logarithm of Real Time Gross Settlement value

LnCHE = natural logarithm of Cheque transaction value

LnSLIPS = natural logarithm of Sri Lanka Interbank Payment System

LnCC = natural logarithm of Credit Card transaction value

LnDC = natural logarithm of Debit Card transaction value

LnIB = natural logarithm of Internet banking transaction value

LnMB = natural logarithm of Mobile banking transaction value

As per the equations below, the estimation of the ARDL-Unrestricted Error Correction Model (ECM) for long run and short run are carried out.

$$\text{LnGDP} = \varphi_0 + \beta_1 \cdot \text{LnGDP}_{t-1} + \beta_2 \cdot \text{LnRTGS}_{t-1} + \beta_3 \cdot \text{LnCHE}_{t-1} + \beta_4 \cdot \text{LnSLIPS}_{t-1} + \beta_5 \cdot \text{LnDC}_{t-1} + \beta_6 \cdot \text{LnIB}_{t-1} + \beta_7 \cdot \text{LnMB}_{t-1} + \mu_t$$

$$\Delta \cdot \text{Ln.GDP} \cdot t = \varphi_0 + \sum_{n=1}^p \varphi_1 \cdot \Delta \cdot \text{LnGDP}_{t-i} + \sum_{n=0}^q \varphi_2 \cdot \Delta \cdot \text{LnRTGS}_{t-i} + \sum_{n=0}^q \varphi_3 \cdot \Delta \cdot \text{LnCHE}_{t-i} + \sum_{n=0}^q \varphi_4 \cdot \Delta \cdot \text{LnSLIPS}_{t-i} + \sum_{n=0}^q \varphi_5 \cdot \Delta \cdot \text{LnCC}_{t-i} + \sum_{n=0}^q \varphi_6 \cdot \Delta \cdot \text{LnDC}_{t-i} + \sum_{n=0}^q \varphi_7 \cdot \Delta \cdot \text{LnIB}_{t-i} + \sum_{n=0}^q \varphi_8 \cdot \Delta \cdot \text{LnMB}_{t-i} + \delta \text{ecm}_{t-1} + \mu_t$$

Where,

φ_0 - constant

β_1 - β_7 - coefficients of independent variables (long-run)

μ_t - white noise

φ_1 - φ_7 - coefficients of first differentiated both exogenous and endogenous variables (short run)

δ - adjustment speed

ecm_{t-1} - one-period lagged error correction term

Δ - delta operator

4. Findings and Discussion

4.1 Unit root tests

In this study, time series analysis has been implemented, commencing with the initial step of testing the variables to ensure stationary behaviour at either levels or differences. Non-stationary data, possessing unit roots, are considered irrelevant in time series analysis since such data might contain non-constant means, non-constant variances, or seasonal effects. The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests have been utilized to examine the stationary nature of the variables. The outputs from these tests provide insights into the levels of stationery, thereby facilitating the identification of a suitable econometric time series model.

The following table 2 shows the results of augmented dickey fuller and Phillips perron unit roots tests

Table 2: Time Series Stationarity Testing

Variable	Testing method	At Levels		First differences		Stationary
		Constant (-1.950)	Trend (-3.600)	Constant (-1.950)	Trend (-3.600)	
GDP	ADF	0.670	-3.568	-4.975 *	-5.196*	Stationary at first difference constant and trend
	PP	0.666	-3.520	-7.474*	-8.386*	Stationary at first difference constant and trend
RTGS	ADF	1.527	-0.607	-2.260 *	-3.310 *	Stationary at first difference constant and trend
	PP	2.360	-0.125	-3.573 *	-4.735*	Stationary at first difference constant and trend
Cheque	ADF	0.287	-2.383	-4.596*	-4.436*	Stationary at first difference constant and trend
	PP	0.256	-3.037	-7.835*	-7.591*	Stationary at first difference constant and trend
SLIPS	ADF	3.004*	-2.595	-2.824*	-4.768*	Stationary at level constant and first difference constant and trend
	PP	4.392*	-2.795	-3.520*	-5.025 *	Stationary at level constant and first difference constant and trend
IB	ADF	2.439*	-3.409	-3.866 *	-5.027 *	Stationary at level constant and first difference constant and trend
	PP	2.375*	-4.109*	-6.279*		Stationary at level and first difference constant and trend

					-7.266	
					*	
MB	ADF	2.009*	-1.248	-2.247	-4.254	Stationary at level constant and first difference constant and trend
					*	
	PP	3.133*	-1.234	-2.603*	-4.225*	Stationary at level constant and first difference constant and trend
CC	ADF	-0.756	-1.460	-3.736*	-3.810*	Stationary at first difference constant and trend
	PP	-1.584	-2.498	-7.737*	-7.685*	Stationary at first difference constant and trend
DC	ADF	2.875*	-1.874	-3.396*	-4.875*	Stationary at level constant and first difference constant and trend
	PP	2.998*	-2.628	-5.608*	-6.951*	Stationary at level constant and first difference constant and trend

Source: Authors calculation

According to the aforementioned analysis, it is ascertained through both the augmented Dickey-Fuller and Phillips-Perron unit root tests that the time series is not susceptible to spurious regression since certain variables are stationary at levels and others at first differences. As the stationary levels of variables are present in both levels and first differences, it is not viable to utilize the Johansen cointegration test. Further, the absence of I(2) among the variables was verified, and an assessment of the cointegration relationship between the variables was conducted using the ARDL model. The rationale for utilizing the Autoregressive Distributed Lag (ARDL) approach resides in its capability to scrutinize the influence and impact of both dependent (y) and independent (x) variables over time while distinguishing between short-run and long-run responses. Additionally, the ARDL method allows for the assessment of the influence of past values of y on the present y , thus contributing to a more thorough understanding of the dynamic relationships among variables. Furthermore, the ARDL approach enables researchers to test or analyses cointegration, which is a necessary condition for establishing long-term relationships among variables.

For that firstly, Bound test from the Auto Regressive Distributed Lag (ARDL) model will be utilized to examine both the long-run and short-run relationships among the variables.

Prior to conducting the bound test, it is essential to determine the maximum lags that will be included in the analysis.

4.2 Lag length determination

In this step, the optimal lag of the variables is determined since time series data is influenced by prior data. The VAR lag order selection technique is employed to generate the following results. Stata software produces Akaike's Information Criterion (AIC), Hannan and Quinn Information Criterion (HQIC), and Schwarz's Bayesian Information Criterion (SBIC) as mentioned below.

Table 3: Vector Autoregression Lag Length

Lag	LL	LR	FPE	AIC	HQIC	SBIC
0	113.947	-	5.40E-14	-7.84795	-7.73378	-7.464
1	285.864	343.83	2.30E-17	-15.8418	-14.8143	-12.3862
2	459.501	347.27	2.e-109*	-477.653*	-474.571*	-467.286*
3	3424.89	5930.8	3.20E-20	-238.881	-236.026	-229.282
4	6664.32	6478.9*	-	-23.963	-22.0221	-17.4358

Source: Authors calculation

* indicates lag order selection by the criterion

Based on the table above, the Akaike Information Criterion (AIC), Hannan and Quinn Information Criterion (HQIC), and Schwarz's Bayesian Information Criterion (SBIC), indicate that this study should incorporate a maximum of 2 lags.

4.3 Autoregressive distributed lag bounds tests

As previously mentioned, certain variables exhibit stationary behaviour at levels, while others are stationary at first differences. Consequently, to determine the long-term cointegrating relationship, the Auto Regressive Distributed Lag (ARDL) Bound test is employed rather than the Johansen Cointegration test, which is appropriate only when all variables exhibit stationary behaviours at levels or first differences

Table 4: Long Run Bound Test

F = 129.924		
Significance level (%)	Lower Bound I(0)	Upper Bound I(1)
10	2.03	3.13
5	2.32	3.50
2.5	2.60	3.84
1	2.96	4.26

Source: Authors calculation

In the context of conducting a bound test for cointegration, if the computed F-statistic surpasses the upper bounds value, it provides evidence in support of the existence of cointegration. Conversely, if the F-statistic falls below the lower bounds value, it indicates that there is no cointegration. It is important to note, however, that if the computed F-statistic falls between the upper bounds value and the lower bounds value, the results are deemed inconclusive.

As illustrated in the table above, the F statistic exceeds the upper bound for all levels of significance. Thus, the null hypothesis of no long-run cointegration is rejected, confirming the presence of long-run cointegration among the variables of economic growth and cashless payment methods investigated in this study

4.4 Autoregressive Distributed Lag Model

The impact of cashless payment methods on the economic growth of Sri Lanka is tested using the ARDL model and the following outcome is produced as mentioned in the below table 5.

Table 5: ARDL Lag Estimates (2,2,2,1,2,2,2,2)

Variables	Regression Coefficient	Standard error	t value	Probability value	Interpretation
GDP(-1)	-0.5563915	0.0518775	-10.73	0.000	Significant and Positively related
GDP(-2)	-0.0730917	0.0448092	-1.63	0.154	Insignificant
RTGS	0.0555465	0.0185869	2.99	0.024	Significant and Positively related

RTGS(-1)	-0.3722979	0.024653 4	-15.1	0.000	Significant and Negatively related
RTGS(-2)	0.0330609	0.023115 9	1.43	0.203	Insignificant
CHE	1.055012	0.080686 4	13.08	0.000	Significant and Positively related
CHE (-1)	-0.3354862	0.089137 5	-3.76	0.009	Significant and Negatively related
CHE (-2)	-0.5086367	0.095838 9	-5.31	0.002	Significant and Negatively related
SLIPS	-0.5241945	0.140635 6	-3.73	0.010	Significant and Negatively related
SLIPS(-1)	1.413454	0.176826	7.99	0.000	Significant and Positively related
CC	-0.2217831	0.075597 2	-2.93	0.026	Significant and Negatively related
CC(-1)	0.2932802	0.060715 9	4.83	0.003	Significant and Positively related
CC(-2)	-0.1606049	0.076081 9	-2.11	0.079	Insignificant
DC	-0.0783475	0.086738 9	-0.9	0.401	Insignificant
DC(-1)	-0.1877782	0.064131 7	-2.93	0.026	Significant and Negatively related
DC(-2)	0.4526947	0.087192	5.19	0.002	Significant and Positively related
IB	-0.1776002	0.023916 8	-7.43	0.000	Significant and Negatively related
IB(-1)	-0.0236701	0.017282 2	-1.37	0.220	Insignificant
IB(-2)	-0.0745405	0.018044 7	-4.13	0.006	Significant and Negatively related

MB	0.1464597	0.024294	6.03	0.001	Significant and Positively related
		2			
MB(-1)	-0.037596	0.026281	-1.43	0.203	Insignificant
		9			
MB(-2)	-0.0752787	0.024661	-3.05	0.022	Significant and Negatively related
Cons	10.36005	0.733909	14.12	0.000	Significant and Positively related
		8			
R-squared	0.9972		F-statistic		98.87
Adjusted R-squared	0.9872		Prob(F-statistic)		0.0000
Log likelihood	114.40543		Durbin-Watson		2.22302
Diagnostic test:					
Breusch-Godfrey LM test for autocorrelation				chi2 0.986	(p value 0.544)

Source: Authors Calculation

Based on the data presented in the above table 5, it can be observed that the F statistic is 98.87 and significant at 0.05 level. These values indicate that the model is statistically significant. Furthermore, the results suggest that RTGS and CHE exhibit a significant positive relationship with economic growth in Sri Lanka. On the other hand, SLIPS, CC, and IB exhibit a significant negative relationship with economic growth in the country. Interestingly, DC and MB do not demonstrate any significant relationship with economic growth in Sri Lanka in the short term. Further, diagnostic test of the autoregressive distributed lag (ARDL) model was performed through an examination of Breusch-Godfrey LM test autocorrelation test. The chi square value is significant at 0.05 level which reveals that no auto correlation in the ARDL model. The Durbin-Watson test is utilized as a means to detect the presence of autocorrelation. Statistically, the dataset is considered normal when the value is between 1.7 to 2.3.

Below Table 6 shows the long-term parameters and short run dynamic relationship of the ARDL Error Correction model.

Table 6: ARDL short run estimate and Error Correction Model

Variables	Regression Coefficient	Standard error	t value	Probability value	Interpretation
ECM	-0.629483	0.0681913	-23.9	0.000	Significant
DLnGDP(-1)	0.0730917	0.0448092	1.63	0.154	Insignificant
DLnRTGS	0.339237	0.0250979	13.52	0.000	Significant and Positively related
DLnRTGS(-1)	-0.0330609	0.0231159	-1.43	0.203	Insignificant
DLnCHE	0.8441229	0.153308	5.51	0.002	Significant and Positively related
DLnCHE (-1)	0.5086367	0.0958389	5.31	0.002	Significant and Positively related
DLnSLIPS	-1.413454	0.176826	-7.99	0.000	Significant and Negatively related
DLnCC	-0.1326753	0.0844917	-1.57	0.167	Insignificant
DLnCC(-1)	0.1606049	0.0760819	2.11	0.079	Insignificant
DLnDC	-0.2649165	0.0731846	-3.62	0.011	Significant and Negatively related
DLnDC(-1)	-0.4526947	0.087192	-5.19	0.002	Significant and Negatively related
DLnIB	0.0982106	0.0243056	4.04	0.007	Significant and Positively related
DLnIB(-1)	0.0745405	0.0180447	4.13	0.006	Significant and Positively related
DLnMB	0.1128747	0.034038	3.32	0.016	Significant and Positively related
DLnMB(-1)	0.0752787	0.024661	3.05	0.022	Significant and Positively related
Constant	10.36005	0.7339098	14.12	0.000	Significant and Positively related
R-squared		0.9984	Adjusted R-squared		0.9924

Source: Authors Calculations

Table 7 displays the outcome of the autoregressive distributed lag (ARDL) error correction model (ECM), revealing an error correction term or speed of adjustment coefficient of -0.629 with a p-value

of 0.0000. This suggests that there is a 62% rate of adjustment in the event of any disequilibrium observed within this model from the short run back to the long run on a quarterly basis. Based on the analysis conducted, it can be concluded that in the short run, RTGS, CHE, IB, and MB exhibit a significant positive relationship. This may reflect immediate boosts to economic activity resulting from increased transaction volumes and liquidity injections. Conversely, the analysis revealed that the SLIPS and the DC payment methods display a significant negative relationship. This could be from the factors such as liquidity constraints and inefficiencies within specific payment networks. Notably, the analysis did not reveal any significant relationship between the payment method CC and the economic growth. This may be due to the factors such as consumer debt levels, merchant acceptance and preference for alternative payment methods.

Table 7: ARDL Estimates of The Long Run Relationship

Variables	Regression Coefficient	Standard error	t value	Probabilit y value	Interpretation
LnRTGS	0.1740984	0.01208	14.41	0.000	Significant and Positively related
LnCHE	0.1294209	0.0890843	1.45	0.196	Insignificant
LnSLIPS	0.5457312	0.072202	7.56	0.000	Significant and Positively related
LnCC	- 0.0546847	0.0792933	-0.69	0.516	Insignificant
LnDC	0.1144958	0.0664976	1.72	0.136	Insignificant
LNIB	- 0.1692628	0.018899	-8.96	0.000	Significant and Negatively related
LnMB	0.0206109	0.0091247	2.26	0.065	Insignificant

Source: Authors calculation

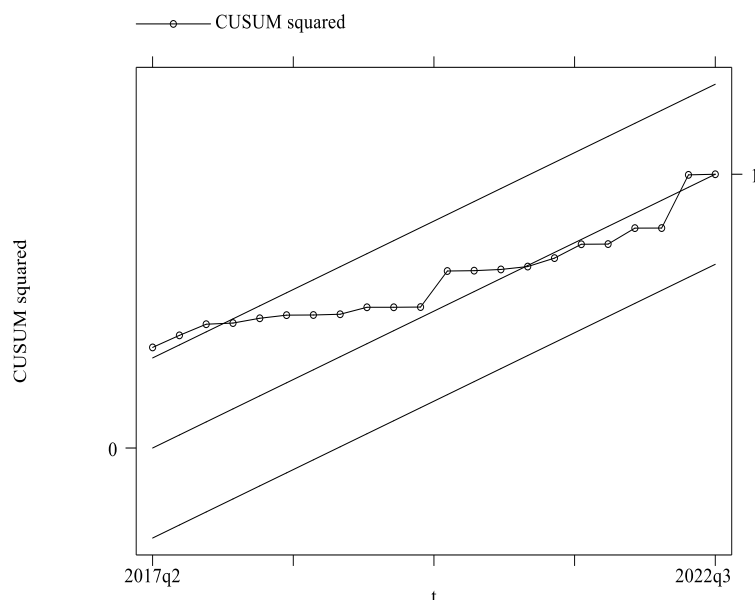
In the long run, RTGS and SLIPS have a significant positive relationship with economic growth due to their efficiency in facilitating large-scale transactions between financial institutions and businesses. These systems streamline the payment processes, reduce transaction times, and improve liquidity management thereby improving the economic activities and growth of the economy. Further, IB has a significant negative relationship due to the potential barriers to access and usage, particularly segments of the population with limited interment connectivity or digital literacy. Moreover, concerns about the cyber security and data privacy associated with online banking may deter the widespread adoption, limiting its contribution to economic expansion. In addition, CHE, CC, DC MB do not have any

significant impact on the economic growth. While these payment methods offer convenience and accessibility for customers, their overall contribution to economic growth may be limited by factors such as transactions fees, regulatory constraints and preferences for cash transactions for certain sectors of the economy.

However, according to Agustiawati et al., (2023) , debit card, credit card and E money collectively influenced economic growth. However, individually, debit and credit card transactions significantly impacted growth, while E money transactions showed no significant effect. On the other hand, Pang et al., (2022) revealed that only E money payments were statistically significant in influencing growth while debit card and credit cards were insignificant. Noman et al., (2023) highlighted that cashless payment methods, including cards, E money, credit transfers and cheques positively influenced economic growth in the long run, with a strong correlation to real in GDP in G7 countries. In the short run, card, E money and cheque payments significantly impacted GDP, whereas credit transfers had no notable short-term effect.

To assess the stability of the autoregressive distributed lag (ARDL) model, the cumulative sum of recursive residual (CUSUM) test was conducted at a 95% confidence level. The findings of this test indicated that the model is appropriately specified, demonstrating its robustness and suitability for analysis.

Figure 4: Cumulative Sum of Recursive Residual (CUSUM) Test



Source: Survey Data

5. Conclusion

This research study aims to investigate the impact of cashless payment methods on the economic growth of Sri Lanka. Specifically, the study employs Real-time Gross Settlement System (RTGS), Cheque (CHE), Sri Lanka Interbank Payment System (SLIPS), Internet Banking (IB), Mobile Banking (MB), Credit Card (CC), and Debit Card (DC) as independent variables, while real Gross Domestic Product (GDP) serves as the dependent variable. The study covers a period from 1Q 2015 to 3Q 2022. To analyse the data, the Autoregressive Distributed Lag (ARDL) model is utilized, preceded by the application of the Augmented Dickey-Fuller (ADF) and Phillip-Peron (PP) tests to establish the stationary relationship of variables at both levels and differences.

The RTGS system in Sri Lanka has demonstrated a significant positive correlation with the country's GDP in both the short and long term. The Central Bank of Sri Lanka has identified RTGS as the most significant contributor to non-cash payment systems. Consequently, it is crucial to eliminate the regulatory and infrastructure obstacles hindering the wider adoption of non-cash payment methods in Sri Lanka through the use of RTGS. Additionally, SLIPS has exhibited a favourable association in the long term despite exhibiting a negative relationship in the short term. Thus, it is imperative to implement sustainable systems in the long run to reap the long-term benefits. In the long term, IB demonstrated a negative correlation, despite indicating a positive association in the short term. On the other hand, both CHE and MB exhibited an insignificant relationship with GDP in the long term and a positive relationship in the short term. CC and DC did not demonstrate any significant correlation in the long term. However, DC revealed a negative relationship with GDP, while CC did not show a significant relationship in the short term.

Central banks, with the assistance of other institutions can promote the usage of cashless payments and conduct educational sessions and provide guidance to senior citizen to encourage them to use the technologies in their day-to-day transactions. Government can motivate businesses to utilize these cashless payment systems in their day-to-day operations. Further, government and other organizations can invest in expanding internet connectivity and digital infrastructure to ensure widespread of usage in online banking and digital transactions, particularly in rural and underserved areas in Sri Lanka. Further, implementation of digital literacy related educational programs to raise the awareness of the benefits of cashless payments are crucial. Another important consideration should be given to strengthen the cybersecurity measures and regulatory frameworks to safeguard against online fraud and data breaches. Further, encouraging businesses to accept and adapt to cashless payments is another important aspect by providing support for the adoption of point of sales (POS) terminals and other payment processing equipment. Further, transaction fee should be minimized to increase the usage of non-cash transactions, In Sri Lanka, collaboration between government agencies, financial institutions,

fin tech companies and businesses are important to improve the digital inclusion and growth in cashless payments.

Overall, the study provides valuable insights into the potential impact of non-cash payments on the economic growth of Sri Lanka. The findings can inform policymakers and stakeholders in the financial sector on the measures needed to promote the adoption of non-cash payment methods in Sri Lanka, which can lead to a more efficient, inclusive, and sustainable financial system in the country.

6. Limitations and Scope for Future Studies

This study offers significant insights into the relationship between cashless payments and economic growth in Sri Lanka. However, it is important to acknowledge the limitations of the study. One notable limitation is the restricted number of cashless payment methods considered, which excludes Tele Banking, and Postal Instruments due to their relatively insignificant contribution to the total cashless payments in Sri Lanka. As a result, the study may not fully capture the breadth and depth of the impact of cashless payments on the country's economy. Moreover, the study only focuses on the impact of cashless payments on economic growth, while there may be other important dimensions to consider, such as financial inclusion, consumer behaviour, and regulatory frameworks.

Future studies could address these limitations by expanding the number of cashless payment methods considered and investigating other dimensions of the impact of cashless payments. Additionally, further research could examine the potential trade-offs and complementarities between cashless payments and other forms of payment, such as cash, and investigate how the adoption of cashless payments may affect different stakeholders in the economy, including consumers, businesses, and the government. Furthermore, future studies could explore the role of digital infrastructure and financial literacy in driving the adoption and impact of cashless payments.

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The Determinants of Intention to Adopt Buy Now Pay Later Services By Sri Lankan Consumers

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Abstract

This quantitative research study conducted in the field of the latest fintech service of Buy Now Pay Later services was completed with the aim of solving the research problem of 'Lack of research on BNPL services and factors influencing its adoption in the Sri Lankan context' since these services are beneficial to both the consumers and merchants involved in the process, especially in a developing country like Sri Lanka. In order to solve this research problem, research question of 'In what way does perceived usefulness, social influence, and financial literacy affect the intention to adopt Buy Now Pay Later services?' was developed, which ultimately created the research objective of 'Identifying the effect of perceived usefulness, social influence, and financial literacy on the intention to adopt Buy Now Pay Later services' under this research study. The study employed a deductive and quantitative research approach, collecting primary data via a Google Form questionnaire using the snowball sampling technique, and analysing it with SPSS software.

In the Data Analysis chapter, it was proven that the collected data was reliable, and the independent variables; Perceived Usefulness, Social Influence, and Financial Literacy and dependent variable; Intention to Adopt Buy Now Pay Later Services got a positive relationship, and the developed hypotheses were accepted by conducting the main analysis of reliability analysis, Pearsons correlation analysis, and the regression analysis respectively. The research study concludes with key implications on managers, society and theory. These findings can be used to promote BNPL services and to improve the financial systems, provide easy access to consumer credit and to boost sales and revenue ultimately enhancing the quality of life.

Keywords: Buy Now Pay Later, Financial literacy, Perceived usefulness, Social influence.

1. Introduction

The Sri Lankan economy faced major challenges in the early 2020s due to the Easter Sunday attacks, COVID-19 pandemic, and an economic and political crisis. These events led to high inflation, forcing many to prioritize essential spending. In response, fintech companies introduced Buy Now Pay Later (BNPL) services, like Koko, providing short-term credit with 0% interest. This helped consumers meet their needs and boosted sales for merchants. Despite its benefits, BNPL adoption has been slow, with noticeable generational gaps and few providers. Nonetheless, BNPL remains a valuable economic and social tool in Sri Lanka.

Globally, BNPL usage surged during the COVID-19 pandemic due to increased e-commerce (Kimberley Long, 2022). However, the growth rate has slowed post-pandemic (Business Wire, 2023). Similar trends are observed in Sri Lanka. In the US, generational differences in BNPL adoption are evident, with younger generations adopting it more rapidly (Insider Intelligence, 2021). Despite visible symptoms of slow BNPL adoption in Sri Lanka, there is a lack of quantitative research on the factors influencing this trend, highlighting a critical research gap. Therefore, we can identify 'Lack of research on BNPL services and factors that influences its adoption in the Sri Lankan context' as the research problem in this research.

1.1 Purpose of the study

This research aims to identify the factors influencing the adoption of Buy Now Pay Later (BNPL) services in Sri Lanka. According to (Daily FT, 2021), BNPL services is a novel introduction in the Sri Lankan financial ecosystem, suggesting a lack of prior comprehensive research on Buy Now, Pay Later (BNPL) services in Sri Lanka. Therefore, the findings of this study will support the development and adoption of BNPL services, benefiting society as a whole.

1.2 Objectives of the study

The current study postulated with 3 specific objectives as below.

1. To access the relationship between the perceived usefulness and intention to adopt Buy Now Pay Later (BNPL)
2. To access the relationship between the social influence and intention to adopt Buy Now Pay Later (BNPL)
3. To access the relationship between the financial literacy and intention to adopt Buy Now Pay Later (BNPL)

Findings of current research will provide valuable data to promote BNPL services to enhance adoption rates, and to formulate strategies to bridge the generational gap, benefiting society overall. The rest of the research paper will discuss the literature review for the research variables and generational cohorts,

followed by the methodology used in conducting the study. Afterward, the data analysis using quantitative data will be presented along with the results and a discussion of the findings. Finally, the conclusions and implications of the research will be discussed

2. Literature Review

2.1 Intention to Adopt Buy Now Pay Later Services

Under the funnel approach, the dependent variable 'Intention to Adopt Buy Now Pay Later (BNPL) Services' is derived from consumer buying behavior, payment behavior, and technology adoption. The Theory of Planned Behaviour (TPB) explains this by analysing attitudes, social norms, and perceived behavioural control (Ho et al., 2024). BNPL services primarily serve underbanked demographics and younger generations, like Gen Z (Sng and Tan, 2022). The Diffusion of Innovations theory by Rogers (2003) and the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) highlight perceived usefulness, ease of use, social influence, and supportive surroundings in technology adoption. The Technology Acceptance Model (TAM) by Davis (1989) emphasizes perceived ease of use and usefulness as key determinants of technology use.

BNPL services are expanding in major countries like China, Japan, and India (Abdellaoui and Tzili, 2019). Their adoption increases due to limited credit card ownership and easier registration processes (Maurizka, Handayani, and Pinem, 2021; Azmi et al., 2020). BNPL's flexibility, manageable payments, and lower interest rates make it preferable for consumers (Maurizka, Handayani, and Pinem, 2021). Additionally, merchants benefit from immediate payments and increased sales without credit risks (Sng and Tan, 2022).

2.2 Perceived Usefulness

Perceived usefulness refers to the expected benefits and outcomes from using a product or system (Renny, Guritno, & Siringoringo, 2013). New technologies must demonstrate efficiency, effectiveness, and time-saving benefits to be adopted (Huey et al., 2023). Consumers seek convenience and positive impacts from technologies like Buy Now Pay Later (BNPL) services (Pratika et al., 2020). The higher the convenience, the greater the willingness to use BNPL (Boden, Maier, & Wilken, 2020). BNPL services reduce default risks and improve financial health (Mukhtar et al., 2023). Perceived usefulness directly influences the intention to adopt BNPL services (Maurizka et al., 2021). Enhanced features increase perceived usefulness, promoting adoption (Huey et al., 2023).

H1: There is a significant relationship between perceived usefulness and intention to adopt Buy Now Pay Later services.

2.3 Social Influence

Social influence significantly impacts the adoption of new technologies (Huey et al., 2023). Nicolaou (2022) states that people are more likely to try new technologies based on recommendations from social connections rather than independently. This social context influences the use of Buy Now Pay Later (BNPL) services (Alwi et al., 2019). Friends, family, and other individuals provide information and support, driving BNPL adoption (Alwi et al., 2019). Indirect social pressure, seeing others use new technologies, also plays a role (Koenig-Lewis et al., 2015). There is a direct, positive relationship between social factors and the willingness to adopt fintech services, especially among Gen Z and Gen Y (Nicolaou, 2022). This phenomenon, driven by the fear of missing out, highlights the critical role of social influence in adopting BNPL services (Chong et al., 2019).

H2: There is a significant relationship between social influence and intention to adopt Buy Now Pay Later services.

2.4 Financial Literacy

Financial literacy refers to the knowledge of financial concepts and the ability to interpret financial data (Akbar et al., 2021). Higher financial literacy enhances individuals' ability to process financial information, capture market opportunities, and manage risk (Huston, 2009). People with good financial literacy make sensible financial decisions (Andarsari & Ningtyas, 2019) and tend to use efficient financial methods like fintech services (Akbar et al., 2021). However, younger generations using BNPL services often lack financial literacy (Andarsari & Ningtyas, 2019) and may engage in impulsive buying without understanding the risks (Fujita et al., 2006; Paskelian et al., 2015; Aydin & Selcuk, 2016). This leads to a negative relationship between financial literacy and the intention to adopt BNPL services among youth (Aydin & Selcuk, 2016).

H3: There is a significant relationship between financial literacy and intention to adopt Buy Now Pay Later services.

3. Methodology

The research approach of deductive research approach has been followed as the determinants of intention to adopt Buy Now Pay Later services were derived from previously conducted research and not decided based upon exploration and investigation. Also, a quantitative research approach is followed when conducting research, as according to (Creswell, 2011), quantitative research is mainly associated with numerical data and statistics to understand relationships and significance between factors and is carried out using surveys to generalize the results to a larger population, which is exactly carried out in this research.

Furthermore, both primary and secondary data have been used in this research. Primary data is collected from the sample of the population who are the residents in the Colombo district of Sri Lanka, and secondary data such as literature used is throughout the research to back up facts with proof. The primary data that is collected is sourced from the residents of the Colombo district of Sri Lanka and the secondary data, information is sourced mainly from journal articles from different platforms such as Google Scholar, Science Direct etc. In this study, primary data was gathered through the distribution of questionnaires using both Google Forms. Using Google Forms offers convenience for both the researcher and respondents, as they can be accessed remotely and at any time. For the purpose of this study, individuals residing in the Colombo district of Sri Lanka have been selected as the sample population due to their familiarity with emerging new technologies such as Buy Now Pay Later services. This sample of 379 individuals would be appropriate to generalize the finds of this research among all Sri Lankans. Also, the snowball sampling technique is followed along with SPSS software is utilized for the data analysis as this software is chosen for its efficiency and effectiveness (Eval Community, 2023).

3.1 Operationalization of the variables

Table 1 elucidate the indicators of the variables along with the sources of extraction. The scales proposed by Alsheikh & Bojei (2014) and Koenig-Lewis et al. (2015) were combinedly deployed in measuring the Intention to Adopt Buy Now Pay Later Services. Furthermore, the scales proposed by Lien, et al (2020) and Trivedi (2016) were deployed in measuring the Perceived Usefulness. Social influence is measured through the scales proposed by Lien, et al (2020) and Koenig-Lewis et al. (2015). Haws et al. (2012)'s scale is deployed in measuring the financial literacy.

Table 8 Operationalization of variables

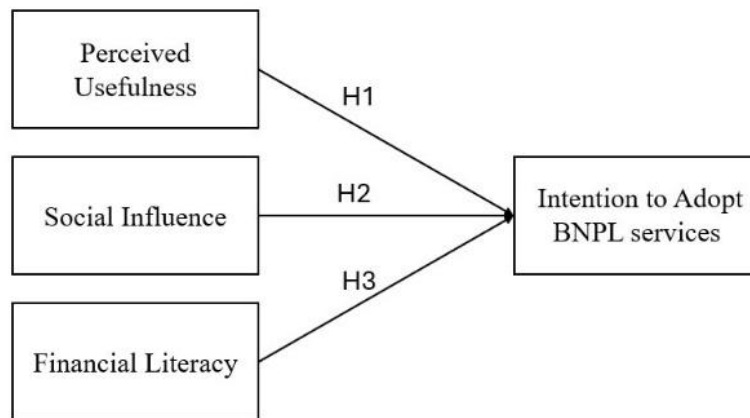
Variable	Indicator	Source
Intention to Adopt Buy Now Pay Later Services	I believe it is worthwhile for me to adopt BNPL services.	Alsheikh & Bojei (2014)
	My general intention to use BNPL services is high.	
	I plan to use BNPL services in the next few years.	Koenig-Lewis et al. (2015)
	Two years from now I intend to pay for purchases with BNPL services.	
	I intend to use BNPL services in the near future.	

Perceived	I save a lot of time when using BNPL services	Lien, et al (2020)
Usefulness	BNPL services can meet my needs.	
	BNPL services have improved my productivity	Trivedi (2016)
	I find BNPL services useful in the buying process.	
	Using the BNPL services helps me buy easily	
Social	BNPL service is in line with the development	Lien, et al (2020)
Influence	trend of society.	
	My work or study environment supports BNPL services.	
	People who are important to me would probably suggest that I should use BNPL services.	Koenig-Lewis et al. (2015)
	People who are important to me expect me to use BNPL services.	
	People who are important to me are likely to recommend using BNPL services.	
Financial	I closely monitor my spending behaviour.	Haws et al. (2012)
Literacy	I am able to work effectively toward long term financial goals.	
	I carefully consider my needs before making purchases.	
	I am able to resist temptation in order to achieve my budget.	
	I am responsible when it comes to how much I spend.	

3.2 Conceptual framework of the study

Figure 1 depicts the relationship between the variables and the proposed hypotheses. The current study proposes perceived usefulness, social influence and financial literacy having a significant relationship on Intention to Adopt Buy Now Pay Later Services.

Figure 5 Conceptual framework of the study



Source: Author compiled

4. Data Analysis and Results

After the data cleaning process, the total of 414 responses were narrowed down to 379 responses where majority of responses from Gen Z being 64.91%, 50.92% were females, 73.88% were from the Colombo district, 54.09% being undergraduates and 24.3% earns an income of Rs. 40,000 – Rs. 99,999. All the variables in this model received a Cronbach Alpha value over 0.7 proving the reliability and goodness of the data collected. Summary of the demographics analysis is depicted in table 1.

Table 9 Demographics Analysis

Demographic Variable	Subcategories	Count	Percentage
Gender	Male	186	49.08%
	Female	193	50.92%
Age	18-27 years old	246	64.91%
	28-43 years old	91	24.01%
	44-59 years old	37	9.76%
	60-78 years old	5	1.32%

Residential district	Colombo	280	73.88%
	Gampaha	60	15.83%
	Kalutara	39	10.29%

Source: Survey Data

4.1 Reliability Analysis

All the variables of the study are reliable considering the Cronbach's alpha values which are above 0.8. The threshold value of the Cronbach's alpha is 0.7 and all the variables consist of the reliability in further analysis (Sekaran and Bougie, 2016).

Table 10 Reliability statistics of the variables

Variable	No. of items	Cronbach's Alpha
Intention to Adopt BNPL services	5	0.920
Perceived Usefulness	5	0.833
Social Influence	5	0.884
Financial Literacy	5	0.881

Source: Survey Data

4.2 Correlation Analysis

According to Turney (2024), using the Pearson's correlation analysis the researcher is able to identify the strength and the significance between the dependent variable and a particular independent variable and it also depicts the direction of the relationship. The correlation coefficient is a number than falls between -1 and +1 where the (-) and (+) indicates the direction of the relationship; (-) depicts a negative relationship whereas (+) depicts a positive relationship. The decimal digits of the Pearson's correlations will express the strength of the relationship according to the range it falls into. The range is as 0 - 0.399: weak relationship, 0.4 – 0.699: moderate relationship and Above 0.7: strong relationship.

The sig value that is generated along with the Pearson's Correlation can be used to identify whether the relationship between the dependent variable and a particular independent variable is worthwhile to interpret. If the sig value is less than 0.05 then it indicates that there is in fact a significant relationship between the two variables and thereby it is worthwhile to interpret that particular relationship vice versa.

Table 11 Correlation Analysis

Dependent Variable	Independent Variable	Correlation coefficient	Strength of the relationship
Intention to Adopt BNPL services	Perceived Usefulness (PU)	0.679	Moderate relationship
	Social Influence (SI)	0.495	Moderate relationship
	Financial Literacy (FL)	0.322	Weak relationship

Source: Survey Data

When analysing the correlation coefficient values it can be derived that all the independent variables have a positive relationship with the dependent variable as the correlation coefficient is a positive value. By analysing the decimal digits of the correlation coefficient, based on the preset range of values it falls into, the strength of the relationship can be derived as per in the table above.

4.3 Regression Analysis

Multiple regression analysis is performed to analyse the interaction between independent variables and dependent variable of the study. Table 4 summarizes the beta-coefficient values and its significance in interpreting the each of the relationship.

Table 12 Regression analysis

Variables	Model		
	Coefficient	Std. Error	Sig. Value
Mean PU	0.679	0.045	<.001
Mean SI	0.495	0.041	<.001
Mean FL	0.322	0.046	<.001
Constant (Unstandardized B)	0.498	0.184	0.007
Adj. R ²	0.485		
F-Value	119.780		
N	379		

Source: Survey Data

As per adjusted R square in the model summary table, the explanation power of the whole model is 0.485 which means that the variables and data in this study explains 48.5% of the determinants which influence people to adopt BNPL services in Sri Lanka. As per the sig values of the independent variables of the ANOVA table, it can be concluded that the model constructed for this research is suitable to interpret as it is 0.001 which is less than 0.05. When analysing the sig values of the coefficient table, it can be concluded that all the hypotheses built from the independent variables of Perceived Usefulness (PU), Social Influence (SI), and Financial Literacy (FL) are suitable to interpret and therefore are valid hypothesis, as the sig value of all the variables are <0.001, which is less than 0.05. Table 5 explains the summary of the hypothesis testing of the current research.

Table 13 Hypotheses Testing Results

Proposed Hypothesis	Sig-value of the multiple regression	Decision on hypothesis
H1- There is a significant relationship between perceived usefulness and intention to adopt Buy Now Pay Later services	<0.001	Accepted
H2- There is a significant relationship between social influence and intention to adopt Buy Now Pay Later services	<0.001	Accepted
H3- There is a significant relationship between financial literacy and intention to adopt Buy Now Pay Later services.	<0.001	Accepted

Source: Survey Data

5. Discussion of the Findings

According to the Data Analysis that was conducted it can be concluded that the data collected is highly reliable with Cronbach's Alpha values over 0.7 for all variables. Correlation analysis shows all independent variables have a positive relationship with the dependent variable; perceived usefulness and social influence have moderate strength, while financial literacy has a weak relationship. This can be backed by literature as consumers perceive convenience as useful when using technologies like BNPL (Pratika et al., 2020) and are more likely to try new technologies from recommendations from others rather than discovering by themselves (Nicolaou, 2022) and tend to use fintech services more when they have good financial literacy (Akbar et al., 2021). Regression analysis accepts all hypotheses

as the significance values are below 0.5 in both the correlation and ANOVA tables, indicating suitability for interpretation.

When considering the similar findings to this research, in the Sri Lankan context, according to Nasiketha, Tham, and Khatibi (2023), social influence is a key factor in the adoption of digital payments by the young generation in Sri Lanka. Strong family bonds and the opinions of family, friends, and close associates significantly impact decision-making (Nasiketha, Tham, and Khatibi, 2023). In the international context, Relja, Ward, and Zhao (2023) explore psychological determinants of Buy Now Pay Later (BNPL) in the UK, highlighting perceived usefulness as crucial as they find BNPL's transaction convenience and speed attract consumers away from traditional credit cards.

When considering the contradicting findings to this research, in the Sri Lankan context, Nasiketha, Tham, and Khatibi (2023) emphasize that perceived risk, including uncertainty and technological doubts, significantly influences Sri Lankan youth's adoption of digital payments. Concerns such as personal data theft and illegal transactions deter their willingness to embrace these services. In the international context, Relja, Ward, and Zhao (2023) explored psychological determinants of Buy Now Pay Later (BNPL) services in the UK, highlighting transparency as crucial. Increased transparency enhances consumer trust, particularly in payment formats and amounts, pivotal for BNPL adoption.

Since this research about the determinants of intention to adopt BNPL services by Sri Lankan consumers and there were few new findings. As per the data analysis it was analysed that out of the total respondents 'Koko' is the BNPL application which is used by a majority of 88.39% whereas only 11.61% uses Mintpay. Thereby we can understand that Koko is more popular than Mintpay in general. But when considering generational cohorts, it is evident that the generation of Z and Y uses Koko more than Mintpay whereas Mintpay is much more popular among Gen X and Baby Boomers than Koko.

6. Conclusion and Implications of the Study

In this research study, where Perceived Usefulness, Social Influence and Financial were derived as the independent variables that influences the dependent variable of Intention to Adopt Buy Now Pay Later services, it was proven that these factors are well established in the field through relevant literature and all the hypotheses which were proved to be accepted using the data of the regression analysis, ultimately concluding that the conceptual framework which was developed to be accurate and reliable and will support future research studies in the field.

By conducting this research study, it was confirmed that perceived usefulness is one of the main factors that determine the intention to adopt BNPL services and thereby ultimately proving that the TAM model is indeed a valid theory related to adoption of new technologies based on user behaviour. By

conducting this research study, the validity of social influence as a determinant that influences people to adopt BNPL services were confirmed, just as it is mentioned in the UTAUT model. The research findings are crucial for entrepreneurs, business managers, government officials, and policymakers to make informed decisions. Entrepreneurs can leverage the insights to promote Buy Now Pay Later services across generations, domestically and internationally, boosting adoption rates. Policymakers can regulate and integrate these services into financial systems, ensuring consumer protection and societal benefit (Rompas, Pangemanan, & Tulung, 2021).

Buy Now Pay Later (BNPL) services, introduced globally and in Sri Lanka, benefit consumers by providing easy access to instant credit for shopping and specialty goods, paid in interest-free monthly instalments (Rompas, Pangemanan, & Tulung, 2021). Merchants also benefit as integrating BNPL services increases consumer purchasing power and boosts sales and profits. BNPL enhances overall quality of life and supports societal wellbeing, contributing to sustainability goals by improving access to goods, services, and economic opportunities (Business Wire, 2023).

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Factors influencing behavioral intention to credit card repayments of employed individuals in the Colombo District

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Abstract

This study examines the behavioural intentions of employed individuals in Sri Lanka regarding credit card repayments, with a particular focus on the economic crisis that began in 2019. Utilizing the Theory of Planned Behaviour (TPB), the research investigates how attitudes, subjective norms, and perceived behavioural control influence repayment intentions. The study employs a quantitative approach, collecting data from a sample of individuals residing in Colombo, Sri Lanka, over the period from 2019 to 2022. Regression analysis reveals that perceived behavioural control (PBC) has the most substantial effect on repayment intentions, followed by subjective norms (SN) and attitudes (ATT). Specifically, a unit increase in PBC, SN, and ATT leads to increases of 0.811, 0.771, and 0.145 units in behavioural intention, respectively. These findings are statistically significant and indicate that enhancing individuals' perceived control and addressing social norms and attitudes towards credit card usage are crucial for encouraging timely repayments. The implications of these results are discussed in relation to financial institutions, policymakers, and educators aiming to promote responsible credit behaviours. By identifying the key determinants influencing repayment intentions, this research provides insights into consumer behaviour within a developing economy and underscores the need for tailored financial literacy programs to assist individuals in managing their credit effectively. Ultimately, this study seeks to inform strategies aimed at addressing the rising trend of credit card defaults and fostering financial stability in Sri Lanka.

Keywords: Attitude, Behavioural Intention, Credit Card Repayments, Perceived Behavioural Control, Subjective Norms, Theory of Planned Behaviour.

1. Introduction

The issue of credit card repayment behaviour in Sri Lanka has gained significant attention due to the rising number of defaults, particularly during the economic crisis that began in 2019 (The Morning, 2023). This downturn has exacerbated financial pressures on individuals, leading to a surge in credit card delinquencies. While extensive research exists on credit card usage, much of it has focused on factors such as financial literacy (De Silva & Patabendige, 2021; Delgado et al., 2024), psychological influences (Ahmed, 2020; Norvilitis et al., 2003), and economic conditions (Ranasinghe, 2023). However, the behavioural intentions driving credit card repayment remain underexplored, especially during financial crises. Understanding these intentions is essential for addressing defaults and aiding individuals in navigating repayment challenges during economic hardships.

The Theory of Planned Behaviour (TPB), developed by Ajzen (1985, 1991), offers a framework for understanding how individuals form intentions to engage in specific behaviours, including financial behaviours like credit card repayment. TPB suggests that behaviour is influenced by three key components: attitudes toward the behaviour, subjective norms, and perceived behavioural control. In the context of credit card repayment, these components highlight the importance of attitudes toward debt, social influences, and perceived financial management ability. Despite TPB's potential to illuminate repayment behaviour, its application in Sri Lanka remains limited, particularly regarding psychological and social factors during an economic crisis.

This gap in the literature is particularly evident given the increasing rate of credit card defaults in Sri Lanka, underscoring the need to understand the psychological and social determinants of repayment decisions. While international studies have examined aspects of credit card repayment (e.g., Tokunaga, 1993; Perera, 2020), research focusing on Sri Lanka is sparse. Few studies explore how attitudes, social influences, and perceived control affect repayment intentions in an economic downturn. This research aims to address this gap by examining how these factors, as conceptualized by TPB, influence the repayment intentions of employed individuals in Colombo.

Focusing on employed individuals in Sri Lanka during the ongoing economic crisis, this study investigates the factors shaping credit card repayment intentions. Guided by TPB, it explores how attitudes toward debt, social norms (e.g., family and peer influences), and perceived financial control impact decisions to repay credit card balances. This research seeks to provide insights into the psychological and social factors driving credit card defaults in Sri Lanka and inform strategies to promote financial stability by encouraging responsible credit card usage and repayment behaviours.

This study aims to enhance understanding of how psychological and social factors shape credit card repayment intentions in Sri Lanka. The findings are significant for policymakers, financial institutions, and credit counsellors, as they can guide the development of programs to foster responsible financial

behaviours. This study also contributes to the broader literature on consumer financial behaviour, particularly in developing economies facing economic challenges. Ethical guidelines are adhered to throughout the research process, ensuring participants' confidentiality, voluntary participation, and protection from harm.

While the study offers insights, it has limitations. By focusing on employed individuals in Colombo, the findings may not fully represent other regions or unemployed individuals. Additionally, self-reported data may introduce biases such as social desirability or recall bias. Nonetheless, this research contributes to understanding credit card repayment behaviour during an economic crisis, furthering discussions on consumer financial stability in Sri Lanka.

2. Literature Review

Three key constructs from the Theory of Planned Behaviour (TPB) significantly influence individuals' intentions regarding credit card repayments: attitude, subjective norms, and perceived behavioural control. These constructs collectively shape repayment behaviours through their interaction and unique contributions.

Attitude reflects an individual's evaluative response toward a specific behaviour, involving a positive or negative appraisal based on anticipated consequences. Ajzen (1991) defines it as a mental state of readiness to respond favourably or unfavourably to an object or behaviour shaped by prior experiences and beliefs. East (1993) further describes it as the spectrum of evaluation individuals assign to psychological objects, which influences intentions toward behaviours like credit card repayments. Subjective norms, another critical factor, represent the perceived social pressures influencing behavioural decisions. According to Ajzen (1991), these norms derive from beliefs about whether significant others approve or disapprove of a behaviour. Social expectations and the motivation to comply with them are pivotal in shaping repayment intentions. Perceived behavioural control, the third construct, encompasses an individual's perception of their ability to perform a specific behaviour. It reflects beliefs about facilitating or hindering factors and is a crucial determinant of both behavioural intention and actual behaviour (Ajzen, 1991). This construct closely aligns with self-efficacy and significantly predicts the likelihood of engaging in intended actions.

Behavioral intention acts as the immediate precursor to the actual behaviour and is influenced by attitudes, subjective norms, and perceived behavioural control. Ajzen (1991) emphasizes that stronger intentions correlate with a higher likelihood of action, framing behavioural intention as a key mediator in the TPB framework. These theoretical underpinnings provide a lens through which credit card repayment behaviours among employed individuals in Sri Lanka can be analysed.

Extensive research has explored the interaction of these constructs with repayment behaviours, offering a foundation for hypothesis development. The classification of credit card users into revolvers, who

pay interest on overdue amounts, and convenience users, who fully settle their accounts, underscores the variability in repayment behaviours (Ding et al., 2009). Credit cards often serve as a financing tool for revolvers competing with other financial loans. The life-cycle hypothesis posits the benefits of borrowing early in life to invest in human capital rather than accumulating debt for material possessions. However, Norvilitis and Mendes (2013) note the prevalence of high-interest credit card debt in the U.S., even when it jeopardizes future financial security.

Financial literacy and awareness of repayment benefits significantly influence attitudes toward credit card repayment. Studies by Anastasia & Santoso (2020) and Kumar & Nayak (2022) highlight that a positive attitude, shaped by understanding the advantages of timely repayments, strongly correlates with responsible financial behaviours. Conversely, negative attitudes toward money and spending can result in prolonged debt and increased financial burdens (Ding et al., 2009). Within the TPB framework, attitudes impact behavioural intentions through beliefs about the behaviour's consequences (Ajzen, 1991). Distinctions between affective reactions, based on anticipated regret, and spontaneous impacts, informed by rational thinking, further enrich the understanding of attitudes (van der Pligt et al., 1998; Fazio, 1990). Research indicates that these dimensions must be integrated for accurate measurement (Ajzen, 2008).

Subjective norms, representing perceived social pressures, significantly influence repayment intentions. Family, peers, and societal expectations create a context where individuals feel compelled to meet financial obligations (Anastasia et al., 2020; Fuentealba et al., 2024). The phenomenon of "keeping up with the Joneses," rooted in social comparison theory, illustrates how social norms can drive individuals to adopt behaviours beyond their financial means (Lea et al., 1995). Accessibility to credit cards amplifies these pressures, particularly among college students who may view credit as a source of income (Hayhoe et al., 1999; Norvilitis et al., 2006). Parental influences often outweigh peer or institutional guidance in shaping financial attitudes and behaviours (Palmer et al., 2001; Norvilitis and Mendes-Da-Silva, 2013). These findings underscore the multifaceted nature of subjective norms in credit card repayment decisions.

Perceived behavioural control, encompassing beliefs about the ease or difficulty of debt repayment, is critical in shaping intentions. Ajzen (2008) distinguishes PBC from self-efficacy and locus of control, highlighting its situational focus and role in moderating the relationship between attitudes, norms, and intentions. Research suggests that PBC is a reliable predictor of debt-related behaviours, with findings indicating its significant influence on borrowing and repayment intentions (Chudry et al., 2011; Kennedy and Wated, 2011).

2.1 Attitudes and Behavioral Intentions Toward Credit Card Repayment

Credit card users are classified as revolvers—who pay interest on overdue amounts—or convenience users, who settle balances in full (Kwon & Lee, 2002; Afshan et al., 2009). Attitudes toward credit card repayment, defined as positive or negative evaluations of repaying debt, are key predictors of repayment behaviour. Favourable attitudes, often linked to financial literacy and awareness of benefits like avoiding interest charges, enhance repayment intentions (Anastasia & Santoso, 2020; Kumar & Nayak, 2022).

The theory of planned behaviour (Ajzen, 1991) explains how attitudes, shaped by beliefs, influence actions. Behavioral attitudes can stem from emotional responses like regret or rational thought and planning (Conner & Armitage, 1998; Fazio, 1990). Factors such as financial knowledge, debt tolerance, and money-specific attitudes further influence repayment behaviours (Davies & Lea, 1995; Hancock et al., 2012).

As individuals gain financial independence and responsibility, particularly with age, attitudes toward repayment become more positive (Brougham et al., 2011; Fuentealba et al., 2024).

H1: There is a relationship between attitude and behavioural intention toward credit card repayment.

2.2 Subjective Norms and Behavioral Intentions Toward Credit Card Repayment

Subjective norms, defined as perceived social pressures to act, significantly influence credit card repayment behaviour (Ajzen, 1991). Expectations from family, peers, and society often drive individuals to fulfil financial obligations (Njo Anastasia et al., 2020; Fuentealba et al., 2024). Social comparison, particularly the concept of "keeping up with the Joneses," exacerbates debt accumulation as individuals strive to match the lifestyles of their peers (Lea et al., 1995). Parental influence is pivotal, with financial education from parents reducing credit card debt, while negative parental practices increase it (Palmer et al., 2001; Norvilitis & Mendes-Da-Silva, 2013). Peer and familial pressures also play a significant role, particularly among college students (Kennedy & Wated, 2011). These norms collectively shape behavioural intentions toward credit card repayment.

H2: There is a relationship between subjective norms and behavioural intention toward credit card repayment.

2.3 Perceived Behavioral Control and Behavioral Intentions Toward Credit Card Repayment

Perceived behavioural control (PBC) refers to an individual's perception of their ability to perform a behaviour, such as repaying credit card debt. It reflects beliefs about available resources and the ease or difficulty of the task (Ajzen, 1991). Research indicates that higher PBC strengthens repayment intentions, as individuals with stable incomes or strong financial management skills feel more capable of meeting their financial obligations (Yzer & van den Putte, 2014).

The theory of planned behaviour highlights PBC as a predictor of behaviour, influenced by the tools and opportunities available to an individual (Madden et al., 1992). PBC accounts for anticipated challenges and perceived control over specific circumstances, distinguishing it from related concepts like self-efficacy and locus of control (Ajzen, 2008). While self-efficacy focuses on overcoming specific obstacles, PBC emphasizes an individual's perception of control within a particular context.

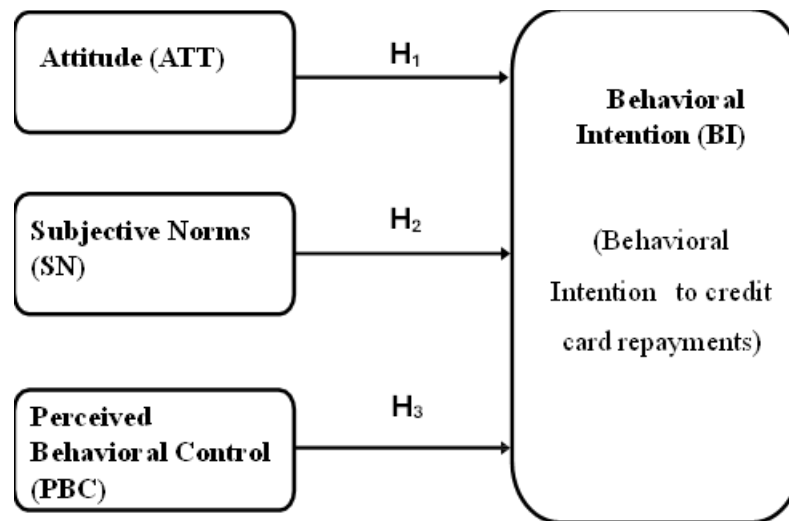
Research supports the predictive value of PBC in debt-related behaviours. For example, Chudry et al. (2011) identified PBC as a reliable indicator of intentions in managing loans, and Kennedy and Wated (2011) found it to be a negative predictor of credit card debt. External locus of control and tolerant attitudes toward debt have also been linked to higher debt levels (Davies & Lea, 1995). High income levels and the ability to make minimum payments further enhance PBC, reducing the risk of delinquency (Fuentelalba et al., 2024).

H3: There is a relationship between perceived behavioural control and behavioural intention toward credit card repayment.

3. Methodology

This study adopts a positivist research philosophy, which asserts the objective and independent existence of truth and reality (Aliyu et al., 2014). Positivism is deemed suitable for this research as it emphasizes the analysis of large samples to identify patterns in behavioural intentions, particularly with regard to credit card repayments. A deductive approach is employed, drawing on the Theory of Planned Behaviour (TPB) as the theoretical foundation for the development of hypotheses. This approach is aligned with the idea that attitudes, subjective norms, and perceived behavioural control influence behavioural intentions. In terms of research methodology, this study follows the mono-method quantitative approach, which focuses on employing a single research method for data collection. Survey research is selected as the strategy for this study, as it is a well-established method for gathering data on individuals' attitudes, behaviours, and perceptions (Fink, 2003). A cross-sectional design is adopted, wherein data collected at a single point in time from a diverse sample of 350 credit card users in Colombo, Sri Lanka. The sample was selected using a convenience sampling technique, which has been widely used in similar studies on credit card behaviour (Ding et al., 2009; Anastasia et al., 2020). To analyse the data, the study employed descriptive analysis, ANOVA, and regression models, which are appropriate for testing the hypotheses and meeting the research objectives.

Figure 6 Conceptual Framework



The conceptual framework for this study, depicted in Figure 3.1, illustrates the relationships between the independent variables—attitude, subjective norms, and perceived behavioural control—and the dependent variable, which is behavioural intention. This framework, grounded in TPB, serves to guide the investigation of how these factors influence credit card repayment behaviour. The study hypothesizes that there is a significant relationship between attitude and behavioural intention (H1), subjective norms and behavioural intention (H2), and perceived behavioural control and behavioural intention (H3). These hypotheses are based on existing literature that supports the connections between these variables and behavioural intentions in financial contexts.

The operationalization of the variables involves defining key indicators and utilizing measurement instruments, such as Likert scale questionnaires, to ensure consistency and reliability. The independent variables, namely attitude, subjective norms, and perceived behavioural control, are measured using items that reflect participants' overall evaluations of credit card usage, social pressures, and perceived control over financial behaviour. The dependent variable, behavioural intention, is assessed using questions that focus on participants' intentions to repay credit card balances in full or exceed the minimum payment. To ensure the robustness of the study, the target population comprises credit card users in Sri Lanka, with a total population of 1,987,857 cardholders as reported by the CBSL Payment Bulletin (Q4, 2023). The sample size is determined using Krejcie and Morgan's (1970) table for a population ranging from 75,000 to 1,000,000, requiring a sample of 384 participants to achieve a 95% confidence level and a 5% margin of error.

Primary data was collected using a purposive sampling method, which targets individuals with relevant experiences in credit card usage, as demonstrated in similar studies (Kundan, 2023). The data gathered through self-administered questionnaires. The analysis of the data involved descriptive statistics to summarize the data, including measures of central tendency (mean, median, mode) and graphical

representations such as histograms and pie charts. Additionally, correlation analysis conducted to assess the strength and direction of the relationships between variables, primarily using Pearson correlation coefficients. The regression analysis will then examine the predictive relationships between the independent and dependent variables, with hypothesis testing through ANOVA and multiple regression techniques.

Finally, the reliability of the measurement instruments assessed using Cronbach's Alpha, a statistic that gauges the internal consistency of scale items. A pilot test conducted with 30 respondents prior to the main data collection yielded Cronbach's Alpha values ranging from 0.696 to 0.704 for the independent variables, indicating moderate reliability. These values suggest that the constructs of attitude, subjective norms, and perceived behavioural control are reasonably consistent in measuring behavioural intentions toward credit card repayments. The reliability of these variables is further illustrated in the Cronbach's Alpha table, which confirms that the measurement instruments are suitable for the study's objectives.

4. Results and Discussion

The demographic analysis of the sample, comprising 340 respondents, reveals a highly educated and financially stable population, predominantly aged between 33 and 39 years, with 70% falling within this age range. The majority of respondents are employed in the government sector (69.4%), and most are married (83.5%), reflecting the financial stability and responsibility of the cohort. The respondents demonstrate a high level of education, with 44.1% holding a bachelor's degree and 40.0% possessing postgraduate qualifications, which may influence their awareness and management of credit card usage. Regarding credit card behaviour, a significant portion (54.1%) own a credit card, with frequent usage patterns indicating active engagement with credit as a financial tool. The respondents' awareness of the risks associated with credit card debt is notable, as 67.4% acknowledge the potential for heavy debt resulting from excessive credit card use, and 90.9% recognize the daily increase in credit card debt. Furthermore, a strong intention to manage credit card debt responsibly is evident, with a significant percentage planning to pay off their entire balance in full each month (76.8%) and others expressing intent to prioritize payments exceeding the minimum amount due (75.6%).

The analysis of the independent variables further reveals that the respondents generally exhibit positive attitudes towards credit card use and repayment, with 95.8% expressing favourable views regarding credit cards. This positive attitude is coupled with a strong awareness of the financial risks associated with credit card use, as 67.4% of respondents acknowledge the potential for significant debt accumulation. In terms of subjective norms, the respondents largely agree that paying off credit card balances in full is a common practice within their social circles, with 99.4% agreeing that their parents and friends prioritize full repayment. However, the data also indicate that social circles frequently use

credit cards for unplanned expenses, as 93.2% of respondents report that their peers occasionally use credit cards for purchases they cannot afford, suggesting a common discrepancy between social norms and actual behaviour. Regarding perceived behavioural control, the majority of respondents feel confident in their ability to avoid long-term credit card debt (96.2%), and they believe that it is possible to manage their credit card repayments effectively, with 77.1% asserting that they can stay out of credit card debt.

The influence of accounting information on the share market price of Plantation Companies listed on the CSE was investigated using regression analysis in this research.

Table 14 Model Summary

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.656 ^a	0.711	0.697	6.89095	1.628
Predictors (Constant): ATT, SN, PBC					

Source: Survey Result 2019-2022

The influence of the independent variable on the dependent variable is interpreted in this model summary table. R-value indicates the power of the influence which can be identified as lower value to the lower impact and higher value to the higher impact and also the accuracy of the forecast of the dependent variable (Dhakal, 2018). According to table 5.1, it indicates a higher R-value of 0.656 ($R = 0.656$) which represents the correlation of independent variables and perceived behavioural intention. The degree of variation in the dependent variable that can be determined from the independent variables is recognized as the R-Square and is also called the coefficient of determination (Dhakal, 2018). In here R square indicates the impact of independent variables on perceived behavioural intention 0.630 ($R = 0.630$) which means independent variables explain 63% of the variation in the dependent variable. In the above table, the adjusted R square displays the amount of variance explained only by independent factors that have an impact on the dependent variable and it is 69.7%. This also suggests that Attitude, Subjective Norms, and Perceived Behavioral Control collectively influence Behavioral Intention. Based on the above results, the researcher can conclude there is a significant impact from Attitude, Subjective Norms, and Perceived Behavioral Control collectively on the Behavioral Intention in Sri Lanka according to this model summary.

The correlation analysis demonstrates significant relationships between each independent variable and the dependent variable, Behavioral Intention. Specifically, Attitude (ATT) shows a weak positive

correlation of 0.341 with Behavioral Intention, indicating that more favorable attitudes towards credit card repayments are associated with stronger intentions to repay. Similarly, Subjective Norms (SN) exhibit a weak positive correlation of 0.325 with Behavioral Intention, suggesting that individuals who perceive stronger social pressures to repay their debts are also more likely to intend to repay. However, Perceived Behavioral Control (PBC) shows a moderate positive correlation of 0.531 with Behavioral Intention, indicating that individuals who feel more in control of their ability to repay credit card debts are significantly more likely to follow through on their repayment intentions. The intercorrelation analysis further suggests that ATT and SN share a weak to moderate positive correlation of 0.288, while ATT and PBC exhibit a moderate positive correlation of 0.222, indicating that individuals with favorable ATT toward credit card repayments are more likely to feel confident in their ability to manage repayments. In contrast, the negative correlation between SN and PBC (-0.072) suggests that social pressures related to credit card repayments do not significantly affect individuals' perceived control over their financial decisions.

Table 15 Coefficient Analysis

Variable	B	t -Value	p-Value	VIF
(Constant)	-3.103***	-6.394	0.000	
ATT	0.145***	2.946	0.003	1.101
SN	0.771***	7.486	0.000	1.097
PBC	0.811***	12.310	0.000	1.015
F - Value	50.120			
Sig	.000 ^b			

a. Dependent Variable: BI

*** represent significant levels at 0.01

Source: Survey Result 2019-2022

The multiple regression analysis provides further insights into the predictive power of the independent variables on BI. The regression model is statistically significant ($p = 0.000$), indicating that ATT, SN and PBC collectively influence BI. The coefficients reveal that each unit increase in ATT leads to a 0.145 unit increase in BI, while each unit increase in SN and PBC results in increases of 0.771 and 0.811 units in Behavioral Intention, respectively. These results suggest that all three factors positively influence the intention to repay credit card balances, with PBC having the most substantial effect. Furthermore, hypothesis testing confirms that all three independent variables—ATT ($p = 0.003$), SN

($p = 0.000$), and PBC ($p = 0.000$)—significantly affect BC. According to table 5.2, all independent variables present VIF value of less than 5, which means that there are no multicollinearity issues in the model.

The significant coefficients for ATT, SN, and PBC in this study corroborate previous research, which has consistently demonstrated the influence of these factors on various financial behaviours (Fishbein & Ajzen, 1975; Kan & Fabrigar, 2017). Specifically, the strong impact of PBC on BI is in line with Ajzen's (1985) assertion that perceived control over behaviour significantly enhances one's intention to perform that behaviour. In the context of employed individuals in the Colombo District, the results indicate that PBC has the most substantial effect on BI, followed by SN and ATT. This finding is consistent with studies that highlight the importance of perceived control in financial decision-making (Armitage & Conner, 2001; Taylor & Todd, 1995). Furthermore, the absence of multicollinearity ($VIF < 5$) in the model enhances the robustness of these findings, supporting the reliability of the regression results (Survey Result, 2019-2022). These insights are crucial for developing interventions aimed at improving financial behaviours, as they highlight the importance of enhancing individuals' perceived control and addressing social norms and attitudes towards financial management (Simply Psychology, 2023).

5. Conclusion

The findings revealed that positive attitudes towards credit cards, subjective norms, and a strong sense of perceived behavioral control significantly enhance individuals' intentions to repay their credit card debts. The study also highlighted the economic challenges faced by consumers, including rising inflation and stagnant wages, which have contributed to increased defaults on credit card payments. Positive attitudes towards credit cards were found to correlate with higher repayment intentions, with individuals who view credit cards as beneficial tools for managing finances being more likely to prioritize repayment. This aligns with previous literature suggesting that consumer attitudes play a crucial role in financial decision-making. Furthermore, subjective norms reflecting social pressures and expectations were found to significantly influence individuals' intentions to repay their debts. When individuals perceive that their peers or significant others expect them to fulfil their financial obligations, they are more likely to act accordingly. Perceived behavioral control emerged as a vital factor influencing repayment intentions. Individuals who feel confident in their ability to manage their finances and meet payment obligations are more inclined to prioritize repayments. This finding underscores the importance of enhancing consumers' self-efficacy regarding financial management. The implications of these findings are substantial for various stakeholders. Financial institutions can leverage this knowledge to design targeted interventions that promote positive attitudes towards responsible credit use. For instance, they could implement educational campaigns highlighting the benefits of timely repayments and effective credit management strategies. Policymakers can also

benefit from these insights by developing regulations that encourage responsible lending practices and protect consumers from excessive debt burdens. Moreover, this research emphasizes the necessity for adapted financial literacy programs aimed at enhancing consumers' understanding of credit management. By equipping individuals with the knowledge and skills needed to navigate their financial responsibilities effectively, such programs can contribute to reducing default rates and encouraging a culture of responsible borrowing.

The findings also highlight the key role of attitudes, subjective norms, and perceived behavioural control in shaping repayment intentions. A positive attitude towards credit card usage correlates with a higher likelihood of timely repayments, reinforcing previous research that suggests favourable attitudes toward financial products lead to responsible usage and management. Subjective norms, reflecting the perceived expectations of peers and significant others, significantly influence repayment behaviours, with individuals aligning their actions to social expectations. Perceived behavioural control is a strong predictor of repayment intentions, with individuals who feel confident in their financial management abilities more likely to prioritize repayments. These findings underscore the importance of enhancing self-efficacy and fostering a sense of control over financial decisions. The insights gained from this study provide information for financial institutions, policymakers, and educators. Financial institutions can design educational programs that promote positive attitudes towards credit card usage and responsible repayment practices, while policymakers can consider regulations that protect consumers from predatory lending and foster financial stability. Additionally, the importance of financial literacy programs tailored to consumers' needs is evident, as they can enhance understanding of credit management and contribute to reducing default rates. This study highlights the complexity of credit card repayment behaviours, particularly in the face of economic instability, and underscores the importance of addressing the psychological and social factors that influence financial decisions.

The study acknowledges several limitations, including its cross-sectional design, reliance on self-reported data, and limited scope of variables, which may affect the accuracy and generalizability of the findings. The sample, drawn from Colombo, may not represent other regions or demographic groups in Sri Lanka, and the economic disruption during the study period could limit the applicability of the results to more stable conditions. The small sample size of 340 respondents also impacts the robustness of the results.

Future research should address these limitations by considering additional factors like financial literacy and personal financial history, conducting longitudinal studies, and including diverse populations across Sri Lanka. This would provide a more comprehensive understanding of credit card repayment behaviours and inform interventions to promote responsible borrowing practices. The study lays the

groundwork for further exploration of psychological and social factors influencing repayment intentions, with implications for financial institutions, policymakers, and educators.

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Adoption of Organizational Changes toward Experiential Marketing Strategies: A Study Based on High-End Hotels in Central Province, Sri Lanka

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Abstract

Experiential Marketing is a trend in marketing that involves customers engaging with a brand in a two-way relationship. This research focuses on the implementation of Experiential Marketing practices in the hospitality industry, specifically in Central Province Sri Lanka's high-end hotels. The scarcity of studies on experiential marketing strategies and adoptions highlight the need for this study. The study evaluates the current Experiential Marketing strategies and explores the potential of implementing Experiential Marketing with appropriate internal changes. The research aims to evaluate the Experiential Marketing strategies implemented by high-end hotels in Sri Lanka using qualitative methods such as interviews and content analysis. The researchers follow a step-by-step guide for data collection, analysis, and interpretation, using purposive sampling for transferability and visiting selected high-end hotels to enhance credibility. The study suggests that personalization of services is crucial for making customers feel unique, and hotel touchpoints should be augmented with experiences. The research also suggests that internal changes within an organization can lead to excellence in resource optimization, strategic modernization, and agile adoption. Implementing an integrated management framework can enhance Experiential Marketing strategies and drive better results. The findings will contribute to the academic discourse on Experiential Marketing and provide practical insights for the high-end hotel industry in Sri Lanka.

Keywords: Agile Structure, Customer Touchpoints, Experience, Experiential Marketing, Internal Changes, Strategic Modernization.

1. Introduction

Researchers are exploring the impact of experiential marketing on branding, providing insights into the current strategy for creating value for brands and customers. Experience is a unique occurrence with emotional importance brought on by contact with stimuli associated with a product or brand (Österle et al., 2018). High market competitiveness leads to product and service imitation, affecting consumer choices more by emotional aspects. Experiential marketing focuses on creating unforgettable memories and engaging with customers, enhancing brand equity and enhancing sensory and emotional experiences, thereby enhancing customer mental availability (Dias et al., 2021). Experiential marketing enhances brand experience, improves the marketing mix, and encourages quicker, more satisfying purchasing decisions in various industries, particularly in emerging countries (Philip & Hezekiah, 2021).

Experiential Marketing, a strategy focusing on creating unforgettable experiences for brands, is becoming increasingly popular due to technology and social media. However, research on its use in Sri Lanka is limited, making it an emerging trend and a valuable subject of study.

Sri Lanka's natural tourism industry faces intense competition from star-class hotels, necessitating creative marketing strategies to meet customer expectations. Offering unique products and a holistic customer experience concept is crucial. However, limited studies on experiential marketing in Sri Lanka make it challenging for Sri Lankan people to get a clear understanding of the emerging trends of experiential marketing and what kind of internal changes need to be adopted in their entities to align with this trend, especially in the hospitality industry, which is highly based on selling experiences since those are often modelled on practices from foreign countries.

Researchers conducted a study in the Sri Lankan hospitality industry to determine if experience marketing and destination trust can enhance foreign tourists' perception of Sri Lanka as a desirable destination. (Chandrasiri & Wijesundara, 2022). Further on how the hotel sector in Sri Lanka retains their customers and customer satisfaction through EM. (Ishara, Poornima, & Gayathree, 2020). In line with Experiential Marketing some of the researchers discuss about how service providers in the Sri Lankan tourism and hospitality industries use virtual reality to more effectively create value for customers. (Muwandeniya & Eranda, 2022). Several studies have explored the benefits of experiential marketing in various countries (Gräve & Frederik, 2019), but few have considered the alignment with high-end hotels in Sri Lanka, a top tourism destination in the central province. There is a scarcity of research on the internal organizational alignments needed to address this trend, including the restructuring of workflows, enhancement of employee training, fostering of collaboration, and integration of technology to create immersive customer experiences, and especially targeting the Sri Lankan context.

So, the first objective of research is to identify and evaluate the experience marketing strategies currently employed by high-end hotels and following the second objective is to examine the required changes in the internal environment of high-end hotels for experiential marketing strategies to be successfully implemented. Exploring the changes and adaptations required to adopt experiential marketing practices effectively and improve customer experience within the internal environment of high-end Hotels.

The research provides practical insights for hotel marketers in the Central Province of Sri Lanka's high-end hotel industry. Hotel operators may create effective marketing plans that concentrate on giving consumers memorable experiences by knowing how the internal environment of an organization adopts these experiential marketing practices. It led hotels to think about how they can achieve mindshare with customers while achieving market share by implementing experiential marketing strategies.

2. Literature Review

2.1 Experiential Marketing (EM)

EM involves customer involvement through two-way engagement, aiming to capture attention and create an emotional attachment to create a positive impression about the brand or product (Schmitt & Bernd, 1999). High market competitiveness leads to product and service imitateness, with emotional consumer choices influenced more by experience seekers, making brands a source of differentiation for experienced companies.

The term "experience" began to be associated with "management" and "marketing" in the late 1990s, due to publications by marketing practitioners and consultants, including Tynan and McKechnie (2009), Carbone and Haeckel (1994), Pine and Gilmore (1998) and Schmitt and Bernd (1999). This new approach was relevant not only from the customer's perspective but also from the supply side. Scholars introduced concepts such as engineering customer experience, EM and the experience economy. As literature evolved, it expanded to cover different aspects of experiential concepts in different fields. These include customer experience management, brand experience (Schmitt, et al., 2009), service experience (Klaus & Maklan, 2012), EM (Tynan & McKechnie, 2009), customer experience quality (Lemke, Clark, & Wilson, 2011), online customer experience, travel experience (Binkhorst & Den Dekker, 2009), retail customer experience (Lemke, et al., 2011), customer experience measurement (Klaus & Maklan, 2012), customer experience design (Verhoef, et al., 2009) and customer journey (Lemon & Verhoef, 2016). These studies emphasized the importance of co-creating experiences to create value.

Digital technologies have further enhanced the impact of EM. Social media and virtual reality (VR) allow brands to create and share immersive experiences with a wider audience (Dholakia & Durham,

2012). Digital platforms can be utilized by hotels to provide virtual tours, interactive booking experiences, and engaging content that showcases their distinctive services.

As Lekstutytė and Alina (2016) mentioned, EM helps companies differentiate their brands by creating unique experiences that appeal to consumers' five senses, heart, and mind, utilizing consumer aesthetics, rest conditioning, variety seeking, and psychotherapeutic resources. Using EM is essential because it produces memorable and captivating customer encounters that improve brand perception and client loyalty. According to Schmitt & Bernd (1999), EM goes beyond traditional marketing's emphasis on product attributes to engage customers through sensory, emotional, cognitive, behavioral, and relational experiences (Pine & Gilmore, 1998). By expanding the audience and increasing engagement, the incorporation of digital technologies, such as social media and virtual reality, enhances these benefits even more (Dholakia & Durham, 2012). Through customized and immersive encounters, experiential marketing, for example, can enhance client happiness and help brands stand out in the hotel sector (Bilgihan, et al., 2016). To maintain a competitive edge and retain customers, EM must be implemented.

2.2 Experiential Marketing Strategies

EM builds enduring customer relationships by developing worthwhile customer perceptions, generating memories, and encouraging engagement and product and service trials (Datta & Veto, 2017). Accordingly, events involving sensory, emotional, and social information create more vivid images associated with the particular brand (Carlson et al., 2017). Both offline and online strategies can be implemented as EM strategies.

The EM approach is a holistic concept that consists of other marketing aspects like event marketing, viral marketing, guerilla marketing, buzz marketing with Instagram settings, etc. that give opportunities for differentiation and be a topic for customers (Klepek & Martin, 2014). Product showcases, immersive experiences, relatable content stunts, and brand activation with mini-events incorporating product sampling are strategies used to engage customers. It goes beyond traditional marketing strategies that incorporate new technological applications like artificial intelligence, augmented reality, and virtual reality to become key drivers in incorporating tracking EM with technology like wearables, Near Field Communication technology, Radio Frequency Identification technology, Quick Response codes, mobile event apps, facial recognition, handheld scanners, etc. that impact EM strategies in the dynamic environment and lead to a more personalized customer experience (Rust & Roland, 2020).

Digital and social media platforms significantly influence EM strategies, requiring a multisensory experience for customers. The strategy should consider sensory, feeling, cognitive, action, and relational dimensions for maximum results in experiential management. (Larocca et al., 2020). Despite the success of quantitative metrics, measuring the impact of marketing strategies on consumers is a major challenge because it has not been demonstrated that those metrics provide appropriate proxies

for evaluating EM campaign outcomes (Gräve, 2019). The main results, or outcomes, of an EM campaign, include outcomes of customer mindset, customer behavior, product market performance, and financial aspects (Katsikeas et al., 2016).

2.3 Organizational Changes For Adopting Experiential Marketing

Within this dynamic business environment, change is essential to the growth of an organization. Organizations need to continuously improve their strategies, operational processes, and structures (Andrews & Richard, 2008). According to Lewin's model, organizations need to pass three stages, including unfreezing, changing, and refreezing, to go through organizational change (Hussain et al., 2016) Linking EM with business strategy is a new viewpoint, and it was discovered that these two fields are interconnected across six dimensions of business strategy: customer orientation, distinctive company capabilities, barriers to imitation, internal marketing, employee empowerment, and visionary leadership (Gupta & Seema, 2012). Organizations face barriers in transitioning to personalized experiences, which consume significant financial resources. To address these constraints, many event organizers partner with other brands and sponsors, considering factors like data privacy and security (Urdea & Petrișor, 2021).

Considering all those factors, organizations need to make the following kinds of changes if they are to adopt EM strategies: Within the organizational structure and the system, Cross-functional teams have to collaborate in EM to achieve a common objective. To make sure that the marketing message is consistent and smooth across all touch points, it is critical to bring together individuals from various departments and backgrounds (Lettenmaier, 2018).

Further, it requires a customer-centric approach. This includes placing the customer's needs and desires at the forefront of all marketing strategies to further personalize the experience and foster emotional attachment (McLoughlin & Aaker, 2010). To be more flexible and responsive to customer needs, organizations must flatten their hierarchies. A complex hierarchical structure frequently impedes communication and slows down decision-making (Wells & Spinks, 2015). Other than that organizations need to change their resources and capabilities as well. Technology is frequently used in EM to give consumers fully immersive experiences. To effectively engage customers, firms must be willing to invest in technology and accept new and emerging technologies (Lettenmaier, 2018).

3. Methodology

Researchers adopted the interpretivism philosophy by assuming that reality is subjective, multiple, and socially constructed. Accordingly, the research approach is inductive, aiming to develop a theory of cultural influence. The researcher opted for a multiple case study as a research strategy, hoping to gain insights from industry professionals within the hotel industry regarding their use of EM strategies.

Aligning with Yin's recommendation to use multiple case studies to gain broader insights, an in-depth investigation was necessary to fulfil the research objectives (Yin, 2018). The methodological choice is a mono-method qualitative approach, utilizing in-depth interviews and document analysis.

Purposive sampling was used to select the case studies in the study. Accordingly, the researchers focused on four high-end hotels, including 4- and 5-star establishments, in the Central Province, resulting in a multiple case study containing four different scenarios to align with the purpose of the study.

In the data collection multiple data sources were used to generate an in-depth understanding of case studies (Eranda, 2021). Accordingly, secondary data was collected from magazines, reports, journal articles, literature, books, company documentaries, internet protocols, websites and existing case studies. To collect primary data, the researcher conducted in-depth semi-structured interviews and observations aimed at uncovering the respondents' experiences, knowledge, feelings, perspectives and issues related to experience marketing strategies. Data analysis was conducted employing the steps of coding, categorizing, synthesizing and theorizing using the NVIVO.

Qualitative research quality assurance involves reliability, transferability, and trustworthiness. Reliability is achieved through multiple data sources and data verification. Credibility is established through familiarity with selected hotels, primary and secondary data collection methods, purposive sampling, and a step-by-step procedure for data collection, analysis, and interpretation. This ensures the validity of the research.

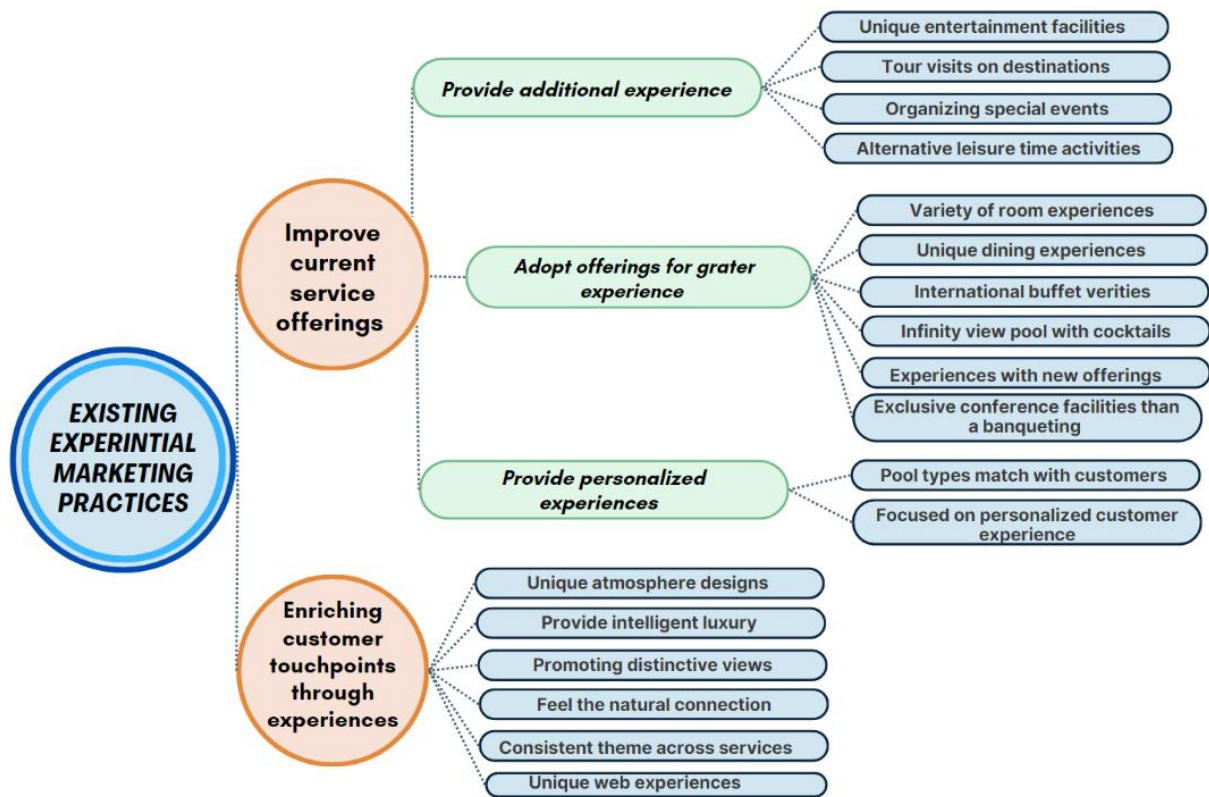
4. Findings

The findings are presented in this section based on the two objectives of the study. Accordingly, the findings relating to the first objective of identifying the existing EM strategies implemented by high-end hotels are presented below.

4.1 Existing EM Practices in High- End Hotels

As the results of analysis generated through coding and sorting the findings generated two themes as depicted in Figure 1 to uncover the existing EM practices in the selected hotels.

Figure 7 Thematic Map - The Existing Experiential Marketing Practices In Selected Hotels



The two themes generated as findings concerning the existing EM practices at high-end hotels are presented and interpreted below, which the first objective that address via research

4.1.1 Improve Current Service Offerings

Hotels focus on creating an amazing experience beyond simple accommodation, using EM to personalize services and incorporate alternative leisure activities. This approach enhances the overall experience and encourages interaction throughout the stay, resulting in high-end hotels continually refining and expanding their service offerings.

Following semi-structured interview transcript contended some of the unique experiences they have blended with a service offering of dining experiences (Refer Excerpt 1).

Excerpt 1:

"The hotel boasts a natural cave, offering a unique cave dining experience. Illuminated by wooden torches, a local villager plays the flute while guests dine, serving a seven-course menu at a rate of \$200 per person. This cave was also Jeffrey Bawa's dining experience with a table that he designed the hotel architecture for, providing a special and royal experience to guests, complete with a 'Perahara' and a dressed-up 'Nilame' suit to keep the unique culture in to experience."

This highlights the inclusion of unique experiences into core elements in service offerings such as dining. This not only covers the cooking but also the unique ambience, the way the food is presented, the background music, the attire of the staff and the variety of menu options. To create a unique and culturally rich experience, hotels deliberately enhance these basic characteristics. As hotels want to differentiate themselves by simply offering a meal, this strategy fits well with EM tactics. The hotel enhances the dining experience by attending to every little detail, including the setting, manner of service, music, and attire. This is an example of how hotels are progressively improving service offerings to provide a more upscale and culturally rich experience, especially in core areas such as dining. This approach is consistent with successful EM practices.

In excerpt 2, the respondent shared in interview, the unique dining experiences that they are offering to customers and how they have injected this experience into their core service offerings (refer Excerpt 2).

Excerpt 2:

“That is the only place we have. I mean, no other hotel doesn't. Have this type of fine dining experience. That was our railway carriage. It was originally functioning. We have brought it here, and we have not changed any main aspects of it. It's the original structure, the original seating style, and all. So it's a fine dining experience. So that is one of the unique features. The thing is, start the carriage with those sounds when customers dine in. It gives another level of experience, and the hotel has the highest railway carriage in Sri Lanka.”

The above respondent emphasized the hotel's unique approach to service delivery, transforming it into experiential marketing. They describe it as providing an authentic train carriage dining experience with real sounds and movements, enhancing the overall guest experience.

In addition to combining experiences with their main offerings, the hotels provide experiences through exclusive leisure activities, one-of-a-kind tour visits, special event management on behalf of the organizations, and distinctive entertainment facilities. As a result of their use of experience marketing, they also regularly receive client involvement for these items.

According to Excerpt 3 from a documentary video, their hotel offers a special extra experience that sets them apart from the competition. (Refer Excerpt 3)

Excerpt 03:

“Experience local attire and gather leaves in a basket at our 25-acre organic tea plantation. Learn to pluck specific leaves and practice to ensure they end up in your basket. Witness the factory's signature organic black and green teas and gain hands-on experience in the lush 25-acre plantation”.

Here, they perfectly celebrate a unique entertainment experience, an additional offering beyond their core services. Embracing Sri Lanka's tea culture, they offer visitors the opportunity to engage in the

entire tea-making process. This includes picking tea leaves dressed in traditional tea picker clothing, using a bucket to collect leaves and going through the operations of a small tea factory. Guests even get to taste the teas they have personally made. This represents a rare and special experience that goes beyond the usual hotel services. It demonstrates a commitment to offering guests something extraordinary, creating lasting memories during their stay.

Personalization plays a significant role in EM practices, under the theme of improving current service offerings for greater experiences. Hotels try to tailor experiences within their service offerings based on customer types.

4.1.2 Enriching Customer Touchpoints Through Experiences

The experience marketing campaign of a hotel relies on every interaction with clients, from information searches to check-outs. These interactions, including information searches and reservations, impact on overall mood and recurring theme of the customer experience. The use of EM can improve these touchpoints, ensuring a more positive and memorable experience for both current and prospective customers.

The field note from the respondent emphasizes how the hotel can provide exceptional experiences using these touchpoints. It demonstrates how the hotel constantly enthralls guests and makes each encounter unforgettable. This reflects the hotel's dedication to offering remarkable and unique experiences, underscoring the importance of strategically improving touchpoints in the customer journey and ultimately bolstering the effectiveness of their EM initiatives.

Excerpt 04:

“Upon entering from the reception to the main lobby, the architecture showcases the building's integration with the natural rock, preserving its original state. Inside the hotel, the rock is left untouched. Inside the rooms, some balconies are covered with trees and leaves, aligning strongly with Jeffrey Bawa's concept of harmonizing with the environment without causing harm. Following Bawa's idea, the entire hotel is covered by green leaves, creating a sense of a hidden place for guests, blending into the surrounding environment.”

According to Excerpt 04 the customers were able to sense the hotel's distinctive appearance and vibe as soon as they arrived, as the establishment was themed on natural culture. Draw attention to the fact that the natural rock is exactly as it is and that the first thing guests see when they enter the main lobby embodies the experience the hotel wants to emphasize and has already provided. It also says that natural leaves covering the balconies of the apartments provide a special sensation of being a part of the surroundings. It shows how the hotels merely pass on their executive marketing initiatives through even the customer touchpoints of the hotel.

The following excerpt 5 field note explains the theme-based experience that maintenance consists of across the service throughout all customer touchpoints to deliver the experience as EM practices.

Excerpt 05:

"The hotel's interior resembles a factory, with clam styles and accessories incorporating tea items. Employees' dress codes match tea farmers', and guests are welcomed with a tea tradition aligned with Tamil tea culture in Sri Lanka."

The hotel interprets its identity around the theme of Sri Lankan tea culture, maintaining a consistent tea experience across all customer touchpoints. Even small details, such as greetings by employees dressed as Tamil tea farmers even the smallest details, such as greetings, are orchestrated with employees appearing as Tamil tea farmers, welcoming guests akin to a kovil, align with the theme, creating a unique and immersive journey for customers.

Further, according to excerpt 6 from interview, the welcome drink was a flavored cup of tea.

Excerpt 06:

"After that, did you receive the welcome tea? Yes. So that is one of the uniqueness It's a specially brewed special recipe that we have made according to a special recipe, a welcome tea. So, everything is tea. We don't serve coffee in our rooms. Also, we give tea"

In particular, the welcome drink is a specially brewed tea, emphasizing the hotel's commitment to the tea theme. This comprehensive approach ensures that every touchpoint, from greetings to amenities, reflects the ambiance of a tea factory. The hotel's unique tea-centric strategy leverages customer touchpoints to create a memorable and cohesive brand experience, demonstrating the effectiveness of its EM initiatives.

The hotel's dedication to maintaining theme-based experiences throughout all touchpoints showcases the effectiveness of its EM initiatives in creating a memorable and cohesive brand experience.

Moving to another aspect, when discussing the enrichment of customer touchpoints through experiences, hotel customers focus on using touchpoints before consuming the hotel service. This means that they provide a unique experience to customers during the hotel search or booking stage. (Refer to excerpt 7)

Excerpt 07:

"Website improvements: in the process of enhancing website experiences, 5 new language options, implementation of a Chabot to assist with online direct bookings, etc."

It refers to the fact that the hotel has invested more in website development to deliver a unique online experience to customers via selecting language options, personal Chabot assistants to guide customers when referencing the hotel website smoothly, and more facilities for online booking and reservations.

It can be interpreted that the hotel is careful to address the customer's engagement point even before they consume their hotel services before visiting the property. They are trying to deliver the experience via their website by enriching customer's thought-provoking experiences. Also, with the Chabot option, they bring customers to the next level of personalization of their offerings, even before they get into the hotel premises.

On the other hand, excerpt 8 from the interview transcript highlights that

Excerpt 08:

“our website offers a unique and immersive 360-degree virtual tour, allowing potential guests to explore the hotel's opulent spaces from the comfort of their devices.”

As mentioned above, the hotel has gone beyond the focus of touchpoints in physical visits, taking another step in optimizing that experience for customers, allowing them to engage with a virtual 360-degree hotel tour that customers can experience before they visit the hotel physically. Here they have incorporated their experiences into their website with impressive web experience as an example of marketing initiatives.

Table 16 The Existing Experiential Marketing Practices In High-End Hotels

Theme	Meaning	Evidence
01 Improve current service offerings	To deliver experiential marketing practices hotels use service with adopting offerings additional experiences and personalization	<i>"The hotel boasts a natural cave, primarily priced for foreign customers, offering a unique cave dining experience"</i> <i>"No other hotel doesn't. Have this type of fine dining experience. That was our railway carriage. So it's a fine dining experience. The thing is, start the carriage with those sounds when customers dine in"</i> <i>"We will deck you out in local attire - saree for the ladies, sarong for the gentlemen - and provide you with a basket to collect your leaves. Then we will take you out to our organic tea fields and show you which leaves to pluck."</i>
02 Enriching customer touch points	Enhance blending consist experiences into customer touch points as experiential	<i>"Upon entering from the reception to the main lobby, the architecture showcases the building's integration with the natural rock, preserving its original state. Inside the hotel, the rock is left untouched."</i>

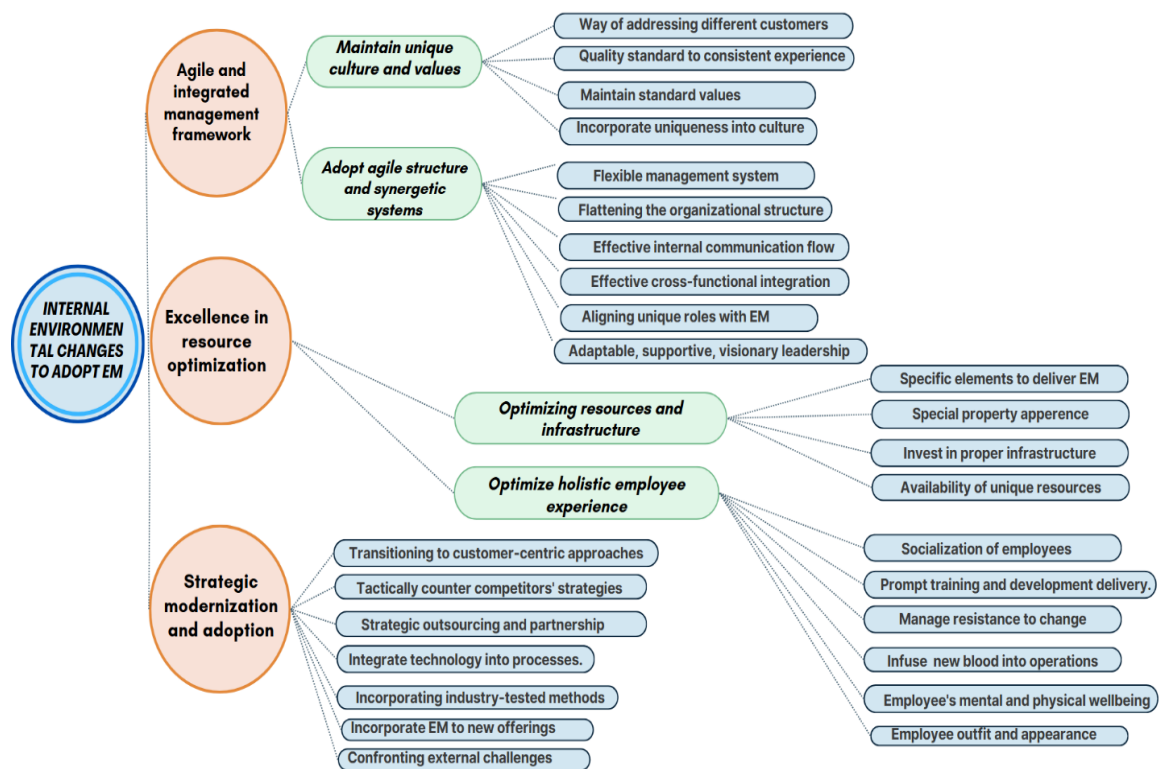
through	marketing	<i>“our website offers a unique and immersive 360-degree virtual</i>
experiences	initiatives	<i>tour, allowing potential guests to explore the hotel's opulent spaces</i>
		<i>from the comfort of their devices.”</i>

The findings relate to the second objective of the study which is examining the necessary changes and adaptations in the internal environment of high-end hotels that facilitate the successful implementation of EM strategies that are presented below.

4.1 The Internal Environmental Changes to Adopt EM

As the results of analysis generated through coding and sorting the findings generated three themes as follows to uncover the internal environmental changes to adopt EM. (Figure 2).

Figure 8 Thematic Map - The Internal Environmental Changes To Adopt EM



The three themes generated as findings concerning the existing EM practices at high-end hotels are presented and interpreted below, which is the second objective that address via research.

4.2.1 Excellence in Resource Optimization

To adopt EM practices, hotels make some changes and adaptations in their internal environment, reach a major consensus with the available resources, and effectively utilize them in an optimized way. Here, resources include both material resources and human resources optimization for excellence in the organization. Optimization of the existing company resources and hotel infrastructure, including unique proper appearances that they have and, focus on holistic employee experience optimization take place to deliver the experiences at an excellent level to exceed customer expectations.

Excerpt 09 Interview transcript.

“Our property, built on natural rock, embodies our commitment to providing a unique experience, integrating seamlessly with the environment and showcasing our chairman's vision.”

This statement underscores the importance of hoteliers maximizing their current assets. It highlights how a unique property design combined specifically with natural rock acts as a strategic choice. This not only enhances the aesthetic appeal but also aligns with the Chairman's vision of providing an unmatched experience. Essentially, it shows that investing in unique property features has a direct impact on EM results.

Similarly, **Excerpt 10** annual report showcases that

The ability to attract tourists depends on the infrastructure (manufactured capital), the ratings and certifications (intellectual capital), and recommendations by our business partners (social and relationship capital). We use our financial capital to purchase goods and services required to make their stay a pleasant experience.

Hotels adopt EM practices by adjusting their internal environment, optimizing resources, and focusing on human resources. This includes optimizing material and human resources, enhancing company infrastructure, and focusing on holistic employee experience. The goal is to deliver exceptional experience, exceed customer expectations, and enhance the overall experience. This approach ensures the organization's excellence in both material and human resources.

Moving to live resources, **Excerpt 11**,

“We send our employees through a specific socialization program, will tell you how to behave as a hotel citizen. That's where you learn how to dress, how to groom yourself, what to say, and what not to say. All of that will be discussed with whoever joins the organization. But. The thing they will do is that, through that, only we can deliver the service, a kind of common ID.”

Accordingly, the critical role of the socialization program in making employees effective contributors to the unique experience offered by the organization. The program serves as a guide on how to act as a "hotel citizen", instructing employees on various aspects such as dress, grooming, communication

norms, and act. The socialization process is crucial for developing a shared corporate identity and providing differentiated services. It involves employees being immersed in the culture, becoming ambassadors of the brand and embodying the values and practices that contribute to the EM strategy, ensuring a unique customer experience.

Along with **Excerpt 12** mentioned,

“Let’s say we recently allowed our staff to learn tea tasting, right? So we took them to an institute and we gave them proper training. And so now when the particular lady is absent, we have another set of staff to give that particular experience that we did where we advertised in-house if anyone likes to learn about the experience, which is we train. It is a win-win situation aligned with the superior experiences that we are providing. So that is our practice. We give cross-departmental training to anyone who needs it. So if we found that particular employee in some other skill. So definitely we allow them”.

It discussed the hotel’s commitment to staff development and training as a critical component of delivering exceptional experiences. Their proactive approach to skill building is illustrated by the example of tea-tasting training. By providing cross-functional training, they ensure a flexible workforce that can easily adapt to different roles. A win-win situation is created when learning opportunities are promoted internally and a culture of continuous development is fostered. Also, hotels should focus on the mental and physical well-being of employees, so they represent brands.

4.2.2 Strategic Modernization and Adoption

The hospitality industry must focus on strategic modernization and environmental adaptations in its internal environment to embrace EM practices. This includes transitioning to customer-centric approaches, outsourcing, and establishing partnerships to counter competitors. Technology integration is critical to improving efficiency and customer experience. Industry-tested methods add reliability to the conversion process.

Excerpt 13

“So basically everything is based on customers, right? Focusing on the fact that, apart from our tea experience and dining experience. Everything is based on customer-centric activities that we have planned”.

The statement emphasizes the importance of customer-centricity in hotels' EM practices. Aligning all aspects of the hotel's offerings with customer preferences and behaviors. This includes offering nature trails and other excursion activities and demonstrating a commitment to tailoring services based on customer interests. The core philosophy is to treat customers as the focal point of decision-making, ensuring their satisfaction is paramount. To yield tangible results, hotels must prioritize understanding

and meeting customer expectations, ensuring every planned activity and service resonates with their guests' preferences.

Excerpt 14

“In the global hospitality industry, catering to clients from varied regions, such as the UK, USA, Dubai, Maldives, and Malaysia, demands a nuanced understanding. Visitors accustomed to high standards from international hotel chains bring elevated expectations. Learning from the best practices of these industry giants, we continuously observe and analyze their operations. The goal is not only to stay informed about global trends but also to incorporate successful strategies into our operations, aligning with the ever-evolving demands of an international clientele”.

The hotel emphasizes the importance of adopting industry-tested methods and learning from successful practices in the global hospitality industry. It caters to guests from various regions and understands the high expectations of guests from big hotel names the hotel follows global trends and uses effective strategies from these big hotels in its services. The manager emphasizes that to impress customers, hotels must strategically obsess over industry trends and adapt to them to stay competitive. Strategic adaptation is crucial in an organization's internal environment, not imitating others.

Researchers have observed that strategic modernization and adoption in hotels involve focusing on the hotel's internal environment, enhancing EM practices to provide standard customer experiences through strategic outsourcing and partnerships.

Excerpt 15

“Collaborations with local artists, cultural experts, and event planners have been instrumental in curating authentic cultural events and performances within the hotel premises. Partnerships with renowned chefs and culinary experts contribute to the diverse and elevated dining experiences offered to our guests”.

This underlines the critical role of strategic outsourcing and partnerships in the internal environment of hotels, particularly with a focus on EM practices. The interviewee highlights how collaborations with local artists, cultural experts, event planners, celebrity chefs and culinary experts play a key role in shaping unique and authentic experiences for hotel guests. By establishing strategic partnerships, the hotel taps into the expertise of these professionals, ensuring a diverse range of cultural events, concerts, and high-end dining experiences. It refers the importance of the right partnerships in delivering exceptional and standard experiences to customers. On the other hand, outsourcing some services also makes for an exceptional standard experience on behalf of hotels without any areas lacking.

Excerpt 16

“Of course, we have outsourced parties, like the spa operation, which is a kind of partnership, but the spa operation and the shop operation are outsourced. To give the status level of experience in the spa, we have this collaboration”.

This statement emphasizes the outsourcing services like spa and shop operations in hotels improves the overall guest experience by partnering with specialized establishments. This strategic decision ensures high standards in areas like spa, contributing to a more comprehensive and refined guest experience. Incorporating outsourcing strategies into effective EM practices is beneficial.

Hotels are integrating technology to enhance their operations and provide a seamless customer experience, while they wait for new product developments to be infused with experience to maintain consistency over the long term. According to respondent 01 interview,

Excerpt 17

“Yeah, if you take new product development, the most recent development is a conference center, Now, if you go to the conference center, you will feel it because it has a 360-degree view.”

Accordingly, hotels' strategic focus is on integrating experiential elements into new product developments for sustainable consistency. Using a recently constructed conference center in the hotel as an example, the interviewer highlights its unique features, including a panoramic 360-degree view that enhances visitors' appreciation of the surrounding environment. This approach allows each addition, such as the conference center, to provide a unique and immersive experience beyond its functional purpose. By creating innovations with distinctive features, hotels aim not only to meet practical needs but also to create lasting memories for guests. Such experiential innovation ensures a long-term commitment.

4.2.3 Agile and integrated management framework

The significance of an agile and integrated management framework in hotels for successful EM practices. This includes a flexible system for swift adjustments, a flat organizational structure, effective internal communication, cross-functional integration, and leadership. Maintaining a unique culture and values is crucial for addressing diverse customers and setting quality standards for consistent experiences. This theme advocates for a transformative internal environment.

Excerpt 18

“So to adapt these EM practices and all, yes, now the biggest challenge would be if you take a very toll structure; it's communication that is challenging in a toll structure. Now what we are doing is flattening the structure so that easy communication will take place. Management systems. If you take

food safety seriously, it's a management system. Food safety management system. There is an environmental management system. Of course. Now I'm looking after the Environment Management System”.

The challenges of a highly organized communication structure in marketing practices and emphasizes the importance of flattening the structure to facilitate easy communication within the hotel. They advocate for flexible management systems, particularly in areas like food safety and environmental management, and emphasize the hotel's commitment to a structured and efficient approach, highlighting a shift towards a flat organizational structure for smoother communication and effective marketing.

Excerpt 19

“The front office acts as a central hub, communicating with housekeeping to understand guest needs and preferences. Standard operating procedures ensure each room meets the required standards, ensuring a smooth and satisfactory guest experience. This interaction between departments, particularly the front office and housekeeping, ensures a seamless and efficient service.”

The importance of collaboration and cross-functional integration in hotels adopting EM practices. It highlights the role of the front office and housekeeping departments in ensuring seamless communication and meeting customer expectations. The front office acts as a central hub, sharing essential guest information and standard operating procedures. These interactions are crucial for a smooth and satisfying guest experience, and any misstep in cross-functional integration can negatively impact the overall guest experience.

Excerpt 20

“We have, Eco Animators we have in the hotel, and Eco Park we have Eco Park in charge. We have a place called Eco Park, which isn't a big thing, but still, Eco Park has so many components”.

“Consider the staff at our mini tea factory, we have already recruited them from our main procedures. So they are the ones who do the production. And so they are only solely responsible for the factory production and handling the tea experience”.

Another major finding was that the hotel's introduced specific job roles align with unique experiences offered by hotels to the organizational structure. Having “Eco Animators” and “Eco Park in charge” shows a deliberate effort to combine roles that suit eco-friendly and nature-centric experiences to provide a variety of ecological experiences. Similarly, key procedures for a small tea factory highlight the strategic placement of knowledgeable personnel dedicated solely to tea production and the handling of the tea experience. Both hotels show a conscious effort to align staff structures with the specific

experiences they aim to deliver by arranging these unique job roles, ensuring expertise and quality in delivering these exceptional services to customers.

Another major aspect that should be presented is the role of culture when focusing on the internal environment adaptation of EM practices done by hotels.

Excerpt 21

“Mostly, it’s a culture that we have created inside the company; we should call it the “Lengathukama” of the company for customers you can treat like Singapore Airlines hostesses now”

The importance of company culture, known as "Lengathukama", is aligned with the experience they provide to customers. More simply, it suggests that the established hotel culture plays a critical role in shaping customer interactions while aiming for a level of service equivalent to prestigious hospitality standards. Also, the mention of a hotel that is synonymous with Sri Lankan tea culture highlights how unique cultural elements are woven into the experience they offer as discussed in earlier. The hotel's values and standards can also be incorporated here as a part of the culture that discloses maintaining their values throughout the EM initiatives to ensure consistency.

Excerpt 22

“The company prioritizes quality and has dedicated teams in various departments, including the kitchen and F&B operations, under the supervision of experienced professionals like the Executive Chef, Sous Chef, and Junior Sous Chef. The Executive Chef oversees all aspects, ensuring the highest standards are maintained for different client groups”.

Maintaining quality across hotel departments is crucial. Dedicated teams, led by experienced professionals like the Executive Chef, ensure high standards in areas such as kitchen and F&B operations. The Executive Chef plays a key role in overseeing services for diverse clients, reflecting the hotel's commitment to quality. This ensures consistent delivery of EM initiatives and a memorable customer experience.

Table 17 Internal Environmental Changes To Adopt EM

Theme	Meaning	Evidence
Theme 01 Excellence in resource optimization	In order to adopt experiential making practices, organizations have to optimize their existing resources,	<i>“The property is strategically built on natural rock, showcasing a harmonious integration with the environment. This architectural decision aligns with our chairman's vision to offer a one-of-a-kind experience to our guests.”</i> <i>“It begins with acknowledging the importance of an employee's mental and physical well-being. A healthy</i>

including human resources as well. *mindset ensures that when employees are serving food or drinks, their overall disposition positively impacts the customer's experience.*

Theme 02 Strategic modernization and adoption	To adopt experiential marketing initiatives, hotels need to focus on strategic management and adaptation in their internal environment, reacting to the external environment.	<i>“We have nature trails and all other excursion activities. Also. Everything is based on customer-centric activities that we have planned”.</i> <i>“Visitors accustomed to high standards from international hotel chains. Learning from the best practices of these industry giants, we continuously observe and analyze their operations”</i>
Theme 03 Agile and integrated management framework	The hotel should have a flexible and integrated organizational structure and systems and unique cultural values and standards.	<i>“The biggest challenge would be if you take a very toll structure; it's communication that is challenging in a toll structure. Now what we are doing is flattening the structure so that easy communication will take place”</i> <i>“Mostly, it's a culture that we have created inside the company; we should call it the “Lengathukama””</i>

5. Discussion

High-end hotels utilize personalized service offerings and consistent experiential initiatives to enhance customer touchpoints, creating memorable experiences and emotional connections to boost awareness.

The study emphasizes the significance of incorporating experiences into service offerings, personalizing them, and engaging customers through these experiences, as well as enriching customer touchpoints. Overall, high-end hotels aim to create memorable experiences and foster emotional connections to enhance customer experiences.

Every interaction a consumer has with a hotel is vital to improving the experience marketing campaign. Every touchpoint that occurs before, during, and following the use of hotel services has a big impact on the clients.

EM is mostly used in the service industry, rejecting traditional marketing with "features and benefits" and approaching marketing through experience creation (Maghnati, et al., 2012). The service industry is shifting towards experience generation, with hotels incorporating unique experiences into their offerings and integrating them into new product developments. This shift aligns with marketing strategies aligned with EM practices, focusing not only on additional benefits and facilities but also on generating experience.

EM can be defined as the process of distributing and promoting a product by allowing customers to observe and participate in various events related to the concept of the product (Sehani & Hettiarachchy, 2022). EM is primarily delivered through customer engagement with events related to offerings, but it can extend beyond events to include unique entertainment facilities, alternative leisure activities, and tour visits. It's essential to blend unique experiences into main offerings and ensure every customer touchpoint is utilized to enhance the experience through EM practices.

On the other hand, it ensures the idea of Klepek & Martin (2014) that the EM approach is a holistic concept that consists of other marketing aspects that give opportunities for differentiation and be a topic for customers.

With EM strategies, hotels try to become more unique than their competitors in the market. According to Datta EM builds enduring customer relationships by developing worthwhile customer perceptions, generating memories, and encouraging engagement and product and service trials (Datta & Veto, 2017).

The study emphasizes the importance of customer engagement in EM and suggests that hoteliers should be cautious when targeting their target market. They should identify the nature of the target market that aligns with the uniqueness of their hotel, as this directly affects customer engagement. Excerpts emphasize that unique experience is tailored to specific customers, resulting in intelligent luxury. Therefore, when implementing EM strategies, hotels should have a clear understanding of their target customer segment to ensure customer engagement throughout their journey.

It has been identified that technology plays a major role in EM practices at high- end hotels, as well as the literature highlighted. It goes beyond traditional marketing strategies that incorporate new technological applications like artificial intelligence, augmented reality, and virtual reality to become key drivers in incorporating tracking EM with technology like wearables, NCF technology, RFID technology, QR codes mobile event apps, facial recognition, handheld scanners, etc (Rust & Roland, 2020).

Some hotels offer personalized experiences through Web Experiences, but some respondents argue against allowing more technology implementation in their hotels to align with sustainability concepts. This could negatively affect the hotel's theme and brand image. Additionally, implementing technological applications in hotel experiences may confuse customers due to limited urbanization and

unique customer culture. The research question should focus on existing EM practices by high-end hotels to better understand their strategies and address potential confusion and ineffectiveness.

Focusing on the hotel's interior environment adopted in EM efforts: excellence in resource optimization, strategic innovation, and adoption of agile and integrated management frameworks, respectively. Moving to more elaboration, the first thing will notice is that these top hotels use some unusual strategies.

The fact is that to go with the EM initiatives, hotels need to shift from the traditional management practices that were implemented to internal organization management. Also, some of the strategies had to change with the dynamic world. Talking about the literature emphasizes that Organizations need to continuously improve their strategies, operational processes, and structures. (Andrews & Richard, 2008). The study confirms that traditional marketing approaches are outdated and should be replaced with strategic innovation and adaptation to environmental changes. It emphasizes the importance of EM, a new concept in marketing, which seeks uniqueness and novelty. Generational changes also influence service, product, and experience expectations, which must align with technologies, even when planning travel (Giberson & Juleigh, 2017). In the contemporary landscape, technology is not the only driver of new experiences. Current criteria indicate that a variety of factors shape unique encounters. Moving forward, research should uncover proven methods from the industry, emphasize strategic outsourcing and partnerships, and highlight new product developments.

This holistic approach recognizes that innovation arises not only from technological advances but also from a nuanced interplay of tested methods, collaborations, and product evolution. The research findings were in line with Gupta's opinion that - Linking EM with business strategy is a new viewpoint, and it was discovered that these two fields are interconnected across six dimensions of business strategy: customer orientation, distinctive company capabilities, and barriers to imitation, internal marketing, employee empowerment, and visionary leadership. (Gupta & Seema, 2012) Shifting from a service-centric to a customer-centric approach is critical to the internal adoption of EM strategies.

Hotels have unique resources such as distinctive property appearance that play a significant role. It is essential to consider these unique resources when delivering exceptional experiences. Focusing on customer needs and leveraging unique assets ensures a more effective and tailored approach to EM in the hospitality industry. Expanding on Gupta's concept, ensuring that employee empowerment is essential to optimizing the holistic employee experience is critical to implementing customer-centric practices. These findings highlight the adoption of unique employee socialization practices, distinguishing individual hotels within chains. Maintaining this uniqueness is critical to maintaining a distinctive identity, allowing hotels to preserve their uniqueness. This approach ensures that employees are well-equipped to deliver exceptional customer experiences, contributing to the overall success and

individuality of each hotel. During the observation, the researcher found that although employee socialization is taken seriously in the hotel culture, even some hotels maintain small villages to optimize employee socialization, and they tend to hire people from the same village where the hotel is located. To keep the weirdness alive with experience.

In addition, the overall strategy driven by leadership must be supportive, flexible, and visionary to streamline operations. Another critical aspect that is often overlooked in literature is the inclusion of fresh talent in operations that involve youth with new ideas. Bringing in new blood has a positive impact not only on creativity but also on organizational structures, improving the effective execution of EM initiatives. This dynamic approach ensures adaptability and innovation, contributing to the overall success of the organization.

A complex hierarchical structure frequently impedes communication and slows down decision-making. (Wells & Spinks, 2015). It is ensured that the hotels are closer to leveling and highlighting the organizational structure and they are trained to handle situations without any supervision. Beyond that, they provide cross-sectional training to employees to strengthen operational and multi-tasking skills. Moreover, the findings speak to flexible management systems, cross-functional integration, and effective internal communication flow.

Another key finding, not much discussed in the literature, is that hotels have unique job roles, with unique experiences they share with customers who have greater expertise with the offering. Culture plays a major role in the internal environment of an organization. However, the literature often fails to adequately highlight the relationship between culture and EM initiatives. The relationship between hotel culture and customer experience necessitates a thorough understanding, highlighting the need for initiatives to align with cultural values and standards, and the importance of integrating culture into marketing strategies.

6. Conclusion

This research covers the adoption of internal organizational changes required for aligning with experiential marketing strategies, following an exploration of the existing experiential marketing approaches employed by high-end hotels. The study focuses on the high-high-end hotel sector in Sri Lanka, aiming to address how these changes can enhance the implementation of experiential marketing within the local hospitality context.

The research examines experiential marketing practices in high-end hotels, revealing two key themes that guide the strategic enhancement of offerings for unique and immersive experiences. High-end hotels focus on curating extraordinary guest experiences beyond accommodation, leveraging existing services for experiential marketing. Personalization and incorporating alternative leisure activities enhance the guest experience. By continually refining and expanding service offerings, they effectively

implement experiential marketing strategies. The hotel's touchpoints, from information search to check-out, are crucial for engaging guests and shaping their perception of the brand, aiming to create memorable experiences throughout the customer journey.

The study reveals three key themes for hotels to adapt to experiential marketing practices: Excellence in Resource Optimization, Strategic Modernization and Adoption, and Agile and Integrated Management Framework. Hotels must optimize both material and human resources to deliver exceptional experiences, focusing on employee experience optimization and adapting to change. Strategic modernization and adoption of customer-centric approaches, strategic partnerships, and technology integration are crucial for successful experiential marketing. Aligning with customer needs, embracing technological advancements, and leveraging strategic partnerships are essential. An agile and integrated management framework is essential, maintaining a flat organizational structure, effective communication, and cross-functional integration. Leadership plays a pivotal role in driving these changes while upholding a unique culture and values is crucial for setting quality standards and addressing diverse customers.

Limitations of the study include difficulty in generalizing findings due to the small sample size and qualitative nature of the multiple case study (4 high-end hotels), though focusing on hotels within the same geographical area offers some level of generalizability. Additionally, there was potential for subjectivity and bias, which was addressed by documenting data transparently and using multiple sources to enhance validity and reliability.

Future research is critical to examine the role of technology in aligning with hotel culture and standards in the field of EM. Understanding how technology helps to shape these experiences is essential to keeping up with industry trends. Furthermore, there is a need to investigate how high-end hotels can effectively target and engage specific customer segments that align with their unique offerings. These explorations will shed light on the strategies high-end hotels use to resonate with the right audiences, ensure their unique offerings align seamlessly with customer preferences and expectations, and ultimately contribute to the success of their EM initiatives.

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Entrepreneurial Impact on Brand Development in The Agricultural Export Sector: A Conceptual Framework

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Abstract

It is important for agricultural export companies that want to be more competitive on a global scale to understand the factors that lead to the growth of export brands, even though this is not a common practice among these companies. However, the perspectives of entrepreneurs in companies that have yet to embrace brand development remain underexplored. This study fills in that gap by using institutional rationality theory to help create a framework for thinking about the points of view of entrepreneurial leaders in agricultural export companies. This approach offers valuable insights into the factors influencing brand development in the export sector from an organization's perspective. Furthermore, the research highlights the importance of branding in competitive markets by emphasizing how strong brand equity and entrepreneurial actions drive export brand development and long-term sustainability. It talks about how outside factors, such as cultural norms and laws, affect strategies and suggests a model for further research to improve how international branding is done. So, the results should add to the larger conversation about brand development by giving useful advice on how to make agricultural export businesses more competitive on a global scale.

Keywords: Agriculture exporters, Entrepreneurship, Export brand development, Institutional Rationality Theory.

1. Introduction

At present, the phenomenon of globalization has significantly transformed the branding landscape, establishing it as a vital strategy for businesses seeking competitive advantage. Globalization's impact creates new possibilities and boundless prospects, facilitating access to emerging markets for commercial ventures (Veinbergs and Skadina, 2021). Economic integration, globalization, and technological improvement enhance the growth and development of numerous countries by bolstering their export capabilities. Exporting has emerged as a crucial strategy for businesses aiming to reach global markets because it requires less resources and is a first step towards internationalization (Chung and Ho, 2024). Export expansion is essential for stimulating economic growth and overall advancement. Export competitiveness is regarded as a crucial element of national prosperity, facilitating corporate success in the global marketplace. As enterprises capitalize on these prospects, the necessity for strategic brand development becomes progressively vital for differentiation in the global marketplace. Moreover, nations that emphasize export competitiveness and branding tactics might establish a permanent edge in global trade.

Furthermore, researchers have explained that firms can use branding to differentiate their products from those of their competitors, adding value to the organization by developing a brand image and improving brand loyalty (Viardot, 2017; Chung et al., 2019; Cleave et al., 2016). Ranasinghe et al. (2017) highlight that numerous governments have recognized the significance of branding by integrating it into their economic plans, especially in agriculture, which serves as a crucial foundation of the global economy and a principal source of food, employment, and revenue for poor countries. FAO (2023) says that between 2000 and 2021, the value of agricultural products increased by 84%, reaching USD 3.7 trillion. At the same time, the value of food exports rose by 4.4 times, from USD 380 billion to USD 1.66 trillion, with big increases seen in all major commodity groups. Many agricultural companies have relied on branding as a critical instrument to establish a competitive advantage and capture value in the global market. The systematic implementation of branding in the agricultural export sector can markedly improve product visibility and foster sustainable growth. The figures illustrate the rising demand for agricultural products on a global scale.

The export sector universally acknowledges the importance of marketing strategy as a critical element. Amid increasing global economic competition, exporters of various sizes are implementing branding strategies to differentiate themselves from competitors, resulting in a wider client base and improved investments. The growth and development of diverse countries is aided by economic integration, globalization, and technical improvement, all of which help to improve their ability to export goods. Export development is essential for encouraging economic growth and supporting holistic development. In order to improve economic development and sustainability in the competitive global market, it is essential to have strong export competitiveness. Exports have a major effect on the

economy since they affect job possibilities, general economic growth, and the stability of international financial transactions (Bashiri et al., 2019). Due to the growth of the home market, a lot of businesses are looking for opportunities in overseas markets. Exporters that want to be successful in different markets worldwide need to be able to create and modify branding strategies. Exporters can improve their market positioning and achieve long-term success by using unique branding techniques. As competition becomes more fierce, businesses need to constantly improve their branding strategy in order to keep up with the changing preferences of their customers and the dynamics of the market.

A substantial number of export companies are currently adopting marketing strategies that emphasize the promotion of their exported products through effective branding. Hasaballah et al. (2019) underscore that the success of exports is contingent upon a variety of factors, such as the scale of the firm, management practices, firm strategy, and the broader environmental context. Much of the existing literature is devoted to the examination of export performance, as exporting has become a prominent topic in scholarly research (Hasaballah et al., 2019; Pinho, 2016). In the academic literature, there is a lack of consensus regarding the factors that influence firm-level decision-making processes, particularly in the development of agricultural export brands. The understanding of this research area from an institutional rationality perspective remains limited, with theoretical explanations still underdeveloped. To fill this gap, the current study's goal is to look into the institutional rationality perspective and offer theoretical insights into how entrepreneurs affect the development of agricultural export brands. Accordingly, the main objective of this paper is to propose a conceptual model answering three research questions:

- (1) What institutional forces drive entrepreneurial initiatives and influence marketing-related outcomes for global brand development in the agricultural export sector?
- (2) How do companies manage these institutional pressures when developing their own Agriculture export brand?
- (3) How do various external forces shape entrepreneurial strategies and influence institutional pressures in developing export brands in the agricultural export sector?

The structure of this paper is as follows. It begins with a review of the literature on previous studies regarding the impact of entrepreneurship and brand-building in the agricultural export sector. This section highlights key findings and gaps in existing research to provide a solid foundation for the study. Furthermore, it gives a conceptual model based on the theory of institutional rationality. This model helps us understand how institutional forces affect entrepreneurial decision-making. Finally, the paper examines implications, limitations, and future research directions, emphasizing the need for further exploration in this understudied area.

2. Literature Survey

Previous studies have shown that brands can significantly benefit companies by shaping consumers' behavior. These advantages include enhanced customer loyalty, increased product endorsements, improved cross-selling opportunities, greater effectiveness of marketing messages, and consumers' readiness to pay higher prices for branded products (Park and Chang, 2022; Aaker, 1996). Moreover, research emphasizes the importance of viewing a brand as a strategic resource for a brand-oriented company, particularly for small and medium-sized enterprises (SMEs) (Mijan, 2015). Most of the literature on brands and brand management focusses on a consumer perspective; however, recently, researchers have started to consider brand management from an organizational point of view (Iyer et al., 2018). Ferreira and Coelho (2017) emphasized the significance of developing and leveraging effective branding capabilities to achieve long-term success in the marketplace. According to Iyer et al. (2018), organizations need to adopt the right mindset and implement appropriate processes to successfully create and sustain brands in the long run. This perspective is particularly relevant for agricultural products, which play a significant role in the economies of developing countries and are often the primary source of income for small-scale farmers. Henn et al. (2020) highlight the notable significance of agricultural and commodity exports, particularly due to the substantial concentration of the workforce in the agricultural sector within many developing countries. Furthermore, in modern "buyer-driven" global markets, having an effective agricultural brand may provide a competitive edge for farmers in poor countries. Docherty (2012) proposed that the most effective method for fighting poverty is to offer value-added products and develop strong agricultural brands. According to Ogasavara et al. (2016), agricultural cooperatives have been slow to build brands instead of seeking government protection and financial support. Researchers have also found that branding plays a crucial role in strengthening the value chain and enhancing the market competitiveness of smallholders. Effectively managing brands is crucial for achieving favorable business performance. It is vital to recognize that brands possess enduring value over time (Vidic and Vadjnal, 2013).

Several scholars have highlighted the critical roles that both leadership and entrepreneurship play in brand development. According to Herath and De Silva (2011), marketing strategies based on the company's capabilities, innovations, and leaders' vision, risk-taking, and dedication are all closely linked to strategic decisions. Burmann et al. (2009) conducted a study in the field of leadership-based brand building. Their research specifically concentrated on the service sector, and they found that leaders within an organization play a key role in driving brand-oriented employee behavior. The strategic decisions made by businesses are closely linked to the entrepreneurial behavior and activity, as well as the attitude, experience, and expertise in marketing of the owner-manager (Bocconcelli et al., 2018). Furthermore, the ability of leaders to foster a strong organizational culture aligned with brand values significantly enhances brand development. This highlights the intertwined nature of

leadership and branding, emphasizing the importance of strategic alignment between entrepreneurial initiatives and marketing objectives.

Baumgarth (2010) suggests that leadership plays a crucial role in internal branding, either as an influential factor or as a central force in driving and executing the internal branding process. Entrepreneurial orientation has been extensively explored in both strategies and entrepreneurship. The notion of Entrepreneurial orientation captures the organizational-level procedures, approaches, and decision-making styles of entrepreneurial firms. It is commonly employed as a measurement tool that encompasses three key dimensions: innovativeness, proactiveness, and risk-taking (Ferreira and Coelho, 2017). However, the existing body of literature exploring organizational-level factors that influence internal branding is limited (Punjaisri and Wilson, 2011; Iyer et al., 2018). This gap underscores the need for further research to explore how entrepreneurial orientation can be leveraged to enhance internal branding practices within organizations.

However, this study is not sufficient to understand how entrepreneurial impact contributes to the development of agricultural export brands. The existing literature primarily focuses on firm capabilities and resource capabilities in international branding, with few studies delving into the factors that influence the organizational decision-making process that leads to agricultural brand development in the export industry. Therefore, this study attempts to bridge this gap by exploring how these factors impact the organizational decision-making process for agriculture brand development, adopting institutional rationality theory as a theoretical lens. Furthermore, this research aims to provide a deeper understanding of how external market dynamics and internal organizational factors interact to shape branding strategies. Additionally, it seeks to contribute to the growing discourse on agricultural branding by offering a conceptual framework to guide future empirical investigations.

2.1 Theoretical Underpinnings

The variables of the theoretical framework are identified based on the Theory of Institutional Rationality. The theory of rationality, which states that every action and decision should be rational, was chosen as the most appropriate theoretical lens to examine the phenomena (Simon, 2012). This choice is primarily based on the fact that developing a firm's own agriculture brand is a decision taken by the organization, and there should be a rationale behind that decision. Therefore, it is observed that the theory of rationality can be utilized to understand the conditions behind the decision to develop the firm's own export brand. Furthermore, this theoretical approach allows for the exploration of how institutional pressures, such as market demands and regulatory frameworks, influence organizational decisions. By adopting this perspective, the study aims to provide a structured understanding of the decision-making processes related to export brand development in the agricultural sector.

When exploring the theory of rationality, it can be broadly categorized into two distinct types: embodied rationality and disembodied rationality. Additionally, it can be further categorized into several subtypes, such as economic, bureaucratic, technocratic, institutional, contextual, and situational (Townley, 2008). After considering these different theories, it becomes apparent that the Theory of Institutional Rationality is well-suited to explain the logic and reasoning behind the actions and behaviors observed within institutional settings (Townley, 2008). Redmond (2016) noted that institutional rationality exhibits dual modes, referred to as pre-scripted rationality and planning rationality. Verstegen (2015) further expanded on this concept by proposing two-stage rationality, which provides a framework for understanding organizational decision-making processes. This theoretical approach allows for a nuanced examination of how institutional norms and pressures shape strategic decisions in organizations. When considering available literature on the theory of rationality, the researcher observed that the Theory of Institutional Rationality is the most suitable to explore the phenomena. Furthermore, it provides a robust foundation for analyzing the interplay between institutional constraints and organizational agency in the context of decision-making.

2.1.1 Improve Current Service Offerings

According to Weber (1948), rationalization is the process of transforming an uncontrollable and unintelligible world into one that can be understood and predicted. According to Redmond (2016), human rationality is influenced by evolutionary forces, as the human mind is a product of such forces. Therefore, the evolution of rationality takes place within a social context. Consequently, rationality is shaped to depend on and collaborate with individuals who possess similar rationality. This interdependence allows for the alignment of collective behavior toward shared goals. Institutional rationality mainly explains cognitive processes that involve a complex and multi-tiered system. It requires two types of thinking: rule-following behaviors and purpose-seeking behaviors. Redmond (2004) further explains that institutions represent a range of behavioral guides, including habits, norms, customs, traditions, and laws. These behavioral guides play a crucial role in shaping individual actions within an organizational framework. According to institutional theorists, practices are primarily rooted in cultural systems that embody a range of activities, social conflicts, and moral dilemmas individuals are compelled to engage with in their everyday lives (Lounsbury, 2007). These embedded practices further influence decision-making processes, thereby affecting organizational behaviors and outcomes.

Institutional rationality acknowledges that organizations consist of different societal spheres, each with its unique reasoning or logic. In this context, organizations and management are expected to act rationally by providing justifications for their decisions, adopted policies, and exercised power. Rationality in organizational behavior entails operating in a rational manner when dealing with individuals and other stakeholders, ensuring alignment with established norms and principles (Wilson, 1971; Redmond, 2004). Weber (1948) noted that one aspect of this process is the growing

differentiation between various spheres. Consequently, these spheres have formed a calculable external environment with modern state administrative structures, formalized legal systems, and advancements in modern science. Rationalization separates society into distinct domains of activity or value, referred to as value spheres. Weber identified multiple value spheres in society, including religious, economic, political, cultural, aesthetic, and intellectual spheres (Weber, 1948). As each sphere becomes more specialized, its internal logic increasingly influences the actions of individuals and organizations within that sphere. However, as these spheres gain more autonomy, conflicts arise between them since each sphere has its own reasoning.

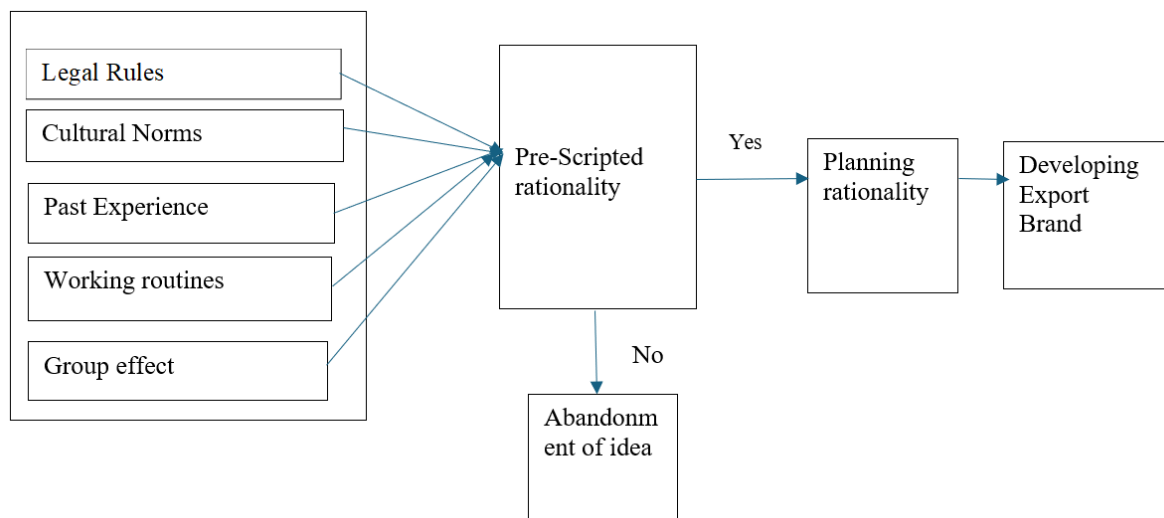
Redmond (2003) further categorized institutional rationality into two modes: 'pre-scripted' rationality and 'planning' rationality. Further, he emphasized that planning rationality is involved in situations that threaten the survival and betterment of individuals and groups. This mode of rationality exhibits purpose-seeking behavior. When previously formed solutions are unfavorable or when new opportunities are evident or when new threats appear, active cognition results in new solutions. If such planned responses are successful, then such responses will be institutionalized and become pre-scripted. This cycle of adaptation and institutionalization is essential in maintaining organizational relevance and effectiveness in a constantly changing environment. As per Redmond (2003), institutional change is driven by this mode of rationality.

According to Williamson (2000), dual-mode rationality influences the decision-making process, leadership style, and organizational structures, ultimately affecting the decision-making process. In this dual-mode institutional model, decision-making and responsibilities are allocated across management levels. Williamson (2000) explained that upper-level management may display purpose-seeking behaviors, while lower-level management is institutionally required to adhere to routine, rule-following behavior. Verstegen (2011) also stated that outside factors, such as legal or cultural rules, shape coordination within an organization. Some controls can be determined internally, some can be slightly influenced, and some are formed externally to the organization. This duality creates a dynamic environment where different layers of decision-making coexist and are influenced by distinct rationalities. As a result, understanding the interaction between these modes provides critical insights into how organizations balance innovation with stability. After considering these various theories, it becomes apparent that the Theory of Institutional Rationality is well-suited for explaining the logic and reasoning behind the actions and behaviors observed within institutional settings (Townley, 2008).

This conceptual framework is based on institutional rationality. Remember, the collection of data in the actual study could lead to changes in this framework based on the findings. The objective of this framework is to be adaptable, allowing for the consideration of new insights that may emerge during the research process. The objective of the present investigation is to comprehend the institutional and technical factors that influence the decision to establish an independent brand within the agricultural

sector. The decision to adopt or reject the development of an export brand is an outcome of the organization's decision-making process. Therefore, the theory of rationality can explain the conditions that impact such decisions. Within the realm of the theory of rationality, there are various theories to choose from. After careful consideration, the theory of two-stage rationality, which falls under the Theory of Institutional Rationality, has been selected as the theoretical framework for analyzing the phenomenon. This theory allows for a nuanced understanding of the decision-making process by emphasizing the interplay of both planned and pre-scripted rational behaviors. We will collect data for the subsequent empirical study from key personnel within agricultural export companies who are directly involved in brand development. This will include company owners, senior and middle-level managers, and managers from the International Marketing Department. We will select these participants based on their direct involvement and experience in brand development activities within their respective organizations. This targeted approach will make sure that the data collected gives us useful and insightful information about the institutional and technical factors that affect decisions about brand development in the agricultural export sector.

Figure 9 Conceptual Indicator Model



The theoretical framework suggests that new ideas are conceptualized as arising from the surrounding environment, manifesting in a variety of forms, including innovative practices, business models, and systems. A variety of factors, such as legal regulations, cultural norms, prior experiences, organizational working procedures, and group effects, influence these concepts. The process becomes intricate and dynamic as these factors influence the initial conception of an idea. The novel concept under consideration in this investigation is the establishment of an individual export brand. Companies enter the initial stage of rationality, which is referred to as pre-scripted rationality, upon the emergence of the idea. This stage requires entrepreneurs to make a decision regarding the new concept. During this stage, entrepreneurs identify choice alternatives and establish their preferences based on various

conditions that influence their decision-making process. If entrepreneurs do not see a rationale in further considering the new idea based on the conditions, the idea will be abandoned at this stage. Nevertheless, entrepreneurs will advance to the subsequent stage, which is referred to as planning rationality, if they perceive a compelling reason to investigate the new concept further. Entrepreneurs participate in discussions regarding the implementation of their new concept within the organization and make decisions regarding the growth of their own export brand during this phase. This will lead to the organization's adoption of the novel concept. The critical role of rational decision-making in the transformation of an initial concept into a fully realized strategy is underscored by this process.

The purpose of this research is to explore why companies in the agriculture export industry in Sri Lanka are lacking in interest in developing their own export brand. While many researchers primarily concentrate on firm capabilities and resource capabilities in the context of international branding, there is limited research that explores the factors influencing the decision to develop one's own export brand. In this situation, it is very important for researchers to really understand how institutions see the growth of their own export brand, because these views have a direct effect on strategic decisions and long-term brand development goals. Furthermore, this research aims to bridge the understanding gap by examining the impact of entrepreneurial actions on brand development in the agricultural export sector.

3. Institutional Rationality and Decision-Making

After considering various theories, it becomes apparent that the Theory of Institutional Rationality is well-suited for explaining the logic and reasoning behind the actions and behaviors observed in institutional settings (Townley, 2008). According to Verstegen (2011), the organization is partly independent and partly formed within it. Therefore, management controls the development of the organization. Verstegen (2015) characterizes pre-scripted rationality as the stage that defines the parameters of the decision problem for the subsequent phase. Researchers further explained that, to effectively navigate this decision phase, it is necessary to understand the concept of bounded rational choices. Understanding the elements that influence the boundaries of the decision room is critical. Verstegen (2011) contends that external influences, such as legal or cultural regulations, influence cooperation within an organization. Although the organization may establish certain controls internally, it has the ability to influence others to a certain extent, and certain controls are wholly external to the organization. The constraints may arise from the legal, social, and cultural background of the decision-maker, as well as the organization's historical evolution and current economic circumstances (Verstegen, 2015). According to the researcher, cultural norms and values have a major influence in determining decision-making. Furthermore, past experience and financial conditions are also critical factors for the decision room. These factors create a framework within which decision-makers are likely to operate, shaping their decision-making process. Without knowing the boundaries

or limitations of the decision problem, it is difficult to determine whether the decision made in the second phase is rational or not (Verstegen, 2015). If the decision maker does not see a rationale for further considering the new idea, they will abandon it at this stage without moving it to the second phase. Therefore, the initial phase plays a crucial role in ascertaining the rationality of the subsequent decision.

According to Redmond (2008), prescriptive rationality explains behavior controlled by internalized habits and norms when the application of a previously planned solution is workable. Both individual and social mechanisms often influence this behavior. Further, Redmond (2016) explained that prescription rationality, which is based on previously internalized habits, norms, customs, laws, or past actions, recovers solutions generated during the prior exercise of planning rationality. Thus, the application of pre-scripted rationality often leads to predictable outcomes based on prior decisions and experiences.

Planning rationality is based on a more active cognition, which involves attention and problem solving. Active cognition leads to reformulated or new solutions when previously developed solutions or new opportunities show up, or when new threats show up. This is called planning rationality (Redmond, 2004). The researcher further asserts that pre-scripted rationality-directed behavior necessitates relatively less cognitive effort, whereas planning rationality necessitates a relatively high cognitive effort. Planning rationality is considered a powerful tool for institutional change (Redmond, 2003). Moreover, it plays a crucial role in shaping decisions under conditions that significantly impact the survival and well-being of individuals and groups. Furthermore, Redmond (2004) explained that planning rationality mainly focuses on cognitive capabilities in situations of significance for the survival and well-being of the individual and the group. If such situations recur, the planned response, if successful, becomes institutionalized, influencing future behavior and decision-making.

According to Townley (2008), the institutional logic framework holds significance in the context of corporate rebranding because organizations may find themselves simultaneously adhering to values and beliefs associated with multiple competing institutional forms. When considering the decision to develop your export brand, it is one that entrepreneurs can make at their discretion. The purpose of this study is to understand the factors that influence the decision to develop export brands. The proposed study will employ institutional rationality, given that this decision is an organizational one. Hence, based on the above arguments and evidence, it can be assumed that the entrepreneur's impact on the decision-making process is crucial, as their strategic vision and understanding of market dynamics directly influence the brand development process.

Consequently, based on the above arguments and evidence assume that,

Proposition 1: Legal rules significantly influence pre-scripted rationality in organizational decision-making.

Proposition 2: Cultural norms significantly influence pre-scripted rationality in organizational decision-making.

Proposition 3: Past experiences significantly influence pre-scripted rationality in organizational decision-making.

Proposition 4: Working routines and group effect significantly influence pre-scripted rationality in organizational decision-making.

Proposition 5: Group effect significantly influence pre-scripted rationality in organizational decision-making.

Proposition 6: Organizations with well-defined pre-scripted rationality transition to planning rationality when encountering novel opportunities.

Proposition 7: Active cognitive efforts in planning rationality are positively associated with the decision to develop export brands.

The relationships and propositions developed in the above section are shown in the following theoretical model Figure 1.

4. Implications for Research

This study critically examines the correlation between entrepreneurship and brand development in the agricultural export industry. The research endeavors to address the extant gaps in literature and make a contribution to the current body of knowledge by addressing this topic. It emphasizes the interaction between branding strategies and entrepreneurship in the agricultural export sector, a topic that is frequently neglected in academic research. Additionally, the results of this investigation may offer enterprises who are endeavoring to negotiate the intricacies of brand development in the agricultural export market valuable insights. The proposed study aims to increase the understanding of worldwide branding by examining the external influences that affect the development of export brands. This is important from a theoretical standpoint. Internal capabilities, such as firm resources and competencies, are the focus of much of the work now in publication, but this study highlights equally important external factors. The application of the Theory of Institutional Rationality (Redmond, 2004) as a theoretical lens enables the development of a novel viewpoint. Organizations' responses to external factors, including regulations, cultural norms, and market dynamics, are elucidated by institutional rationality, particularly its dual-mode concept. The study provides a more comprehensive comprehension of the obstacles agricultural exporters encounter when attempting to establish competitive brands by implementing this framework. Furthermore, it investigates the interaction between these external factors and organizational decision-making processes, thereby broadening the comprehension of brand development in the export sector.

The concept of institutional rationality has not been widely explored in international branding research, especially in the context of dual-mode rationality. This gap highlights an opportunity to advance knowledge by examining how institutional forces interact with entrepreneurial decision-making. The proposed study aims to address this gap, thereby contributing to the theoretical understanding of international branding and offering insights for future research in related areas. By incorporating this perspective, the study provides a unique lens through which the complexities of branding decisions in the global marketplace can be better understood.

Practically, this study has significant implications for entrepreneurs and practitioners in the agricultural export industry. It aims to provide insights that can guide decision-making processes when developing export brands, especially in competitive global markets. By focusing on Sri Lanka's agricultural exports, the research provides a localized perspective that can inform strategies for adding value to products and enhancing brand positioning. The outcomes will be particularly advantageous for small and medium enterprises (SMEs) seeking to enter international markets despite facing resource limitations. The report offers practical guidance for tackling common challenges faced by these businesses in brand development. Additionally, the study addresses a lack of research on this topic in the Sri Lankan context. By focusing on the agricultural exporting industry, the research aims to bridge this empirical gap and provide a foundation for more localized studies. Sri Lanka, as a developing nation, has the potential to strengthen its agricultural export performance by adopting strategies that emphasize brand development and value addition. The study's insights could also support policymakers and industry stakeholders in long-term planning and decision-making. Furthermore, the findings may encourage greater collaboration between the public and private sectors to foster sustainable growth in the agricultural export industry.

Moreover, the results may stimulate future scholarly investigations in this domain. Examining ideas like dual-mode rationality and worldwide branding about agricultural exports encourages further investigation of these themes. Future research would improve our comprehension of branding strategies across various markets and provide a more thorough perspective on the problems and opportunities in global branding. It could also add to the theoretical framework of institutional rationality by including dynamics that are unique to each industry. This would make the research more useful in both academic and real-world settings. The findings could also pave the way for cross-disciplinary studies that integrate entrepreneurship, international marketing, and institutional theory.

5. Limitations and Future Research

This study acknowledges certain limitations. First, it employs the institutional rationality theory to analyze the entrepreneurial impact on factors associated with developing agriculture export brands. While this theoretical perspective offers valuable insights, it does not capture the full complexity of factors influencing export brand development. Future research could explore additional factors

influencing the development of agricultural export brands and apply alternative theoretical perspectives, such as the Resource-Based Theory and Resource Dependence Theory, to broaden the scope of understanding. Second, further studies could examine variables like firm size and the influence of business partners on export brand development, which might reveal critical dynamics not captured in this study. Investigating how factors such as the degree of organizational learning influence the development of export brands may provide significant insights into the internal mechanisms that contribute to brand success. Furthermore, examining the impact of government regulations, market dynamics, and cultural factors may yield a more thorough framework for comprehending export brand creation. Third, future researchers can study the development of a company's own export brands in other industries to determine whether similar conditions contribute to the lack of interest in establishing such brands. For instance, a comparison can be made with industries such as the Apparel export industry and the coconut export industry, and the authors are currently in the process of empirically validating it within the framework of emerging economies. Such extensions would further contribute to the theoretical and practical understanding of international branding and export market strategies, paving the way for more effective and holistic approaches.

6. Conclusion

The concept of brand orientation has received significant academic focus in recent decades. Research increasingly emphasizes the importance of branding as a fundamental component of a company's marketing strategy, with a robust brand serving to distinguish it in competitive markets. Keller and Brexendor (2019) assert that cultivating a strong brand with substantial equity offers organizations various strategic benefits by facilitating more effective decision-making aimed at long-term sustainability. This paper introduces a conceptual framework that aims to clarify the export brand development process and scrutinize the impact of entrepreneurship on brand development. This study posits that entrepreneurial influence is crucial in determining decisions regarding export brand development and analyses the factors that impact these decisions. This study's model is based on the theoretical principles of institutional rationality theory. This research looks at several outside factors, including laws, cultural norms, past events, established work habits, and the way people interact with each other that affect how new export brand development strategies are adopted. Furthermore, it analyses the pivotal impact of entrepreneurial influence on the formulation of these strategic decisions. This study employs a theoretical model grounded in institutional rationality theory to enhance the understanding of export brand growth by illustrating the continuous interaction between external circumstances and entrepreneurial actions. The suggested paradigm provides a robust basis for future empirical study to confirm and enhance its applicability. This study emphasizes the strategic importance of promoting innovation to address obstacles in export branding by conceptualizing entrepreneurial adaptability in response to external constraints. Further research on this concept is

necessary to assess its efficacy across diverse markets and industries. This will enhance its theoretical depth and increase its utility for worldwide branding initiatives.

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The Impact of Digital Marketing, Sales Promotion, And E-Word Of Mouth On Customer Purchase Intention In Sri Lankan Handicrafts Industry

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Abstract

This study examines about the impact of digital marketing, sales promotion, and e-word of mouth on customer purchase intention in the Sri Lankan handicrafts industry. The study aims to measure how effective digital marketing strategies are on customer purchases in the Sri Lankan handicrafts industry. The study adhered to the quantitative method, Data was collected through a survey of 152 local and international consumers and analyzed by SPSS using different statistical methods such as reliability analysis, correlation analysis, and regression analysis. The findings of the study reveal digital marketing. Sales promotion and E-WOM have a significant impact on customer purchase intention as the strongest influence indicated by the E-WOM, the second is digital marketing emphasizing the importance of online reviews, recommendations, and digital engagements in the handicrafts sector. The study contributes to the literature by identifying how these modern marketing strategies work in niche industries and provides valuable insights for handicraft artisans and businessmen to optimize their business and boost customer engagement.

Keywords: *Customer purchase intention, Digital Marketing, E-WOM (electronic word of mouth), Globalization, Handicrafts industry, Marketing strategies, Sales promotion.*

1. Introduction

Due to increasing globalization and the increasing demand for home accessories, the global handicrafts industry has been expanding over the past years. Also, this has caused the industry competitiveness to grow (Teo et al., 2020) Globalization which can be defined as interconnectedness and interdependency has opened up business opportunities for most businesses and industries, Sri Lankan handicrafts industry is also such kind of industry that has been given the opportunity to face to the global markets and their competition (Koswatte, 2020). Studies show that Globalization has directly affected the global handicrafts market as well, different global studies done by the United States Agency of International Development for global handicrafts have found that the global handicrafts industry kept evolving as it remained at US\$ 75 billion in 1996, and it increased to approximately US\$984 billion by 2023 (Koswatte, 2020).

The studies performed on the Sri Lankan handicrafts industry have been identified as not using proper marketing techniques to sell the products by artisans in the Sri Lankan handicrafts industry. (Kalubowila & Rajapakse, 2021). According to (Kalubowila & Rajapakse, 2021) there is an improvement in using digital media like Facebook, and Instagram to promote Sri Lankan handicrafts yet some of the artisans still use their close contacts and crafts shops near cultural heritages which are not enough to cater to the global demand for the handicrafts. To successfully cater to the demand for the global markets and face the global competition, it has been identified the right utilization of marketing strategies is crucial in the era where most of the customers prefer online buying and selling (Jurnal & Vol., 2022). Even though there are various marketing strategies, with the existing trend of online buying and selling, it has been chosen three marketing strategies digital marketing, sales promotion, and e-word of mouth will be ideal to cater to the global demand in today's digital era for the Sri Lankan Handicrafts Industry (Jurnal & Vol., 2022).

1.1 Research Question(s)

- What is the impact of digital marketing on customer purchase intention in the handicrafts industry of Sri Lanka?
- What is the impact of sale promotion on customer purchase intention in the handicraft industry?
- What is the impact of e-word of mouth on customer purchase intention in the handicrafts industry?.

1.2 Research Objective(s)

- To identify the impact of digital marketing on customer purchase intention in the handicrafts industry.
- To identify the impact of sales promotion on customer purchase intention in the handicrafts industry.
- To identify the impact of E-WOM on customer purchase intention in the handicrafts industry.

1.3 Research Aim

To investigate the influence of digital marketing, sales promotion, and electronic word-of-mouth (E-WOM) on customer purchase intention within the handicrafts industry

2. Literature Review

According to *The Race to the Top – The Story of Globalization* book published by Swedish journalist Thomas Larsson has been defined globalization as the process that creates a world shrinkage or else the distances getting shorter and things moving closer (Larsson, 2001). It has shown how much easier it is for people on one side of the globe to communicate with people on the other, for their mutual advantage. The concept itself essentially talks about the movement of goods, capital, technology, and people beyond the borders of the countries as a result of the integration happen to the domestic economies with international economies through international trade and investment rules. (Majeed, 2018)

Globalization has been able to leverage the global business landscape for various industries with international trade and the advancement of technologies (Larsson, 2001). This created or opened up new business opportunities for various industries worldwide. Even though it seems globalization has created a positive effect by creating new business opportunities it has also affected the industries by creating huge competition for domestic businesses. Moreover, this has been a major reason for changing consumer's taste for products as well, Researchers depict that this has created a negative effect on the traditional industries, for example, the handicrafts sector since the consumer now seeking more fusion crafts that are blended with both traditional and modernized tastes to products (Koswatta, 2020).

Studies show that Globalization has directly affected the global handicrafts market as well, different global studies done by the United States Agency of International Development for

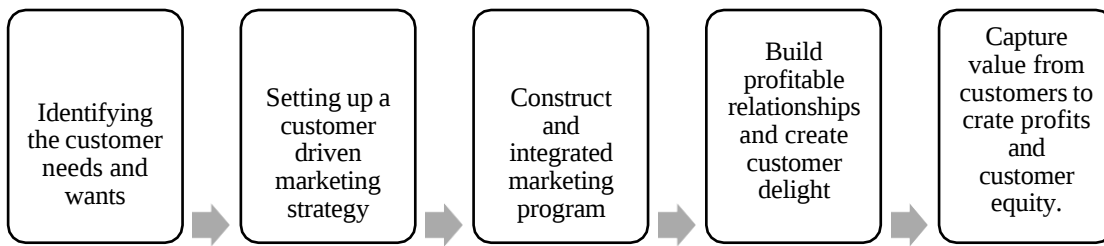
Global Handicrafts have found that the global handicrafts industry kept evolving as it remained at US\$ 75 billion in 1996, and it increased to approximately US\$984 billion by 2023 (Koswatta, 2020).

2.1 Marketing strategies

Although the majority think that marketing is only involved with selling and advertising as it can be seen various products have been marketed using TV commercials, sales calls, and e-mail pitches, Marketing is somewhat different from selling and advertising or can be said marketing is a broader concept and selling and advertising is only the tip of the iceberg of marketing. Marketing can be broadly defined as the social and managerial process used to obtain what organizations and individuals need and want through creating and exchanging values with others (Kotler & Armstrong, 2014).

As per the principles of marketing the whole marketing concept can be identified as a five-step process.

Figure 10 Simple Marketing Model



Source: Kotler & Armstrong. (2014).

The above chart is a simple model of marketing that shows how marketing is involved in business by identifying the needs of customers until it creates value for the customers. The first 4 steps are all about understanding the consumer, creating values, and creating solid customer relationships. (Kotler & Armstrong, 2014).

With relation to the proposed it should be evaluated how marketing strategies create an impact on the handicrafts industry in Sri Lanka. As per the previous paragraph, studies have depicted that the Sri Lankan handicrafts sector faces challenges when facing the competitiveness arising from the global handicrafts industry due to globalization. According to (Koswatte, 2020) it has been mentioned that to survive in the global handicrafts sector, as an industry Sri Lankan Handicrafts sector should find effective ways to promote the handicrafts to the global. Also, in the (Kalubowila & Rajapakse, 2021), has shown that Sri Lankan handicraft artisans lack digital marketing knowledge and still rely on close contacts to sell the handicrafts to customers or relying on shops near Sri Lankan famous cultural heritages. Studies show a few uses digital marketing techniques to sell their products in today's era and most people prefer to use digital technologies, e-commerce platforms to buy and sell products. Also, the Sri Lankan artisans don't know about the current consumer trends or the correct demand that should be supplied to the market.

According to marketing, some key strategies can used to market a product and they are market segmentation which happens to be the step where the organization tries to divide the market into different customer segments by evaluating their preferences, targeting which involves selecting the key customers from the market segments and finally differentiation and position where it involves supplying the demanded product and creating a good impression on consumers mind (Kotler & Armstrong, 2014). So according to the previous paragraph studies performed in the Sri Lankan handicrafts sector show a lack of understanding the customers, selecting the customers, and also, they are lacking in selling and promoting their products to the global markets which are crucial when it comes to the promotions of the handicrafts products.

From the marketing perspective, it has been chosen three promotion strategies such as, digital marketing, sales promotion, and E-WOM to evaluate their impact on the customer purchase intention in the Sri Lanka handicrafts industry. The three strategies are effective in understanding the consumer,

getting informed about the market trends which helps to select the right consumers, and finally creating good brand awareness and exposure for the local and global markets.

2.2 Digital Marketing

Digital marketing can be defined as a new field of marketing that involves making an impact on consumers using different online channels such as social media, mobile apps, blogs, emails, and search engine optimization (SEO) (García et al., 2019). The whole process aimed at closer communication with the customer using different types of advertising. (García et al., 2019).

In the (Jurnal & Vol, 2022), it has been analyzed whether there is a positive impact on digital marketing and customer purchase intentions, and it has been found out there is a positive impact on using digital marketing towards customer purchase intentions. It drives people to buy products more, also the study done by Ryan and Jones (2009), depicts that online trading has a huge growth and also it has created a variety of choices for digital marketing.

Moreover, various studies performed in the digital marketing sector have proved that there is a positive impact between digital marketing and brand awareness, digital marketing and brand building, etc., For example, a study has evaluated the “effectiveness of digital marketing in the challenging age: An empirical study” with focusing on the effectiveness of digital marketing by evaluating various forms of digital marketing on organizations sales. Also, the study conducted on “Raising brand awareness through Internet Marketing Tools critically analyzed digital marketing tools such as organizations’ websites, internet advertising, social media, and search engine optimizations to evaluate their impact on brand awareness. All the studies have shown that there is a positive impact of digital marketing on customer purchase intentions, brand awareness, brand building, etc.

When it comes to the Sri Lankan handicrafts industry in information development flow article (Koswatte, 2020) article has highlighted the need for digital strategies for the Sri Lankan handicrafts industry to promote the products to global markets. Even though it has been mentioned the requirements of digital strategies, there is no research has been done to evaluate the impact of digital marketing on the Sri Lankan handicrafts industry. Therefore, it has been examined the studies performed under the same subject manner but in different countries' handicrafts sectors to get a good insight into what digital marketing strategies should be ideal for handicrafts. After analyzing (Guha et al., 2021) it has been chosen social media networks have as a digital marketing strategy that would be ideal for the Sri Lankan context as it already examined in the Indian context..

2.3 Sales Promotion

Sales promotion is a crucial component that can be found in the promotional mix along with advertising, personal selling, public relations, and direct marketing. Sale promotions involve creating extra value for the products and services offered by a particular organization or business to persuade

consumers to purchase them. Moreover, activities involved in sales promotions are planned for a shorter period.

According to the Institute of Sales and Promotions, it has been identified as “the practice of offering additional values for a brand or the products to achieve the defined marketing objectives. According to the (Aykaç & Yilmaz, 2020), those activities have been identified using three different categories and they are, monetary incentives for example, cash discount coupons, savings cards, etc., chance to win a prize for example contests, sweepstakes lotteries, etc., and finally product promotions for example sampling, free in the mail, etc.

When comes to the implementation of sales promotion activities companies should remember to implement the planned sales promotion activities well since have a high effect on consumers' demand, their purchase intentions, and consequently on sales.

According to Aykaç & Yilmaz (2020), sales promotions can increase store visitation, increase product purchases, and change consumer behaviors and intentions. The purpose of the sale promotion activities is the same as the promotional element as it informs, persuades, and reminds the customers about the product.

In the marketing chapter it has been identified there is a lack in understanding the customers and selecting the customers and also, they are lacking in selling and promoting their products to the global markets which are crucial when it comes to the promotions of the handicraft's products. Therefore, as a solution sales promotions could be used since they can increase consumer purchases by influencing consumer intentions. Not only that according to (De Pelsmacker et al. 2010) sales promotion activities can attract potential customers as well.

2.4 Electronic Word of Mouth (E-WOM)

According to studies performed in various industries on the E-WOM on customer purchase intention, it has been identified that there is a positive relationship between the two variables. As mentioned the proposed study is also going to research the impact of E-WOM such as (online reviews, and recommendations) on customer purchase intention, as the theory itself argues changing the subjective norms and perceived behavioral control can influence the behaviors of the individuals towards the increment of customer purchase intention. (Jurnal & Vol, 2022).

2.5 Customer Purchase Intention

Customer purchase intentions can be described as being ready to engage in a behavior Fishbein & Ajzen (2010) or else it can further understand which product or service a consumer is inclined to buy. Overall, with relation to the above definition it can be further understood the customer purchase intentions as the consumer readiness to buy a particular product or a service. When it comes to consumer purchase intentions, the term itself has been recognized using many different names. Some

of them are, “likelihood of purchases, willingness to purchase, intention to buy, etc. According to Wee et it can be said that to understand why consumers purchase particular r products or services can only be understood by trying to understand the consumer purchase intentions. Also, studies show that consumer purchase intentions are related to consumer behaviors, perceptions, and attitudes as well. Hence it proves that choosing the theory of planned behavior is ideal for identifying the customer purchase intentions and how they are influenced by the independent variable factors. (Aykaç & Yilmaz, 2020).

According to the mentioned studies it can be said that consumer purchase intentions are directly related to the consumer purchase and can be influenced by the above-mentioned marketing strategies which are digital marketing, sales promotion, and E-WOM as mentioned in the above paragraph when it comes to the Sri Lankan handicrafts industry it will be very important to evaluate the customers purchase intentions within the handicrafts industry to promote them more.

Moreover, customer purchase intentions are backed by the theory of planned behavior since the theory of planned behavior provides a sound framework to identify the behaviors of individuals based on their attitudes, subjective norms, and perceived behavioral control. This theory has been used to identify the relationship between each independent and dependent variable of the proposed study. (Ajzen, 1991)..

2.6 Handicrafts Industry In Sri Lanka And Global

Before moving on to the handicrafts industry in Sri Lanka it should have an understanding of the global status of the handicrafts industry. As the studies show with the effects of globalization the global handicrafts industry has evolved creating huge competition in developing countries' handicrafts industries. Studies conducted by the United States Agency of International Development for global handicrafts have identified there is a priority on low-end (low prices) markets are expanding and those markets were captured mainly by China and India through their mass production. Their mass production can produce lower-cost products and also, they create more western designs. Numerous studies done by (Koswatte, 2020) have identified that the global handicrafts industry kept evolving as it remained US\$ 75 billion in 1996 and increased to approximately US\$984 billion by 2023.

When it comes to the Sri Lankan handicrafts industry has a thousand-year history back from the current years as per (Sri Lanka China Business Council,2018). However, the industry itself has a thousand-year back history it remains a cottage industry as per studies. The main reasons for it to remain as it involves using traditional techniques or old outdated techniques to create handicrafts and also uses unrefined raw materials to produce them. These techniques and the use of raw materials have conserved the purity and the classical abilities of the handicraft industry and its products since artisans still value those things. (Teo et al., 2020)

Wooden masks, rush goods, lacquer works, cutworks, brassware, handlooms textiles, batik, reed weaving, and woodcarvings are the primary good types produced in the Sri Lankan handicrafts sector. Ceramics are considered the oldest handicraft in Sri Lanka (Growlanka, 2018). Sri Lankans widely use handicrafts made out of kitchen utensils, pots and pans, terracotta figurines, and sculpted ceramic vases (Lanka, 2018) (Teo et al., 2020). The pottery is done by using clay and pottery wheel to mend the clay into pots by hand. Then using a traditional brick kiln the pot is oven-heated to make pottery (Srilankaheritages.net, 2011) (Teo et al., 2020). New developments in the pottery industry are glazing and pattern-drying wet clay (News.lk, 2014) (Teo et al., 2020).

Items that are made by batik artisans are unique designs and have various colors (Lanka, 2018) (Teo et al., 2020). Hydrochloric acid will keep the hue of the colors of the fabric after the bubbles are removed. The sun will make the colors of the batik lighter when evaporated. The number of times the batik is applied can be understood by the number of colors. Batik was originally a village business and later it was taken to labs in the Sri Lankan central region and southwest coastline areas (Fiber2fashion, 2015) (Teo et al., 2020).

Moreover, handloom is also a famous handicraft in Sri Lanka. Handloom was initially produced in a smaller industry by using country ladies as the workers. The handlooms' spun cotton and dynamic colorful patterns captured the locals' taste and also foreigners' attention towards the handloom, because of that now both batiks and handlooms are produced in a more larger scales industries rather than only relying on small, scaled businesses to cater to the demand of global markets.

2.7 Literature Gap

From globalization to the Sri Lankan handicraft industry, it has been discussed about all the specific subjective areas taken into account when performing this research concerning the various studies carried out on each term mentioned. For each independent and dependent variable, there can be found various studies to show the relationship between those variables concerning different industries in different countries. Some of the studies were performed in the same industry, which is handicrafts.

Even though researchers have done to other geographical contexts it was hard to find any research done to evaluate the impact of marketing strategies (digital marketing, sales promotion, E-WOM) on customer purchase intentions in the Sri Lankan handicrafts industry. There were studies on promoting handicrafts to the global markets, assess the competitiveness in the Sri Lankan handicrafts industry, and also developing information flow for the handicrafts industry in Sri Lanka. Hence, it can be said that the proposed area was not covered properly by any existing study and therefore there is an existing literature gap on evaluating the Impact of the impact of digital marketing, sales promotion, E-WOM on customer purchase intentions in Sri Lankan handicrafts industry.

3. Methodology

This research was conducted using a deductive approach and the quantitative method for data collection. Data was collected through a structured survey questionnaire administered to a sample of 152 handicraft customers (both local and foreign) from the Colombo, Negombo, and Galle areas. A convenience sampling method was employed to select participants, ensuring accessibility and feasibility in reaching respondents within the specified regions.

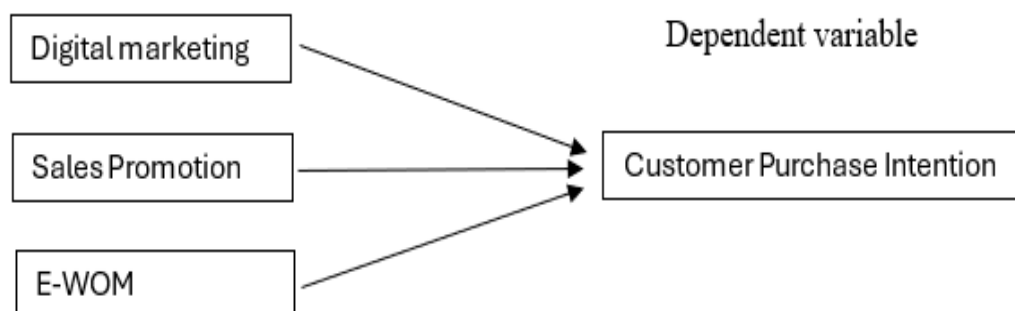
The questionnaire consisted of a demographic segment and four questions per variable for each independent and dependent variable. All questions were developed using a Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree."

The collected data was analyzed using SPSS software, employing descriptive analysis, reliability analysis, and multiple regression analysis to draw meaningful insights and conclusions.

3.1 Conceptual Framework

Figure 11 Conceptual Framework

Independent variables



3.2 Hypothesis

H1: There is a significant impact of digital marketing on customer purchase intention in the handicraft industry of Sri Lanka.

H2: There is a significant impact of sales promotion on customer purchase intention in the handicraft industry of Sri Lanka.

H3: There is a significant impact of E-WOM on customer purchase intention in the handicraft industry of Sri Lanka.

3.3 Operationalization

Table 18 Operationalization Table

Variable	Measure	Source	Scale
Digital Marketing	• Discovery	(Sivasankaran, S.	Likert scale
	• Quality	2013)/ De	
	• Comparison	(Pelsmacker et	
	• Interaction	al. 2018)	
Sales promotion	• Preference	(Aykaç and Yilmaz,	Likert scale
	• Savings	2020)	
	• Choice		
	• Research		
E-WOM	• Accuracy	(Hanandeh et	Likert scale
	• Helpfulness	al., 2019)	
	• Confidence		
	• Reassurance		
Customer purchase intention	• Influence	Author developed	Likert scale
	• Attraction		
	• Trust		
	• Confidence		

4. Data Analysis

Data analysis was performed to transform the data into meaningful and usable insights from the gathered data from respondents. The demographic segment of the questionnaire was constructed using four areas. They are gender, age, buyer type, and income levels to ensure the ideal balance of the handicraft's buyer samples. And to showcase how it affects the purchase in the Sri Lankan handicrafts industry. SPSS software has been used to derive meaningful insights into how each independent variable contributes to the purchase intention of customers in the Sri Lankan handicraft industry.

4.1 Descriptive Analysis

According to the descriptive analysis, the demographic profile of respondents provides valuable context for understanding the impact of digital marketing, sales promotion, and e-word of mouth (E-WOM) on customer purchase intention in the Sri Lankan handicrafts industry. Among the 152 respondents, 89 (58.6%) were females, and 63 (41.4%) were males, indicating that women represent a significant portion of the customer base. This highlights the importance of tailoring digital marketing and promotional strategies to appeal to female customers, who may exhibit distinct preferences in handicraft purchasing behavior.

In terms of age distribution, the majority of respondents were aged 18–24 years (38.8%), followed by those aged 25–34 years (29.6%), while the least represented group was 55 years and above (11.8%).

This suggests that younger customers form the primary target audience for handicraft businesses, making it essential for digital marketing and E-WOM strategies to resonate with a tech-savvy, youthful demographic.

Regarding residency, 112 respondents (73.7%) were residents, while 40 (26.3%) were non-residents. This finding emphasizes that local customers are the primary market for Sri Lankan handicrafts, but non-residents, likely including tourists, represent a substantial secondary market. Therefore, sales promotions and E-WOM campaigns should be designed to address both local and international customer preferences.

Lastly, income distribution shows that respondents were fairly evenly split among income levels, with 49 earning below LKR 50,000, 55 earning between LKR 50,000–100,000, and 48 earning above LKR 100,000. This diversity suggests that marketing and sales promotion strategies should accommodate customers across varying income groups, ensuring affordability and perceived value to drive purchase intention effectively.

By connecting the demographic insights to the research objectives, this analysis underscores how different customer segments can influence and respond to digital marketing, sales promotions, and E-WOM in the Sri Lankan handicrafts industry.

4.2 Reliability Analysis

The overall reliability of the conceptual framework was measured using reliability analysis. Cronbach's value came as 0.900 representing a high level of internal consistency between the variables. And also, the reliability analysis of each variable is also at an acceptable level.

Table 19 Reliability Analysis

The Variable	Cronbach's Alpha	Reliability	Conclusion
Digital Marketing	0.811	$0.811 > 0.7$	Reliable
Sales Promotion	0.840	$0.840 > 0.7$	Reliable
E-WOM	0.799	$0.799 > 0.7$	Reliable
Customer Purchase Intention	0.831	$0.831 > 0.7$	Reliable

4.3 Correlation Analysis

Correlation Analysis was performed to identify the relationship between independent and dependent variables. According to the correlation analysis below, conclusions have been made. Since digital marketing has a r value of 0.742, it can be said that digital marketing has a very strong positive correlation with customer purchase intention. Since sales promotion has a r value of 0.680, it can be said that sales promotions have a strong positive correlation with customer purchase intention. Since E-WOM has a r value of 0.780, it can be said that E-WOM has a very strong positive correlation with customer purchase intention.

Therefore, it can be said that with 95% confidence, there is a significant relationship between digital marketing, sales promotion, E-WOM, and customer purchase intention.

Table 20 Correlation Analysis

Independent variable	Pearson correlation value (r)	P value	Significance of the relationship	Type of the relationship
Digital marketing	0.742	0.000	Significant	Very strong positive
Sales promotion	0.680	0.000	Significant	Strong positive
E-WOM	0.780	0.000	Significant	Very strong positive

4.4 Regression Analysis

Model summary generated from using the SPSS software is there to identify changes in dependent variables as how much of a change occurred to it due to the independent variable. For this study, the R-squared shows 0.704 which is 70.4% it can be concluded that the model is better, and these independent variables are strong predictors of consumer purchase in the Sri Lankan handicrafts industry.

Table 21 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.839a	.704	.698	.34086

The analysis of variance or else the ANOVA table is there to analyze the significance of the model.

Table 22 ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.934	3	13.645	117.439	.000b
	Residual	17.196	148	.116		
	Total	58.130	151			

According to the ANOVA table, the p-value is 0.000 which is less than 0.05 which is the Alpha value, therefore the H0 is rejected. In summary, it can be said that this model is significant with a better R-squared and adjusted R-squared value.

4.5 Hypothesis testing

Hypothesis testing is where the identification happening on a predetermined hypothesis of the research has been achieved or not. To test this, it is again considering the 'p' value approach where if the $p < \text{Alpha}$, H0 gets rejected, and if the $p > \text{Alpha}$, H0 gets accepted. Apart from that the unstandardized coefficient (B) is there to determine the expected change to the dependent variable in this case customer purchase intention by increasing an independent variable by one unit while the standardized coefficient (Beta) depicts the importance of each variable when determining the outcome. The following is the regression coefficient table derived from the regression analysis.

Table 23 Coefficient Table

Variable	Unstandardized coefficient	Standardized coefficient (Beta)	P value	Hypothesis status
Digital marketing	0.358	0.337	0.000	H0 rejected, H1 accepted
Sales promotion	0.196	0.205	0.001	H0 rejected, H1 accepted

E-WOM	0.440	0.404	0.000	H0 rejected,
				H1 accepted

4.5.1 Hypothesis 1

H0 - There is no significant impact of digital marketing on customer purchase intention in the handicraft industry of Sri Lanka.

H1 – There is a significant impact of digital marketing on customer purchase intention in the handicraft industry of Sri Lanka.

According to the table, the unstandardized coefficient for digital marketing indicates 0.358, meaning the dependent variable which is customer purchase intention will increase by 0.358 when digital marketing increases by one unit. The standardized coefficient (Beta) for digital marketing is 0.337 which is an indication of the positive influence on the dependent variable (customer purchase intention).

Finally, since the $P < \text{Alpha}$ value with H0 is rejected, and with 95% confidence it can be said that there is a significant impact of digital marketing on customer purchase intention in the handicrafts industry of Sri Lanka.

4.5.2. Hypothesis 2

H0 - There is no significant impact of sales promotion on customer purchase intention in the handicraft industry of Sri Lanka.

H2 – There is a significant impact of sales promotion on customer purchase intention in the handicraft industry of Sri Lanka.

According to the table, the unstandardized coefficient for sales promotion indicates 0.196, meaning the dependent variable which is customer purchase intention will increase by 0.196 when Sales promotion increases by one unit. The standardized coefficient (Beta) for the Sales promotion is 0.205 which is an indication of the positive influence on the dependent variable (customer purchase intention). Finally, since the $P < \text{Alpha}$ value with H0 is rejected, and with 95% confidence it can be said that there is a significant impact of sales promotion on customer purchase intention in the handicrafts industry of Sri Lanka.

4.5.3. Hypothesis 3

H0 – There is no significant impact of e-word of mouth on customer purchase intention in the handicrafts industry of Sri Lanka.

H3 – There is a significant impact of e-word of mouth on customer purchase intention in the handicrafts industry of Sri Lanka.

According to the table, the unstandardized coefficient for the e-word of mouth indicates 0.440, meaning the dependent variable which is customer purchase intention will increase by 0.440 when the e-word of mouth increases by one unit. The standardized coefficient (Beta) for the e-word of mouth is 0.404 which is an indication of the positive influence on the dependent variable (customer purchase intention). Finally, since the $P < \text{Alpha}$ value with H_0 is rejected, and with 95% confidence it can be said that there is a significant impact of e-word of mouth on customer purchase intention in the handicrafts industry of Sri Lanka.

5. Discussion

Valuable insights are provided by the above regression analysis regarding the importance of digital marketing, sales promotion, and E-WOM on customer purchase intention. Among those variables, the strongest impact is shown from the E-WOM while digital marketing falls as the second influential variable and sales promotion as the last one.

5.1. E-WOM

Existing literature has proved that E-WOM on purchase intention is a consistent behavior. This shows the power of online reviews, recommendations, and social media discussions in the process of shaping customer behavior. Trust and authenticity play a crucial role in the handy craft industry. Hence, E-WOM plays a crucial role in building credibility and driving sales.

5.2. Digital Marketing

Customer purchase intention is shaped by the influence of digital marketing. Businesses that are looking to enhance their customer base are relying on online platforms, advertising, content marketing, and social media engagement. This is important mainly in the handicraft sector due to the high impact of visual appeal and storytelling.

5.3. Sales Promotion

Compared to E-WOM and digital marketing the effect of sales promotion on purchase intention is comparatively weaker even though there is a positive impact. Hence, this suggests that even though promotions and discounts can stimulate short-term sales they might not have the same long-lasting impact.

6. Conclusion

This research was conducted to measure the impact of digital marketing, sales promotion, and electronic word of mouth (E-WOM) on customer purchase intention in the Sri Lankan handicrafts industry. The study was primarily aimed to bridge the knowledge gap in the existing literature by measuring the impacts of these modern marketing strategies (digital marketing, sales promotion, and E-WOM) on customer purchase intention in a traditional sector like handicrafts in Sri Lanka where a visible undergrowth of digital adaptation existing.

6.1. Summary of findings

The study was conducted by collecting responses through a survey questionnaire. From the 152 responses gathered, the analysis showed that all three independent variables have an impact on customer purchase intention. However, the level of the impact varies between the independent variables. As found out E-WOM has the strongest impact while digital marketing comes as second and sales promotions come at last. These results suggest that consumers highly rely on peer views and recommendations on products in a niche industry like handicrafts while digital marketing is also an essential tool for creating brand awareness and maintaining brand awareness. These results are well aligned with existing literature as well.

Finally, it can be concluded that these findings confirm the initial hypothesis since the analysis suggests E-WOM and digital marketing will have a significant impact on customer purchase intention while the sales promotion is well suitable to accomplish the short-term sales goals of the handicrafts business.

6.2. Limitations of the study

The major limitation of the study is the smaller sample size, and it is limited to only 152 responses. Even though the sample size is sufficient to derive statistical data it may not be a full representation of consumers of handicrafts industry. So, there could be variations when drawing conclusions about the whole population based on this small sample.

Another limitation is the bias of data. Since the questionnaire is self-reported, respondents would have added biased responses to the questionnaire which could be a reason to make conclusions based on non-accurate inputs of respondents. Finally, the research is only concerned with three marketing strategies while other factors like quality of handicrafts products, brand loyalty, etc. could have a significant impact on customer purchase intention in the Sri Lankan handicrafts industry.

6.3. Future research areas

Future researchers can explore the other factors that have an impact on customer purchase intention in the Sri Lankan handicrafts industry by considering, factors like price, cultural significance, etc. Or else

the same research could be done in a different industry. Finally, they can measure the impact of emerging technologies like Augmented reality (AR), and virtual reality (VR) on handicrafts.

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Psychosocial Drivers of Migration Intentions: Exploring Gender Dynamics and Workforce Implications for Generation Z in Sri Lanka

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Abstract

This study explores the psychosocial drivers of migration intentions among Generation Z in Sri Lanka, emphasizing the roles of psychological factors, gender dynamics, and workforce implications. Using a qualitative approach, semi-structured interviews with 19 participants reveal that migration aspirations are shaped by self-improvement, emotional well-being, and exposure to global opportunities. Gender-specific insights indicate that women prioritize career growth and autonomy while managing societal constraints, whereas men focus on financial responsibilities. The findings also highlight dissatisfaction with local job opportunities and workplace inequities as significant push factors. These dynamics aggravate workforce challenges, including brain drain, further impacting the country's economic development. The study proposes actionable policy recommendations, such as fostering economic stability, enhancing gender-sensitive workplace policies, and aligning educational strategies with industry needs. By addressing these drivers, policymakers, educators, and businesses can collaboratively mitigate the adverse effects of migration and retain Sri Lanka's youth talent. Future research is encouraged to extend these findings, focusing on broader socio-economic and regional contexts.

Keywords: Generation Z, Gender dynamics, Migration intentions, Workforce implications, Sri Lanka, Brain drain.

1. Introduction

Migration, the movement of individuals from one country to another for temporary or permanent purposes, has become a prominent global phenomenon, particularly among younger generations. In the 21st century, migration has increasingly shaped global labor markets, cultural exchanges, and socio-economic dynamics. According to the International Organization for Migration (2022), over 281 million people live outside their country of origin, highlighting the growing importance of understanding migration trends. Among these, young people, particularly Generation Z—those born between 1995 and 2012 (Debczak, 2019)—play a pivotal role due to their distinct aspirations, digital literacy, and heightened awareness of global disparities.

The migration aspirations of Generation Z are significantly influenced by their exposure to digital connectivity and global narratives. As the first generation to grow up entirely in the digital age, their perceptions are shaped by instant access to information and peer-driven comparisons through social media platforms (Pepper, 2023). This exposure frequently increases the appeal of opportunities abroad, such as improved career prospects, higher living standards, and greater personal freedoms. For example, a study by The Economist (2021) highlighted that over 60% of young professionals in developing economies aspire to migrate for education and employment opportunities. Such trends underscore the global nature of migration and its critical relevance for youth. Moreover, Generation Z's ability to engage with diverse online communities has provided them with greater insights into disparities between their home countries and developed nations, further fueling their aspirations to migrate.

Sri Lanka, struggling with political instability and economic challenges, mirrors many of the migration drivers observed in other developing countries. For instance, nations like India and Bangladesh have also witnessed an increasing exodus of skilled youth due to limited job opportunities and socio-economic constraints (Ahmed et al., 2020). Similarly, in Nepal, youth migration has been driven by aspirations for financial stability and educational advancement, often resulting in significant brain drain (Shakya, 2022). These parallels provide a comparative lens through which Sri Lanka's migration patterns can be better understood. The shared experiences of young people across South Asia reflect a regional challenge that calls for coordinated policy interventions and targeted strategies to address youth migration.

Push and pull factors are fundamental to migration theories, shaping the decision-making process for migration. Push factors such as economic hardship, political instability, and inadequate local opportunities propel individuals to leave their home countries. In Sri Lanka, these challenges are further heightened by a prolonged economic crisis and political uncertainties, which disproportionately affect the youth (Weeraddana, 2023). Simultaneously, pull factors such as higher wages, improved career trajectories, and access to quality education in foreign countries act as significant attractors.

Similar trends are observable in neighboring countries like Pakistan, where youth cite employment and education as primary motivations for migration (Hussain et al., 2019). The interplay of these factors highlights the complexity of migration decisions, which are often shaped by both personal aspirations and structural constraints.

Generation Z's migration intentions are also influenced by gender dynamics and socio-cultural norms. Studies have shown that women, particularly in South Asia, often face unique barriers, including societal expectations and safety concerns, which shape their migration decisions differently from men (Kunnumbrath & Kodali, 2023). These gendered experiences are critical for understanding migration drivers in contexts like Sri Lanka, where traditional gender roles and societal pressures remain influential. For instance, women's migration decisions are often constrained by familial obligations and cultural expectations, while men may experience pressure to migrate as breadwinners. Addressing these gender-specific challenges requires a detailed understanding of how social norms intersect with economic and psychological factors to influence migration decisions.

Moreover, the interplay between individual aspirations and structural constraints highlights the complexity of migration decisions. Generation Z's desire for self-fulfillment and career growth is often at odds with the realities of limited local opportunities. For example, a survey conducted by the Asia Foundation (2022) found that 72% of young Sri Lankans perceived migration as a pathway to achieving their professional and personal goals. Such findings emphasize the urgency of addressing the underlying push factors while leveraging the potential of this demographic to contribute to local development. Additionally, the global competition for skilled youth emphasizes the need for policies that not only retain talent but also create opportunities for meaningful engagement within home countries.

Seeing in this manner, the research seeks to answer the questions, RQ 01: "What are the psychological and social factors influencing the migration intentions of Generation Z in Sri Lanka and RQ 02: "How do these factors vary by gender?" By addressing these research questions, the study renders several important contributions. Firstly, it advances the understanding of gender-specific migration drivers within the context of Sri Lanka, offering detailed insights into the interplay of societal pressures and individual aspirations. Secondly, it highlights the implications of these migration intentions for workforce sustainability, emphasizing the need for targeted retention strategies. Thirdly, it provides actionable recommendations for policymakers and businesses to address the root causes of migration, thereby reducing brain drain and fostering a more resilient workforce. Lastly, it enriches the global discourse on youth migration by presenting findings from a developing economy, contributing to the broader understanding of migration patterns in diverse socio-economic contexts.

2. Literature Review

Migration as a global phenomenon has been studied extensively through various theoretical lenses. Push-pull models, such as those proposed by Lee (1966), highlight how socio-economic disparities between regions influence migration decisions. These models provide a foundational understanding of why individuals migrate, categorizing the factors that compel them to leave their home countries as push factors and the elements that attract them to host countries as pull factors. In the Sri Lankan context, these models remain relevant, as political instability and limited employment opportunities serve as prominent push factors, while better living standards and career prospects abroad function as key pull factors (Valiuniene, 2016). However, contemporary migration research increasingly emphasizes the importance of psychological and social drivers, which have received less attention in studies focusing on Sri Lankan youth. This gap highlights the need for a more comprehensive exploration of how these less tangible factors influence migration intentions, especially within distinct socio-cultural frameworks..

2.1 Psychological Factors Influencing Migration

Personal aspirations, mental health, and emotional well-being have emerged as critical psychological motivators for migration. Castelli (2018) argues that migration decisions are often deeply intertwined with an individual's quest for self-fulfillment, stability, and personal growth. For Generation Z, whose values are shaped by exposure to digital media and global narratives, these factors are particularly salient (Pepper, 2023). This generation has grown up with unparalleled access to information, enabling them to compare their circumstances with those in developed countries instantly. Social media often amplifies the appeal of migration by portraying an idealized version of life abroad, fostering dissatisfaction with local living conditions. For instance, platforms like Instagram and LinkedIn allow individuals to showcase professional and personal successes, which can influence migration aspirations (Witte, 2024).

Moreover, mental health challenges, heightened by socio-economic instability, play a significant role in migration decisions. A study by Suci and Florea (2017) emphasizes that youth in economically constrained regions often view migration as a pathway to escape stressors associated with local economic hardships. However, while studies highlight the psychological dimensions of migration, there is limited empirical evidence focusing specifically on Generation Z in developing economies like Sri Lanka. This gap underscores the importance of exploring how mental health, aspirations, and digital narratives intersect to shape migration intentions.

2.2 Gender Dynamics in Migration Intentions

Gender plays a pivotal role in shaping migration decisions, with notable differences in motivations and barriers faced by men and women. Research by Kunnumbrath and Kodali (2023) highlights that women often prioritize safety, access to resources, and family well-being, while men are more likely to migrate for career advancement and economic responsibilities. In South Asia, cultural norms and societal expectations impose additional constraints on women, particularly in navigating restrictive laws and family obligations. In Sri Lanka, these dynamics are further compounded by traditional gender roles that often limit women's agency in making independent decisions about migration (Pingama, 2016).

The intersection of gender and migration is further influenced by global narratives. Women in developing countries increasingly perceive migration as a means to achieve empowerment and autonomy, often citing examples of female professionals thriving abroad (Ahmed et al., 2020). However, they face unique challenges, such as overcoming workplace discrimination and securing financial independence in foreign environments. Men, on the other hand, frequently experience societal pressure to migrate as breadwinners, reinforcing traditional patriarchal norms. Despite the global nature of these trends, there is a lacuna of research on how gendered migration dynamics specifically manifest within the socio-economic and cultural framework of Sri Lanka..

2.3 Workforce Implications of Youth Migration

The migration of skilled youth has far-reaching implications for workforce dynamics. Docquier and Rapoport (2011) emphasize the phenomenon of brain drain, where the outflow of talent from developing economies hampers local development. In Sri Lanka, the migration of Generation Z exacerbates labor shortages in critical sectors while increasing dependency on remittances. For example, sectors such as healthcare and information technology have reported significant challenges in retaining skilled professionals, leading to gaps in service delivery and innovation (Weeraddana, 2023). This trend reflects a broader challenge faced by developing economies struggling to balance the benefits of remittances with the adverse effects of losing their most productive labor force.

Policy responses to address brain drain have included incentives to retain talent, such as offering competitive salaries and professional development opportunities. For instance, India has implemented returnee programs to encourage highly skilled migrants to reintegrate into the local workforce (Hussain et al., 2019). However, the effectiveness of such measures remains mixed, particularly in contexts like Sri Lanka, where economic and political instability deter long-term commitments from young professionals. Additionally, the intersection of gender and workforce implications remains underexplored, particularly in terms of designing policies that address the unique barriers faced by women in the labor market

2.4 Emerging Perspectives on Generation Z Migration

Generation Z is distinguished by its technological proficiency and global awareness, traits that significantly influence migration intentions. This cohort's aspirations are shaped by their exposure to social media, which often portrays idealized versions of life abroad (Witte, 2024). Unlike previous generations, Generation Z is more likely to consider non-traditional pathways for migration, such as remote work opportunities and digital nomadism, reflecting their adaptability and entrepreneurial spirit. Studies such as those by Suciu and Florea (2017) highlight how digital connectivity amplifies aspirations for better opportunities, particularly among youth in economically constrained regions.

Furthermore, Generation Z's migration intentions are often tied to their perceptions of quality of life and work-life balance. A study by Shakya (2022) found that young professionals in Nepal cited lifestyle aspirations and flexible working conditions as key motivators for migration. Similar trends are observable in Sri Lanka, where dissatisfaction with local workplace cultures and limited career growth opportunities drive migration aspirations. Despite these insights, there is limited empirical evidence on how these traits specifically drive migration intentions in developing economies like Sri Lanka. This highlights the need for research that captures the unique values and motivations of Generation Z, particularly in contexts characterized by economic volatility and cultural diversity.

Despite a growing body of literature on migration, several gaps persist in understanding the psychosocial drivers and workforce implications of migration among Generation Z in Sri Lanka. Firstly, there is a lack of gender-sensitive research that examines how societal pressures and personal aspirations intersect to shape migration intentions. Secondly, the implications of these migration patterns on workforce sustainability remain understudied, particularly in industries critical to Sri Lanka's development. Finally, existing studies often adopt quantitative approaches, leaving a gap in qualitative insights that capture the lived experiences and decision-making processes of young migrants. This study seeks to fill these gaps by exploring the psychosocial and gendered dimensions of migration intentions and their broader implications for Sri Lanka's labor market.

3. Methodology

This study adopts a qualitative approach to explore the psychosocial drivers of migration intentions among Generation Z in Sri Lanka, with a particular focus on gender dynamics and workforce implications. A qualitative design was chosen to provide an in-depth understanding of participants' lived experiences and perspectives, allowing for a detailed exploration of the complex interplay between psychological, social, and economic factors driving migration intentions. The methodology encompasses detailed discussions on the population, sample, sampling technique, data collection, data analysis, and ethical considerations to ensure the rigor and relevance of the findings..

3.1 Population and Sample

The target population comprised Generation Z individuals in Sri Lanka, specifically those aged 18 to 29 years in 2024. This age group represents individuals who are either entering the workforce or pursuing higher education, making them particularly relevant to the study's focus on migration intentions. This age group was selected due to their unique positioning as digital natives who are significantly influenced by global narratives, aspirations, and socio-economic challenges.

From this population, a sample of 19 participants was selected to ensure manageability and depth of analysis. The sample included individuals from diverse educational backgrounds (government university students, private university students, and working professionals) and different geographic regions, including urban and rural areas. This diversity was essential to capture the varied experiences and perspectives of Generation Z in Sri Lanka, particularly the differences in access to resources and exposure to global opportunities. A balanced representation of genders was ensured to capture gender-specific nuances in migration intentions, with 10 female and 9 male participants recruited for the study. The selection of participants also considered factors such as socio-economic status and family background to further enhance the richness of the data.

3.2 Sampling Technique

Convenience sampling was employed due to its practicality and feasibility. This non-probability sampling technique allowed the researchers to recruit participants who were readily accessible and willing to share their experiences. While convenience sampling may limit the generalizability of the findings, it enabled the researchers to gather valuable insights from a diverse group of participants within the constraints of time and resources.

To address potential biases associated with convenience sampling, efforts were made to recruit participants from varied socio-economic and educational backgrounds. Additionally, the researchers engaged in reflexivity throughout the study to minimize their influence on participant responses. By documenting and reflecting on their assumptions and interactions with participants, the researchers ensured that the findings authentically represented the participants' perspectives.

3.3 Data Collection

Data were collected through semi-structured interviews to allow flexibility and depth in exploring participants' migration intentions and the factors influencing their decisions. Semi-structured interviews were chosen for their ability to provide a balance between structure and adaptability, enabling the researchers to explore predetermined themes while allowing participants to share additional insights.

An interview guide was developed to ensure consistency across interviews. The guide covered key themes such as psychological drivers (e.g., aspirations, emotional well-being), gender-specific influences (e.g., societal expectations, safety concerns), and workforce implications (e.g., career opportunities, job satisfaction). The development of the interview guide involved a review of existing literature to identify relevant themes and ensure alignment with the study's objectives. The guide was pilot tested with two participants to refine the questions and ensure clarity and relevance. Validity of the data was ensured through the design of an interview guide based on a comprehensive literature review, followed by validation by an expert panel comprising academics and professionals familiar with migration studies and qualitative methodologies. This process ensured that the questions were contextually relevant and captured the intended constructs. Pilot testing with two participants further enhanced content validity by refining the clarity and relevance of the questions. Reliability was maintained through thematic analysis guided by Braun and Clarke's framework, with peer debriefing sessions conducted to verify the consistency and credibility of the identified theme.

Each interview lasted approximately 45 minutes and was conducted in Sinhala or English, based on the participant's preference. This multilingual approach ensured inclusivity and allowed participants to express themselves in their most comfortable language. Interviews were conducted in person or via video conferencing platforms, depending on participants' availability and preferences. All interviews were audio-recorded with informed consent and subsequently transcribed verbatim to preserve the authenticity of the participants' narratives. The use of transcription software and manual verification ensured accuracy and completeness of the transcripts.

3.4 Data Analysis

Thematic analysis, as outlined by Braun and Clarke (2006), was employed to analyze the data. This method was chosen for its systematic approach to identifying, analyzing, and reporting patterns (themes) within qualitative data. The analysis process involved several stages: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report.

Initially, the researchers familiarized themselves with the data by repeatedly reading the transcripts and noting initial impressions. This was followed by the generation of initial codes to identify relevant features of the data. Codes were then collated into potential themes, which were reviewed and refined to ensure they accurately reflected the data. Key themes that emerged from the analysis included career aspirations, emotional well-being, societal pressures, and gendered motivations. Throughout the process, the researchers engaged in peer debriefing to enhance the credibility and reliability of the findings. This involved discussing the themes with other researchers to ensure that the analysis was rigorous and free from personal biases.

3.5 Ethical Considerations

Approval was obtained from participants prior to the commencement of the study, ensuring adherence to ethical research practices. Participants were provided with detailed information about the study's objectives, procedures, and their rights, including the right to withdraw at any time without penalty. Informed consent was obtained from all participants through signed consent forms, which were available in Sinhala and English to accommodate language preferences.

Measures were taken to protect participants' confidentiality and anonymity. Pseudonyms were used in all transcripts and reports to ensure that participants could not be identified. Audio recordings and transcripts were securely stored in password-protected files, and only authorized researchers had access to the data. Additionally, the researchers were sensitive to the potential emotional impact of discussing migration intentions and ensured that participants were not subjected to distress. Participants were informed that they could pause or terminate the interview at any time if they felt uncomfortable.

The researchers also adhered to ethical principles in data management and dissemination. All findings were presented in aggregate form to prevent identification of individual participants, and participants were offered the opportunity to review the findings to ensure their accuracy and fairness. By prioritizing ethical considerations throughout the study, the researchers upheld the integrity of the research process and ensured the well-being of the participants.

3. Results and Discussion

4.1 Psychological Drivers of Migration Intentions

Participants highlighted aspirations for self-improvement, emotional well-being, and personal growth as critical motivators for migration. Male respondents often mentioned financial independence and achieving traditional milestones, such as owning a house or car. One participant expressed, *"I feel stuck here; achieving my dreams seems impossible unless I move abroad. The opportunities I need to progress just aren't available here. I've tried everything I can locally, but it's like hitting a wall every time."* This sentiment reflects the frustrations of young professionals who perceive migration as a pathway to financial and personal stability.

Women frequently emphasized career opportunities and escaping restrictive societal norms. For instance, one female respondent stated, *"Here, I can't explore my potential; abroad, I'll have freedom to grow, to pursue the career I've always dreamed of, without the constant judgment from society. Every decision I make here feels scrutinized; I want the chance to live for myself."* These findings align with Castelli (2018), who emphasizes that migration decisions are intertwined with personal aspirations and mental well-being. Moreover, psychological motivations among Generation Z are

amplified by their digital upbringing, which heightens awareness of global opportunities (Pepper, 2023).

Another participant, a university graduate, shared, *"Staying here feels like being in a loop with no progress. I see my friends who moved abroad—they're thriving, building careers, buying houses. It's hard not to compare and feel like I'm being left behind. It's not just envy; it's a realization that their environment offers possibilities that mine doesn't."* Such narratives emphasize the role of peer comparisons in shaping migration intentions. This aligns with broader findings that digital media fosters dissatisfaction with local conditions by portraying idealized lifestyles abroad..

4.2 Gendered Motivations and Barriers

Distinct gender patterns emerged in the study. Male participants focused on economic stability and societal expectations, while women prioritized emotional well-being and safety. A female respondent noted, *"I feel trapped by societal expectations; moving abroad offers me freedom to be who I want to be without constantly having to prove myself to others. Here, I feel like I'm always fighting battles—whether at work or at home. Abroad, I imagine a fresh start."* This illustrates how migration is perceived as a means of escaping rigid societal norms and achieving personal autonomy.

Similarly, women reported facing family resistance, with one participant stating, *"My parents think migrating is unsafe for women. They worry about my safety, about what people will say, and whether I'll manage on my own. It's exhausting to constantly justify my decisions. I understand their concerns, but it feels like my dreams are being sidelined."* This highlights the added emotional burden faced by women in negotiating migration aspirations within traditional family structures. Conversely, men often felt familial pressure to succeed financially. One male respondent shared, *"I'm expected to provide for my family; migration seems necessary to meet those expectations. It's not just about me; it's about fulfilling what's expected of me as a son. My success reflects on my family, and that's a heavy weight to carry."*

This dichotomy emphasizes the influence of cultural norms on gendered migration dynamics, consistent with findings by Kunnumbrath and Kodali (2023). The intersection of gender and migration motivations reveals the complex ways in which societal expectations shape decisions, often reinforcing traditional roles and responsibilities. For women, migration offers liberation from societal constraints, while for men, it is often a means of fulfilling prescribed roles.

4.3 Workforce Implications

Participants expressed dissatisfaction with local job opportunities, citing low wages and limited career progression. One respondent remarked, *"No matter how qualified you are, opportunities here are limited. I have a degree, but I'm stuck in a job that doesn't pay enough to cover basic expenses, let alone save for the future. Sometimes, it feels like my education was wasted because there's no platform*

here to use it effectively." This frustration highlights the structural challenges in Sri Lanka's labor market, which push young professionals to seek better prospects abroad.

Women reported concerns about workplace discrimination, with one participant stating, *"Even if you're qualified, you're not taken seriously. It's harder to climb the ladder as a woman here; it feels like the system is stacked against us. I've faced situations where my ideas were dismissed until a male colleague repeated them."* Men, on the other hand, emphasized financial instability, as reflected by a participant who noted, *"It's not just about earning more; it's about earning enough to feel secure. Staying here feels like being stuck in a cycle of uncertainty. Even when I earn, the rising costs make it impossible to plan for the future."*

These trends resonate with Docquier and Rapoport (2011), who highlight the workforce impact of skilled youth migration. The migration of Generation Z professionals exacerbates labor shortages in critical sectors, including healthcare and information technology, further straining Sri Lanka's economic development. Additionally, participants noted that migration often becomes a necessity rather than a choice due to the lack of support for professional growth within the country. One respondent summarized this sentiment: *"Migration isn't a luxury; it's survival. Staying here feels like stagnation."*

4.4 Socio-Cultural Influences

Social media emerged as a critical influence, with respondents describing it as a tool for showcasing idealized lifestyles abroad. *"Seeing my friends succeed abroad makes me want to try,"* shared one participant. *"They post pictures of their new jobs, their travels, their achievements. It's hard not to feel like I'm missing out by staying here. Their posts don't show the struggles, but they highlight the rewards, and that's what stays with you."* This reflects the role of social networks in amplifying migration aspirations by portraying success stories that highlight the perceived benefits of living abroad.

Family dynamics also shaped migration decisions, particularly for women facing resistance and men receiving encouragement to pursue financial success abroad. A male respondent noted, *"My parents see migration as an investment in the family's future. They encourage me to go, work hard, and send money back home. It's seen as a duty, not a choice."* Conversely, a female participant shared, *"Migration isn't just my decision; it's tied to what my family thinks is appropriate. Even if I want to go, their concerns hold me back. It's like my aspirations are secondary to their fears."*

These findings align with the work of Witte (2024), which emphasizes the role of social networks and family expectations in shaping migration aspirations. The interplay between socio-cultural influences and individual aspirations underscores the complexity of migration decisions, particularly in contexts where traditional values and global narratives coexist. Social media, combined with familial pressures,

creates a dual narrative of aspiration and obligation, shaping the migration landscape for Generation Z.

The findings illuminate the interplay between psychological, gendered, and socio-economic factors shaping migration intentions among Generation Z in Sri Lanka. Policymakers must address these drivers through targeted interventions, such as improving job opportunities, fostering inclusive work environments, and leveraging social media to highlight local success stories. By tackling these root causes, Sri Lanka can retain its youth talent and mitigate the adverse effects of brain drain. Furthermore, addressing the gendered dimensions of migration requires policies that empower women

4. Discussion

5.1. Economic Stability and Employment Opportunities

Policymakers should prioritize creating economic stability by introducing targeted programs to enhance employment opportunities for young professionals. A robust strategy would involve offering tax incentives for businesses that actively recruit local youth, particularly in sectors experiencing labor shortages. These incentives could include reduced corporate tax rates for companies that implement local hiring policies or establish skill development programs tailored to the needs of Generation Z. Additionally, the government can provide subsidies to industries that invest in training programs, apprenticeships, and internships, ensuring a seamless transition for young graduates entering the workforce.

Another critical aspect of economic stability is ensuring fair and competitive wages. Policymakers should establish mechanisms to monitor and enforce wage standards across industries, ensuring that employees are adequately compensated for their skills and efforts. Minimum wage laws should be regularly updated to reflect inflation and living costs, preventing financial dissatisfaction that often drives migration. Furthermore, the creation of employment insurance schemes can provide a safety net for young professionals, fostering confidence in the local labor market.

Policymakers should also focus on fostering entrepreneurship as a means to create new job opportunities. By offering financial support such as low-interest loans, grants, and start-up incubators, governments can empower young entrepreneurs to establish and grow businesses locally. These initiatives not only provide economic stability for individuals but also contribute to the overall economic development of the country. For instance, countries like India have successfully implemented youth-focused entrepreneurship schemes, such as the "Startup India" initiative, which could serve as a model for Sri Lanka. Moreover, the promotion of export-oriented industries can create additional opportunities for skilled professionals, aligning with global market demands and increasing economic resilience.

5.2. Educational Strategies

Educational institutions have a vital role in shaping the aspirations and capabilities of Generation Z. Universities and vocational training centers should collaborate with industries to develop career-oriented programs that bridge the gap between education and employment. By aligning curricula with industry needs, institutions can equip students with practical, in-demand skills that enhance their employability within the local labor market. Internships, apprenticeships, and co-op programs should be integrated into academic frameworks to provide students with hands-on experience and professional networks.

A key focus should be on expanding STEM (Science, Technology, Engineering, and Mathematics) education and digital literacy. Policymakers and educators must work together to create specialized programs in areas such as data science, artificial intelligence, renewable energy, and advanced manufacturing. These fields not only have high global demand but also offer opportunities to retain talent within the country by establishing competitive local industries. Scholarships and funding programs should be introduced to encourage students from underrepresented backgrounds to pursue these fields, ensuring inclusivity and diversity.

Social media literacy programs should be introduced to educate students about the realities of migration and promote local success stories as viable alternatives to moving abroad. These programs can help young people critically assess the idealized portrayals of life abroad often seen on social media platforms. By highlighting the opportunities and potential for growth within Sri Lanka, these initiatives can counteract the allure of migration and foster a sense of pride and commitment to contributing to the country's development.

Additionally, policymakers should incentivize institutions to focus on research and innovation. Providing funding and resources for research projects that address local challenges can encourage students and academics to engage in meaningful work that contributes to the country's progress. Establishing partnerships between universities and local industries can further enhance the practical application of research outcomes, driving innovation and economic growth. Collaboration with international universities can also bring global expertise into the local education system, providing students with world-class learning experiences.

5.3. Business Innovations

Businesses must foster a culture of innovation and inclusivity to attract and retain young talent. Providing competitive salaries, flexible working conditions, and clear career advancement pathways are critical strategies for addressing workforce dissatisfaction. Companies should implement policies that support work-life balance, such as remote work options and flexible hours, to align with the values

and preferences of Generation Z. These measures can significantly enhance job satisfaction and reduce the economic push factors that drive migration.

Investing in upskilling initiatives is another key strategy. Businesses should offer training programs, certifications, and mentorship opportunities that enable employees to enhance their skills and advance their careers. Special focus should be placed on empowering women and underrepresented groups by creating tailored programs that address the specific barriers they face in the workplace. By addressing skill gaps and creating pathways for professional growth, businesses can reduce the push factors that lead to migration.

Highlighting success stories of young professionals who thrive in local businesses can also counter the allure of migration. Companies should leverage their communication channels to showcase employees' achievements and contributions, demonstrating that meaningful and rewarding careers can be built within Sri Lanka. Additionally, corporate social responsibility (CSR) initiatives that focus on community development and youth empowerment can strengthen businesses' ties to local communities, fostering loyalty and reducing migration pressures.

To further attract talent, businesses should actively engage in public-private partnerships with educational institutions and government agencies. Such collaborations can lead to the development of industry-specific training programs, innovation hubs, and entrepreneurship support networks. These initiatives provide young professionals with the resources and opportunities they need to succeed locally, creating a robust ecosystem that supports talent retention.

Finally, businesses should explore opportunities to participate in global value chains, enabling employees to gain international exposure without leaving the country. By positioning themselves as globally competitive players, local companies can offer employees the chance to work on high-profile projects and collaborate with international teams, providing the professional growth and prestige often associated with migration..

5. Limitations and Future Research Directions

This study highlights the need for further research to explore the intersectionality of migration drivers, considering variables such as regional disparities, educational levels, and socio-economic backgrounds. However, it is important to acknowledge certain limitations. The reliance on convenience sampling and a relatively small sample size may affect the generalizability of the findings. Additionally, the self-reported nature of the data introduces potential biases that could influence the interpretation of migration intentions. Future studies should employ mixed-method approaches and larger, more representative samples to validate and extend the findings, offering deeper insights into migration trends among Generation Z in developing economies.

6. Conclusion

This study sought to explore the psychosocial drivers of migration intentions among Generation Z in Sri Lanka, with a specific focus on gender dynamics and workforce implications. The findings revealed that aspirations for self-improvement, emotional well-being, and personal growth were key psychological motivators, while societal expectations and restrictive cultural norms shaped gendered migration dynamics. Men were driven by financial responsibilities and societal pressures, whereas women emphasized career opportunities and autonomy. Additionally, dissatisfaction with local job opportunities and workplace inequities emerged as significant factors influencing migration intentions. These insights underscore the need for targeted interventions, as outlined in the recommendations, to create economic stability, promote inclusive educational strategies, and foster business innovations. By addressing the root causes of migration through collaborative efforts between policymakers, educators, and businesses, Sri Lanka can retain its youth talent and mitigate the adverse effects of brain drain. Future research should build on these findings to provide deeper insights into the evolving aspirations of Generation Z and inform sustainable development strategies tailored to the local context..

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The Role of Digital Information Management in Enhancing Undergraduate Students' Digital Literacy: A Multi-University Analysis

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Abstract

This study explores the role of digital information management in enhancing undergraduate students' digital literacy through a multi-university analysis. Specifically, it investigates the impact of understanding digital practices, using information, finding information, and creating information on students' digital literacy. A quantitative research design was employed, with data collected from undergraduate students at three Sri Lankan universities. Using convenience sampling technique, a total of 120 respondents participated in the study by completing a structured survey questionnaire.

The findings reveal that the experiences of using information and finding information significantly contribute to students' digital literacy, highlighting their essential role in effective digital information management. However, the study found no significant impact of understanding digital practices or creating information on students' digital literacy. These results suggest that while practical engagement with information retrieval and utilization is critical, broader conceptual understanding and content creation may require additional contextual or instructional support to influence digital literacy outcomes. This study provides valuable insights into the specific dimensions of digital information management that enhance digital literacy, offering implications for educators and policymakers in designing targeted interventions to develop these skills among undergraduate students..

Keywords: Digital literacy, Experiential learning theory, learning by doing theory, Undergraduate Students.

1. Introduction

The ability to read and write is the concept of being literate. American Library Association (American Library Association, n.d.) defines digital literacy as an individual's ability to find, evaluate, utilize, share and create content using information technology. According to Belshaw, D. (2011), The term literacy can be defined as mastering basic and useful skills that have the power to profoundly improve and modify a person's capacity for thought. Because new technological skills and knowledge are needed in technologically oriented workplaces, the need for learning by individuals, society, and educational authorities has become exceedingly complex in the 21st century with the arrival of new technologies and Web applications. Digital literacy is the ability to find, organize, understand, evaluate, and analyze information using digital technology (Batcha et al., 2014). the term digital literacy is defined as an individual's ability to find and evaluate information, use this information effectively, create new content using this information, and share and communicate this newly created information using appropriate digital technologies (Reddy et al., 2020). The search for digital documentation through the Internet is becoming a more relevant resource in the process of gathering information in higher education, either because of its quality or because physical sources are becoming increasingly limited and not less importantly because digital publishing is much faster than physical publishing.

1.1 Background of the Study

(Salcito, 2014), The Microsoft's Vice-President for Worldwide Education, has emphasized that preparing students for the 21st-century workforce requires equipping them with essential skills such as critical and creative thinking, collaboration, communication, and computational thinking. The rapid development of information technology, particularly in the education sector, has redefined learning practices in the 21st century (Sulaiman & Ismail, 2020).

The COVID-19 pandemic underscored the critical importance of digital literacy as an essential competency. With the sudden closure of schools and universities mandated by government regulations, a historic shift toward virtual learning environments occurred (Alvarez, 2020). This transition exposed significant challenges, particularly the lack of preparedness among educators, who were often ill-equipped with the tools and knowledge necessary to effectively facilitate online learning (Daniel, 2020). In Sri Lanka, digital literacy prior to the pandemic was limited, with most individuals demonstrating only basic skills such as social media use and elementary online searches. However, the pandemic accelerated the recognition of digital literacy as a critical skill for both educators and students, especially in the educational field, where the demand for these skills increased dramatically.

In the context of higher education, digital literacy plays an integral role in supporting academic activities. It enables students to access extensive research resources, including online databases, digital libraries, and academic journals, thereby fostering their research capabilities. Additionally, universities

increasingly depend on digital communication tools such as email, video conferencing, and online collaboration platforms to connect students, faculty, and researchers (Educause, 2020). Furthermore, digital literacy enhances academic writing, presentation, and critical thinking skills, which are fundamental for student success.

Despite universities' growing focus on improving digital literacy, the actual utilization of digital resources by students for academic purposes remains limited. According to research published in *Computers & Education* (2021), while many university students exhibit proficiency in social media use and basic web browsing, they lack the critical thinking skills required to evaluate online information effectively. Similarly, a study in the *Journal of Information Technology Education* (2020) found that although students demonstrate competency in basic digital applications, they often lack advanced skills such as data analysis and cybersecurity awareness.

Digital literacy has become an essential competency for the 21st century, involving the ability to comprehend, analyze, and effectively use digital data (Nuryadi & Widiatmaka, 2023a). Shopova (2023) highlights that university students must possess the knowledge and skills to access and utilize diverse information formats, including e-publications, online videos, audio recordings, digital libraries, and databases. Moreover, students are expected to critically evaluate information resources, independently address scientific challenges, and apply digital tools to enhance their academic and professional endeavors.

A lack of digital literacy among students can have profound consequences. Students may struggle to identify credible sources, conduct effective research, collaborate with peers, and use digital tools to complete assignments. This deficiency not only hampers their academic performance but also limits their preparedness for professional and societal roles. According to Nuryadi and Widiatmaka (2023a), developing data literacy, which includes the capacity to understand, analyze, and utilize digital information, is a core requirement for students in the digital age.

Therefore, this study seeks to examine the role of experiential learning in enhancing students' digital literacy. By analyzing the connection between students' experiences and their digital literacy development, this research aims to provide insights and recommendations for universities to implement strategies that can improve students' digital competencies, thereby preparing them to thrive in the demands of the digitalized academic and professional landscape.

Building upon the primary research problem, this research seeks to address the existing gap in the literature by providing answers to the following questions:

1. What is the significant impact of understanding digital practices on students' digital literacy?
2. What is the significant impact of Using information on students' digital literacy?
3. What is the significant impact of finding information on students' digital literacy?

4. What is the significant impact of creating information on students' digital literacy?

2. Literature Review

2.1 21st Century Teaching and Learning

Physical Education is as vital as other school subjects, requiring well-organized and planned lessons that cater to students' competencies, needs, and interests (Tiamvong, 2023). Effective Physical Education in the 21st century emphasizes critical thinking, decision-making, and problem-solving while fostering self-awareness and appreciation for others. To prepare students for the workforce, 21st-century learning must focus on skills such as creativity, collaboration, communication, and computational thinking (Schunk, 2012). Teachers are expected to transition into facilitators, enabling students to engage in active, experiential learning.

The rapid advancement of information technology has revolutionized education, with ICT literacy becoming essential for both teachers and students (Sulaiman & Ismail, 2020). Digital literacy, defined as the ability to create and use digital content wisely, is critical for student success in the digital age (Basantes-Andrade et al., 2020). Generation Z, with its innate interest in digital tools, requires teachers to integrate technology into teaching while developing critical, creative, and communicative competencies (Sánchez-Caballé et al., 2021).

The COVID-19 pandemic drastically accelerated the adoption of online learning. Institutions implemented virtual classrooms using platforms like Zoom, Google Classroom, and learning management systems. Blended learning, combining online and in-person methods, has emerged as an effective approach (Kanyal Butola, 2021a). Innovative strategies, such as flipped classrooms and just-in-time teaching, personalize learning and enhance engagement (Dominguez et al., 2018).

Virtual classrooms offer flexibility, reduced peer pressure, and access to diverse resources, but challenges remain in equipping educators with digital skills. While the pandemic disrupted traditional education, it also highlighted the need for updated teaching methods and digital competency, essential for fostering 21st-century skills in students (Govindarajan et al., 2020).

The COVID-19 pandemic prompted the rapid closure of schools, forcing education to transition from traditional to virtual platforms. This shift revealed significant challenges, particularly in technology infrastructure and teacher preparedness (Alvarez, n.d.; Daniel, 2020). Teachers, often unprepared for online instruction, faced knowledge gaps and lacked access to adequate tools and internet connectivity, which hindered their ability to adapt effectively (Baran & Correia, 2014; Adarkwah, 2021). Efforts to strengthen IT infrastructure and provide necessary resources have since gained momentum, highlighting the growing importance of technology in education (Kerres, 2020).

Online teaching posed unique challenges, requiring more time and effort from educators compared to traditional methods. Teachers spent considerable time preparing, delivering, and assessing lessons, as online platforms demanded the creation of new instructional materials and constant feedback (Fish et al., 2009; Pérez-Jorge et al., 2020). Additionally, online education necessitated greater engagement, with teachers needing to participate in discussions, emails, and digital interactions, which increased their workload significantly (Bender et al., 2004).

Despite these challenges, the pandemic underscored the necessity of digital literacy for both teachers and students. Before COVID-19, digital skills were limited to basic social media use in many regions, such as Sri Lanka. However, the crisis highlighted the critical need for comprehensive digital literacy in education (Dhawan, 2020). Teachers' motivation, combined with guidance and training, has been identified as key to improving online instruction. Innovative teaching strategies and digital tools can enhance student engagement and learning outcomes when teachers are equipped with the necessary skills and resources (Mohamad et al., 2015).

Although the transition was challenging, the pandemic accelerated the integration of technology in education, paving the way for a more digitally competent educational landscape..

2.2 Teaching and Learning Difficulties During The Covid-19

The COVID-19 pandemic prompted the rapid closure of schools, forcing education to transition from traditional to virtual platforms. This shift revealed significant challenges, particularly in technology infrastructure and teacher preparedness (Alvarez, n.d.; Daniel, 2020). Teachers, often unprepared for online instruction, faced knowledge gaps and lacked access to adequate tools and internet connectivity, which hindered their ability to adapt effectively (Baran & Correia, 2014; Adarkwah, 2021). Efforts to strengthen IT infrastructure and provide necessary resources have since gained momentum, highlighting the growing importance of technology in education (Kerres, 2020).

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enhance student engagement and learning outcomes when teachers are equipped with the necessary skills and resources (Mohamad et al., 2015).

2.3 Digital Literacy

Digital literacy, defined as the ability to locate, evaluate, utilize, create, and share information using digital technologies, has become a vital competency in the 21st century (Glister, 1997). It extends beyond technical abilities to include critical thinking, creativity, and innovation (Martin & Grudziecki, 2006). The European Commission emphasizes digital literacy as essential for entrepreneurship, creativity, and survival in today's technologically driven society (Batcha et al., 2014).

In higher education, digital literacy is crucial for academic, personal, and professional development (Jeffrey et al., 2014). Students must skillfully use digital tools to gather, evaluate, and create information while ensuring its credibility. Digital publishing, offering faster access to current information, is increasingly preferred over traditional physical sources. Educators play a critical role in fostering these competencies to help students adapt to an increasingly digital society (Coffin Murray et al., 2014).

The shift toward digital literacy requires higher education institutions to intentionally integrate technology into teaching and learning processes (Jeffrey et al., 2014). Without advanced digital skills, individuals cannot fully engage in modern society or achieve the innovation and knowledge needed to thrive in the 21st century, making digital literacy indispensable for lifelong learning and global competitiveness.

2.4 Experiential Learning Theory

Experiential Learning Theory (ELT) was developed in response to John Dewey's call for a theory of experience to guide educational innovation. Drawing upon foundational scholars such as William James, John Dewey, Kurt Lewin, Jean Piaget, Lev Vygotsky, Carl Jung, Mary Parker Follett, Carl Rogers, and Paulo Freire, ELT emphasizes the importance of experience in human learning and development (Kolb & Kolb, 2017). ELT is a dynamic and holistic theory that focuses on how people learn from experience, positioning learning as a continuous process of human adaptation that occurs at individual, group, organizational, and societal levels. This process involves resolving the dual dialectics of action and experience, making it relevant beyond formal educational settings. In higher education, ELT has been used to enhance teaching effectiveness through a model that encourages inquiry, self-disclosure, conversation, and reflection. Instead of merely matching teaching styles with learning preferences, ELT promotes a more nuanced approach, considering teacher-student relationships and content alignment (Willingham, 2009).

2.5 Learning by Doing Theory

John Dewey, a prominent philosopher and educator, introduced the concept of "Learning by Doing," emphasizing experiential, hands-on learning. Dewey believed that learning is most effective when students engage in meaningful activities, linking theory with real-world practice, which fosters critical thinking and problem-solving (Dewey, 1938). He criticized traditional education for separating theoretical knowledge from practical application, advocating for learning through experimentation and exploration. This approach has significantly influenced modern education, promoting techniques like project-based learning and interactive simulations. In technology and craft education, learning-by-doing is fundamental, with a constructionist view where students actively construct knowledge through problem-solving and design (Kelley & Knowles, 2016; Purzer et al., 2015). However, Dewey's philosophy stresses that effective learning requires students to reflect on their experiences, linking actions with understanding (Willingham, 2009). This reflective process is essential for developing digital literacy and competence in today's educational environment.

2.6 Understanding Digital Practices

Understanding digital practices refers to the skills and behaviors involved in using digital technologies and engaging with digital content. It encompasses digital literacy, which includes the ability to navigate digital tools and platforms, as well as efficiently locate, analyze, and utilize information. In today's technologically driven world, digital practices have become crucial in all aspects of life, including work, education, and social interactions. These practices range from basic web browsing to more complex digital problem-solving tasks. Research on digital practices helps in understanding how people adapt to technology in various settings, including education and the workplace. This research is essential in developing digital literacy programs, enhancing the adoption of new technologies, and improving online engagement.

As Shopova (2014) suggests, digital literacy is necessary for full participation in the knowledge society, including technology for collaboration and communication such as smartphones, tablets, and laptops. Digital literacy involves not only knowledge of tools but also the competency to use them effectively, which becomes increasingly important in education. Yazon et al. (2019) found that students are highly literate in understanding online users and the implications of sharing online content. However, they are less aware of online self-promotion or managing digital identities. Students generally understand the ownership and legal boundaries of online information but still lack deeper engagement with critical skills in digital literacy.

2.7 Using Information

The ability to use information effectively is a crucial skill in today's digital age. Information usage involves more than just accessing data; it requires understanding, evaluating, and applying information

to solve problems and make informed decisions (Schunk, 2012). Individuals with strong information-using skills can adapt to new challenges and address complex issues in various areas of life.

However, the ability to evaluate information critically remains a concern. According to Yazon et al. (2019), while faculty members are adept at finding online information, they often lack the competence to evaluate the credibility and reliability of their sources. This gap leads to issues such as plagiarism due to improper citation practices. Additionally, they are not well-versed in social bookmarking, information sharing, or organizing data efficiently. Effective use of information, therefore, involves more than accessing it; it requires skills in evaluating its validity and organizing it for practical use.

2.8 Finding Information

With the internet providing vast amounts of information, the challenge lies in distinguishing between accurate and misleading data. Information seeking has become a central skill in digital literacy, requiring not only effective searches but also the critical ability to assess the trustworthiness of sources. While search engines are the primary tools for locating information, critical thinking is needed to navigate vast online content.

Yazon et al. (2019) suggest that academic staff are skilled at finding information online, yet they struggle with advanced search techniques and the effective use of online libraries. They are comfortable using search engines and social media platforms but lack expertise in adjusting search strategies when needed. The ability to quickly sift through search results and extract relevant information is another area where many academics fall short. This highlights the importance of teaching students not only how to search for information but also how to critically evaluate the data they find.

2.9 Creating Information

Creating information is the ability to generate new knowledge, content, or insights, often through critical thinking, creativity, and synthesis of existing material (Battelle for Kids, 2020). This ability is highly valued in the 21st-century knowledge economy and is recognized as a key skill in education, particularly in the P21 Framework, which classifies information creation as part of "Life and Career Skills."

According to Yazon et al. (2019), faculty members possess good skills in creating information, especially in using digital tools to produce media and collaborate online. They are comfortable with technologies that enable content creation, such as video editing tools, collaborative document platforms, and social media for professional and educational purposes. However, they often lack the practice of engaging with broader audiences, such as contributing to blogs, forums, or maintaining a public digital presence. Faculty members also show some understanding of the different media required for various online interactions but may not consistently engage in these practices. This demonstrates a gap in their ability to engage in diverse forms of digital content creation and interaction.

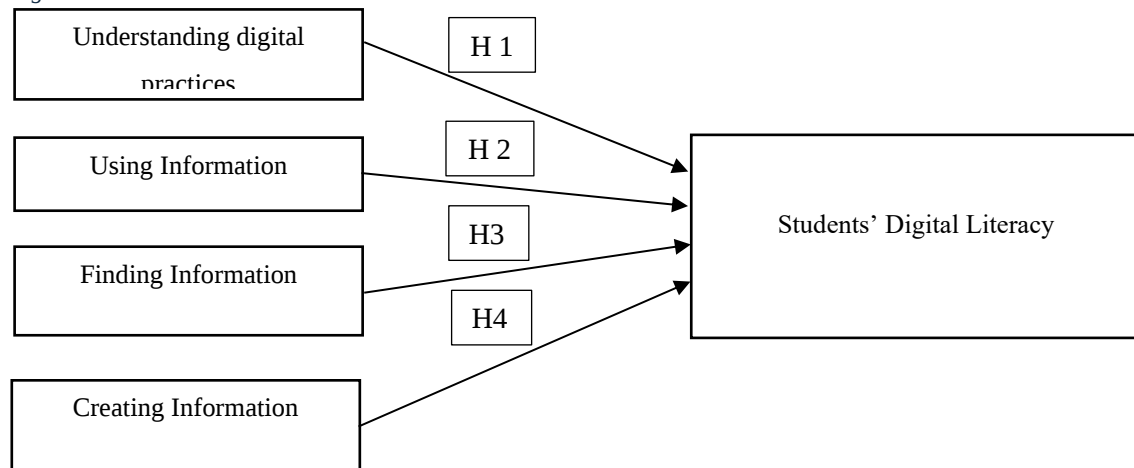
In summary, digital literacy is an evolving set of skills that encompasses finding, using, and creating information. As individuals engage with digital technologies in increasingly complex ways, their competence in these areas will significantly impact their ability to adapt and participate fully in modern society. Educational institutions and research efforts focused on digital practices are critical in preparing individuals for the challenges and opportunities presented by the digital world.

3. Methodology

a. Conceptual Framework

A robust research framework is essential for understanding the study's core concepts. The conceptual framework illustrates the hypothesized relationships between key variables, aiding in the empirical investigation of the role of digital information management in enhancing undergraduate students' digital literacy.

Figure 12 Research Model



Source : Generated by the author

3.2 Hypotheses

H1: Understanding digital practices has a significant impact on Students' Digital Literacy.

H2: Using information has a significant impact on Students' Digital Literacy.

H3: Finding information has a significant impact on Students' Digital Literacy.

H4: Creating information has a significant impact on Students' Digital Literacy.

3.6 Research Design

The research approach employed in this study is deductive, as it is grounded in established theories, namely the Experiential Learning Theory and Learning by Doing theory. The research began with the formulation of these theories, followed by the development of hypotheses which were subsequently

tested. The research philosophy adopted is positivism, as the study seeks to explore objective, quantifiable data through a structured approach. A mono-method research choice was utilized, employing only a quantitative approach for data collection. Data was gathered using a survey questionnaire, which provided a structured means of capturing responses from participants.

To analyze the data, a cross-sectional study design was employed, considering the limited timeframe available for the research. The population for this study includes all private and government university students in Sri Lanka. The sample consisted of 120 undergraduate students selected from three universities. Convenience and snowball sampling techniques were used for participant selection, enabling efficient access to respondents. Primary data was collected and analyzed using the SPSS analysis tool to draw conclusions based on statistical examination of the survey responses.

4. Data Presentation and Analysis

In this study, the participant pool consisted of 57% females and 43% males. Age distribution among the participants revealed that 63% were aged between 21 and 23 years, 28% were between 24 and 26 years, 7% were between 18 and 20 years, and 2% were between 27 and 29 years. The data were collected from both private and government universities in Sri Lanka. Of the total participants, 67% were from private universities, while 33% were from government universities. Regarding academic year distribution, 53% of participants were in their fourth year of study, 19% were in their third year, 15% were in their second year, and 13% were in their first year. These demographic characteristics provide a comprehensive overview of the study's participant sample.

4.1 Reliability of the Study

Internal consistency was measured using Cronbach's Alpha, which ranges from 0 to 1, with higher values indicating greater reliability and dependability of the constructs used.

Table 24 Reliability of Data

Variable	Cronbach's Alpha
Understanding digital practices	0.908
Using Information	0.849
Finding Information	0.895
Creating Information	0.915
Students' Digital Literacy	0.917

Source : Survey Data

The study includes five variables, with Table 4.1 showing the reliability of data for each. All variables have Cronbach's Alpha values greater than 0.8, indicating good internal consistency and reliability. Thus, the questionnaire used to measure these variables is both valid and reliable for the study.

4.2 Correlation Analysis

In this analysis, the strength of the relationship between the independent variables and the dependent variable, Students' Digital Literacy, was measured using correlation analysis.

The independent variable of Understanding Digital Practices exhibits a strong positive relationship with students' digital literacy, with a correlation coefficient of 0.547. This value indicates a substantial and positive association between understanding digital practices and the level of students' digital literacy.

The independent variable of Using Information also demonstrates a strong positive relationship with students' digital literacy, with a correlation coefficient of 0.691. This suggests that higher levels of information usage are strongly associated with increased digital literacy among students. Similarly, the independent variable of Finding Information shows a strong positive relationship with students' digital literacy, with a correlation coefficient of 0.677. This indicates that students who are adept at finding information tend to have higher levels of digital literacy.

The independent variable of Creating Information exhibits a weak positive relationship with students' digital literacy, with a correlation coefficient of 0.451. While this value is still positive, it suggests a weaker association compared to the other independent variables.

These results indicate that understanding digital practices, using information, and finding information have strong positive correlations with students' digital literacy, whereas the relationship between creating information and digital literacy is relatively weaker, though still positive.

4.3 Regression Analysis

4.3.1 ANOVA

Model	Sig.
Regression	0.001

Source : Survey Data

4.3.2 Coefficient analysis

Variable	Significance
Understanding Digital Practices	0.712
Using Information	0.001

Finding Information	0.001
Creating Information	0.802

Source : Survey Data

The results of this study indicate that the independent variable of Understanding Digital Practices does not have a significant impact on the dependent variable, Students' Digital Literacy ($P = 0.712$, $P > 0.05$). This finding contrasts with the results of Yazon et al. (2019), who identified a significant impact of understanding digital practices on teachers' digital literacy. Several factors may contribute to this discrepancy. First, the samples in the two studies differ, with Yazon et al. (2019) focusing on teachers, whereas this study examines students. Furthermore, the study by Yazon et al. (2019) was conducted in the Philippines, while this research was carried out in Sri Lanka. Additionally, Yazon et al.'s study was conducted before the COVID-19 pandemic, which has had a significant impact on the digital literacy of individuals, potentially altering the relationship between digital practices and digital literacy in the post-pandemic context.

Conversely, the independent variable Using Information was found to have a significant impact on Students' Digital Literacy ($P = 0.001$, $P < 0.05$). This result aligns with the findings of Yazon et al. (2019), who also concluded that the use of information significantly affects digital literacy among students. Both studies were conducted in university settings, and Sri Lanka and the Philippines share similar cultural backgrounds, which may explain the consistency in findings. Additionally, Aramide (2022) also found that the use of information significantly impacts digital literacy, further supporting the results of this study. However, the study by Aramide (2022) involved a larger sample size (193 individuals), while this study utilized a sample of 120 participants. Furthermore, Aramide's study was conducted in Nigeria, which could contribute to the differences observed in other findings.

Similarly, the independent variable Finding Information was found to have a significant impact on Students' Digital Literacy ($P = 0.001$, $P < 0.05$). This result is consistent with the findings of both Yazon et al. (2019) and Aramide (2022). As with the variable of Using Information, both the Yazon et al. (2019) study and this research were conducted in university contexts, with Sri Lanka and the Philippines sharing similar cultural traits. Aramide's study, conducted in 2022, also aligns with these findings, likely due to the fact that both studies involved students and were carried out in the post-pandemic era. Therefore, the consistency in findings may be attributed to these similarities across the studies.

Lastly, the independent variable Creating Information does not exhibit a significant impact on Students' Digital Literacy ($P = 0.802$, $P > 0.05$). This finding contrasts with the results of Yazon et al. (2019), who found that the creation of information significantly influenced students' digital literacy. This discrepancy may stem from differences in sample and country, as Yazon et al. (2019) focused on

teachers, while this study surveyed students, and the study was conducted in the Philippines prior to the COVID-19 pandemic. The post-pandemic context in Sri Lanka could have altered the relationship between creating information and digital literacy. In contrast, the findings of Aramide (2022) are consistent with the results of this study, suggesting that the creation of information may not have a significant impact on digital literacy in the context of students. Both studies were conducted in recent years (2022 and 2023), and the findings may be similar due to the temporal alignment.

In conclusion, the differences in findings across studies can be attributed to variations in sample characteristics (teachers vs. students), geographical contexts (Philippines vs. Sri Lanka, Nigeria), and the timing of the studies (pre- and post-COVID-19 pandemic). These factors highlight the need to consider contextual variables when interpreting the results of studies on digital literacy.

4.4 Model Summary

This section shows the multiple regression analysis for the variables. This test is also used to evaluate the study's hypothesis.

R	0.712
R Square	0.507
Adjusted R Square	0.49

Source : Survey Data

The adjusted R-squared value for this study is 0.490, indicating that 49% of the variation in the dependent variable, Students' Digital Literacy, can be explained by the independent variables. This value provides a measure of the explanatory power of the model, suggesting that the independent variables account for a substantial portion of the variance in digital literacy outcomes. For comparison, Aramide (2022) reported an adjusted R-squared value of 0.33, indicating that only 33% of the variation in digital literacy could be explained by the independent variables in that study.

The higher adjusted R-squared value in this study (0.490) compared to Aramide's (2022) study can be attributed to the difference in the number of independent variables included in the models. Aramide (2022) utilized seven independent variables, while this study focused on four independent variables. Typically, the adjusted R-squared value is expected to be higher when more independent variables are included in the analysis; however, it is important to note that the inclusion of additional variables does not always result in a proportionally higher explanatory power.

While an adjusted R-squared value above 70% is often considered ideal, the value of 49% in this study still represents a reasonable level of explanatory power. Digital literacy is a multifaceted and complex concept, encompassing a wide range of skills and competencies. Consequently, it is challenging to

capture the full extent of digital literacy using only four independent variables. The findings are consistent with the nature of the subject, which is broad and may require a more comprehensive set of variables to fully explain the variance in digital literacy outcomes. Therefore, the adjusted R-squared values of both this study and Aramide's (2022) study are appropriate given the scope of their respective models and the complexity of digital literacy as a construct.

4.5 Model Summary

Table 25 Hypotheses Testing

Hypotheses	Correlation coefficient		Regression coefficient		
	Statistic	P value	Statistic	P value	
H1	0.547	0.001	0.159	0.712	Reject
H2	0.691	0.001	0.206	0.001	Accept
H3	0.677	0.001	0.300	0.001	Accept
H4	0.451	0.001	0.021	0.802	Reject

Source : Survey Data

4.6. Results and Discussion

Correlation and multiple regression analyses were used to achieve the study's objectives. The reliability test results indicated that all variables were reliable, with Cronbach's alpha values ranging from 0.85 to 0.92, demonstrating a very good level of reliability.

H1: There is a significant impact of understanding digital practices on Students' Digital Literacy.

According to the result of this study, it says in independent variable of Understanding digital practices has 0.712 of P value, which means that the H0 do not rejected. It indicates that the independent variable of Understanding digital practices do have not significant impact on dependent variable of Students' Digital Literacy. Further, the correlation analysis suggest that the independent variable of understanding digital practices have a moderate positive relationship with the students' digital literacy. ($0.5 < 0.547 < 1$)

Yazon et al., (2019) have found that the understanding digital practices have a significant impact on teachers' Digital literacy. So, my findings and the study were conducted in 2019 findings are different. It may be that the two were different because the sample and country was different. The study conducted in 2019, they have taken teachers as a sample. But in my study in get students as my sample.

And also, this study done in Philippine but my study based on the Sri Lankan context. Furthermore, the study conducted in Philippine done the research in 2019, that mean before the covid-19 pandemic. The covid-19 pandemic most affect to the improvement of people digital literacy. So, findings may change due to these reasons.

H2: There is a significant impact of using Information on Students' Digital Literacy

According to the result of this study, it says in independent variable of Using Information has 0.001 of P value which means that the H0 rejected. It indicates that the independent variable of Using Information has significant impact on dependent variable of Students' Digital Literacy.

Yazon et al., (2019) have found that the using information have a significant impact on students' Digital literacy. So, my findings and the study were conducted in 2019 findings are same. It may be that the two findings were same because both the studies data were gathered from universities and both the countries where Sri Lanka and Philippine have quite similar cultural background.

Aramide, (2022) have found that the using information have a significant impact on Digital literacy. So, my findings and the study were conducted in 2022 findings are different. It may be that the two were different because the sample size and country was different. The study conducted in 2022, they have taken 193 individuals as a sample. But in my study, I get 120 individuals as my sample. And also, this study done in Nigeria but my study based on the Sri Lankan context. Furthermore, the study conducted in 2022, they have taken school student as a sample. But in my study, I get university students as my sample.

Further, the correlation analysis suggest that independent variable of using information have a strong positive relationship with the students' digital literacy. ($0.5 < 0.691 < 1$)

H3: There is a significant impact of finding Information on Students' Digital Literacy

According to the result of this study, it says in independent variable of finding Information has 0.01 of P value, which means that the H0 rejected. It indicates that the independent variable of Finding Information has significant impact on dependent variable of Students' Digital Literacy. Further the correlation analysis suggest that the independent variable of finding information have a strong positive relationship with the students' digital literacy. ($0.5 < 0.677 < 1$)

Yazon et al. (2019) found that the ability to effectively locate and utilize information significantly impacts students' digital literacy. Similarly, the findings of my study, conducted in 2019, align with those of Yazon et al. This alignment may be attributed to the fact that both studies gathered data from university students in countries with comparable cultural contexts, namely, Sri Lanka and the Philippines.

Additionally, Aramide (2022) also identified that the ability to find information has a significant influence on students' digital literacy. My findings, derived from a study conducted in 2023, correspond

with Aramide's results. The similarity in findings could be explained by the fact that both studies were conducted in recent years and involved data collection from student populations. The temporal proximity of these studies may have further contributed to the consistency of results.

H4: There is a significant impact of creating Information on Students' Digital Literacy

According to the results of this study, the independent variable *Creating Information* has a p-value of 0.802, indicating that the null hypothesis (H_0) cannot be rejected. This implies that *Creating Information* does not have a significant impact on the dependent variable, *Students' Digital Literacy*. Additionally, the correlation analysis reveals that the independent variable *Creating Information* has a weak positive relationship with *Students' Digital Literacy*, with a correlation coefficient in the range of 0.451 ($0 < 0.451 < 0.49$).

Yazon et al. (2019) found that *Creating Information* significantly impacts students' digital literacy. However, the findings of my study differ. This discrepancy could be attributed to differences in the sample and context of the two studies. The study conducted in 2019 by Yazon et al. used teachers as the sample population, whereas this study focused on students. Furthermore, their research was conducted in the Philippines, while mine is based on the Sri Lankan context. It is also important to note that their study was conducted prior to the COVID-19 pandemic, which significantly influenced the development of digital literacy worldwide. These differences in sample, context, and time period may account for the variation in findings.

In contrast, Aramide (2022) found that *Creating Information* has a significant impact on students' digital literacy. The findings of the study align with those of Aramide (2022). This consistency may be due to both studies gathering data from student populations. Moreover, Aramide's study was conducted in 2022, and my study in 2023, suggesting that the temporal proximity and similar target populations may have contributed to the alignment of the findings.

5. Conclusion

This study aims to examine the relationship between the independent variables—Understanding Digital Practices, Using Information, Finding Information, and Creating Information—and the dependent variable of students' digital literacy, while also identifying measures to enhance digital literacy among undergraduates in Sri Lanka. The findings from the ANOVA analysis indicate that the model, incorporating all independent variables, is significant. Correlation analysis revealed that Understanding Digital Practices, Using Information, and Finding Information exhibit a strong positive relationship with students' digital literacy, while Creating Information has a weaker positive relationship.

Coefficient analysis further showed that Understanding Digital Practices and Creating Information do not significantly impact students' digital literacy.

Conversely, Using Information and Finding Information were found to have a significant impact on digital literacy. These results suggest that practical experiences related to using and finding information positively affect students' digital literacy, while understanding digital practices and creating information have a lesser impact. The majority of respondents expressed a desire to improve their digital fluency, recognizing its importance for enhancing learning. In response, universities could implement educational programs, workshops, and critical thinking training to foster digital literacy.

Based on the findings of this study, several recommendations can be made to enhance the digital literacy of undergraduates in Sri Lanka. Universities should consider integrating digital literacy training into the curriculum, ensuring that students gain proficiency in critical areas such as using information, finding information, and creating information. This could involve incorporating digital tools and resources into various academic courses and practical assignments, which will allow students to gain hands-on experience in working with technology.

Since the study found that the experience of using information and finding information has a significant positive impact on students' digital literacy, universities should offer specialized workshops that focus on enhancing students' ability to effectively search for and evaluate online information. These workshops could cover essential skills such as using search engines, navigating academic databases, and utilizing online research methods. In addition, universities should encourage students to engage more deeply with digital practices by offering awareness campaigns or training programs that highlight the importance of understanding digital content and engaging with it in various formats such as blogging, video production, or participating in online communities.

It is also essential for universities to provide students with access to modern digital resources, such as software tools, e-libraries, and other platforms that support learning and the development of digital literacy. Furthermore, teaching students how to critically evaluate online information should be a priority, especially in the age of misinformation. Incorporating critical thinking modules that help students assess the reliability and credibility of sources will empower them to navigate the digital landscape with greater confidence.

Additionally, universities should foster a culture of continuous learning by offering online courses, certifications, and exposure to emerging digital trends. This is particularly important as students have expressed a willingness to further develop their digital skills. Finally, post-COVID-19, universities must recognize the accelerated shift to digital learning and ensure that all students have equal access to opportunities for improving their digital fluency. By implementing these strategies, universities in Sri Lanka can play a significant role in enhancing students' digital literacy and equipping them with the necessary skills to thrive in an increasingly digital world.

6. Limitations and Suggestions for Future Research

The study has several limitations, including a small sample size and a focus on only three universities in Sri Lanka. Additionally, the use of a self-reported online survey may introduce bias. Future research could address these limitations by expanding the sample size, including more universities, and employing alternative data collection methods for broader insights..

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Impact of Soft Skills on Project Management Success: Insights from Selected IT Project Handling Companies in Colombo, Sri Lanka

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Abstract

In Sri Lanka's IT industry, where the complexity of projects continuously increases, technical expertise itself is not sufficient to ensure success. This study examines the impact of eight critical soft skills—Trustworthiness, effective communication, conflict management, adaptability, emotional intelligence, cultural awareness, motivation, and Leadership—on the success of an IT project in Colombo. Using a quantitative approach, data was collected from 200 participants, including project managers, IT team leaders, developers, engineers, and stakeholders, through structured questionnaires. The findings suggest that Leadership, motivation, adaptability, and effective communication are the most impactful predictors of project success, while other soft skills also positively contribute. The findings emphasize the importance of IT sector employees developing soft skills to foster better team collaboration, resolve conflicts efficiently, and enhance project results. Additionally, the study provides practical recommendations for improving training programs and project management practices, supporting the competitiveness of Sri Lanka's IT sector.

Further studies could investigate how the development of soft skills influences long-term outcomes across various cultural and organizational settings.

Keywords: : Leadership, Motivation, Effective Communication, Adaptability, IT Project Success, Soft Skills.

1. Introduction

The rapid advancement of digitalization has empowered ICT to drive exceptional economic growth worldwide (Dubey & Tiwari, 2020). Success in the rapidly evolving IT sector is naturally based on technical expertise and the ability to manage interpersonal relationships effectively. While technical skills provide the foundation for executing project tasks, soft skills play a critical role in ensuring project success by fostering collaboration, managing stakeholder expectations, and mitigating conflicts. Misunderstandings, unresolved disputes, and misaligned objectives can derail projects, underscoring the importance of interpersonal competencies in IT project management.

In this study, project success is defined as achieving key outcomes such as cost-time-quality performance, stakeholder satisfaction, organizational benefit, and client satisfaction. These factors collectively highlight the multidimensional nature of project success, which depends on both technical and interpersonal capabilities.

Although global research has acknowledged the theoretical significance of soft skills, there is limited empirical evidence on their impact on the Sri Lankan IT sector. The unique challenges faced by Sri Lankan IT project teams—ranging from diverse stakeholder interests to varying technical expertise and cultural nuances—emphasize the need for context-specific research. This study examines the influence of eight key soft skills—Trustworthiness, effective communication, conflict management, adaptability, emotional intelligence, cultural awareness, motivation, and Leadership—on IT project success in Colombo. By addressing this gap, the research aims to provide actionable insights for enhancing project management strategies and improving project outcomes in Sri Lanka's competitive IT industry.

1.1 Background of The Study

While technical abilities are vital for IT project management success, soft skills are increasingly recognized as critical to achieving project objectives. Project managers, team leaders, and IT professionals must possess a strong technical foundation, yet without the necessary soft skills, technical proficiency alone often falls short. As Bourne (2005) emphasizes, interpersonal skills play a pivotal role in project outcomes because effective collaboration and stakeholder management are essential for meeting objectives.

In Sri Lanka's IT sector, the integration of soft skills into project management practices remains poorly understood. Despite the global acknowledgment of their importance, there is limited empirical research exploring how soft skills contribute to IT project success within Sri Lankan IT project-handling companies. This gap in knowledge is especially significant given the unique challenges faced by Sri Lankan IT project teams, such as diverse stakeholder interests, varying levels of technical expertise, and cultural nuances.

This study addresses this gap by examining the influence of key soft skills on project success within the Sri Lankan IT context. The findings aim to provide actionable insights for improving project management strategies, enhancing IT project outcomes, and fostering organizational success in this dynamic industry.

1.2 Research Questions

1. What are the key soft skills required for project managers to effectively manage IT projects and ensure successful completion?
2. Which project management soft skills have the greatest impact on successful IT project outcomes within Sri Lankan IT companies?.

1.3 Research Objectives

1. What are the key soft skills required for project managers to effectively manage IT projects and ensure successful completion?
2. Which project management soft skills have the greatest impact on successful IT project outcomes within Sri Lankan IT companies?.

2. Literature Review

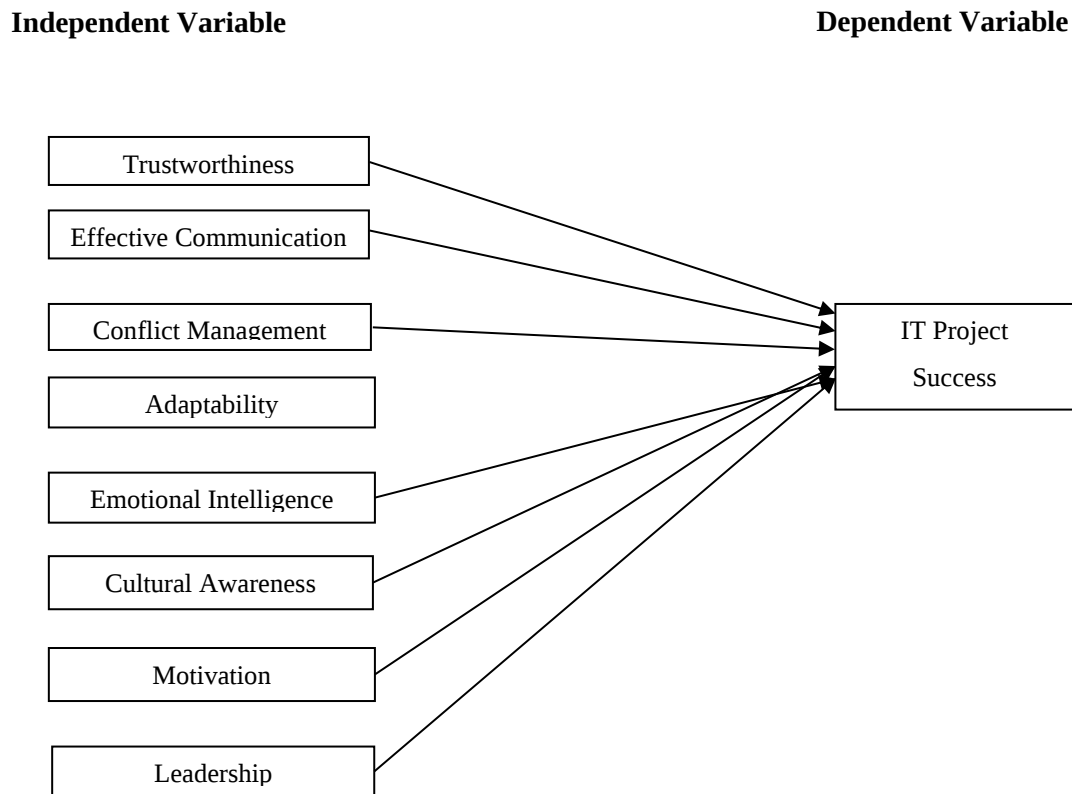
Projects are essential for achieving organizational objectives that align with the strategic goals of the organization (Derakhshan, Turner & Mancini, 2019). As highlighted by Turner and Muller (2003), organizations are increasingly relying on projects to accomplish their strategic goals in today's competitive global economy. Further research has identified that the rise of software as a service projects in digitalized global economies has enhanced decision-making, collaboration, and cost-efficiency in modern operations (Zaman et al., 2019). Given the extensive academic discourse surrounding project success (Joslin & Müller, 2015), there is a growing consensus that diverse project types necessitate distinct management approaches and procedures to ensure effective delivery (Müller & Turner, 2007). Nevertheless, research indicates that project success has not significantly improved, even with improvements in project management processes, tools, and systems (Mir & Pinnington, 2014). To ensure the success of these initiatives, which are frequently complicated and dynamic, a combination of technical know-how and skillful people management is needed. Within the project environment, the complexity of a project can create significant pressure, potentially leading to failure. Therefore, project managers must possess the necessary competencies (Eftekhari et al., 2022). Similar to other service oriented organization, ICT organizations' performance is primarily reliant on the organization's human capital, requiring careful management in an uncertain environment (Dubey, Tewari, 2020). Complex IT projects, characterized by inherent uncertainty, require project managers with strong emotional skills and competencies for effective complexity management. This combined emphasis on interpersonal and technical abilities is essential for project managers to navigate the

obstacles presented by different stakeholder interactions and technological improvements. A project manager's responsibilities go beyond just supervising tasks. It includes setting goals for the project, inspiring and managing the team, and overseeing the project's changing requirements (Turner & Muller, 2003). Several scholars have identified that in addition to technical expertise, software projects also require social skills for success (kerzner & kerzner, 2017; Zaman et al., 2019). Given that the success of projects depends on the cooperative efforts of numerous team members and stakeholders, effective people management is crucial to ensuring that project goals are met. The success of a project is greatly influenced by key soft skills. Being trustworthy encourages team members to appreciate and work together, which is crucial for project success (Al Awabdeh & Yousef, 2017). Effective communication ensures that project goals are clearly understood and helps manage stakeholder expectations, aligning team efforts (Al Awabdeh & Yousef, 2017). Teamwork is facilitated, and misalignment is avoided because of this transparency (Rosenau, 1998). Disagreements can occur in varied IT teams; thus, conflict management is essential. Maintaining team cohesiveness and project momentum requires proactive dispute resolution (Al Awabdeh, 2017). According to Goleman (1995), emotional intelligence (EI) fosters a positive team environment by improving communication and dispute resolution. To effectively respond to evolving project needs and technical improvements, project managers must be adaptable (Fernandez & Fernandez, 2008). In multinational teams, cultural awareness is essential for preventing miscommunications and promoting cooperation (Trompenaars & Hampden-Turner, 2011). Team performance is significantly influenced by motivation, which guarantees alignment with project goals. Successful outcomes are more likely to be achieved by a motivated team (Al Awabdeh, 2017). Emotional, intellectual, and managerial skills are all part of Leadership, which helps teams overcome challenges and develop trust (Dulewicz & Higgs, 2003). The research emphasizes how crucial soft skills such as Trustworthiness, communication, conflict management, emotional intelligence, adaptability, cultural awareness, motivation, and Leadership are to the success of projects. These observations are crucial for evaluating how these abilities affect Sri Lankan IT project management companies.

3. Conceptual Diagram

The conceptual framework of this study examines the connection between the success of IT projects in Sri Lankan enterprises and soft skills. It establishes a link between these soft talents and important success factors including cost, time, quality performance, stakeholder satisfaction, and organizational benefits.

Figure 13 Conceptual Framework



4. Methods

This study plans to use the hypothetical-deductive method since most applicable research uses a deductive approach in this context (Bahrainizad and Rajabi, 2018a; Silayoi and Speece, 2007a). This study follows a quantitative approach in a mix of positivist and realist research philosophies. The positivist philosophy emphasizes objective, measurable phenomena, aligning with the study's reliance on structured surveys and statistical analysis. Numerical, statistical, or mathematical analytical techniques using quantitative data can be applied within a theoretical framework. According to (Sekaran and Bougie, 2010), quantitative research and the deductive approach are connected. Choosing into account each of these factors, the 'Quantitative Method' will be used to gather data for the study. Realism complements this by acknowledging objective realities while considering empirical evidence to explore relationships between variables. These combined approaches ensure that the results are unbiased, reliable, and applicable within the Sri Lankan IT project management context.

The study investigates the influence of eight key soft skills—trustworthiness, effective communication, conflict management, adaptability, emotional intelligence, cultural awareness, motivation, and Leadership—on IT project success. Soft skills were measured using Likert-scale questions, with responses indicating the perceived impact of each skill. IT project success was evaluated based on

established criteria such as cost-time-quality performance, stakeholder satisfaction, and overall organizational benefit. These metrics were derived from prior literature and adapted to the context of the Sri Lankan IT sector.

The research population consisted of employees in IT project management roles within companies located in Colombo, Sri Lanka—a hub for IT and technology-driven industries. The target population included project managers, IT team leaders, developers, engineers, and other stakeholders involved in IT projects. The study employed a stratified sampling method to ensure representation across different roles and experience levels in IT project management. A sample size of 150 was initially determined using the Morgan table, which provides a statistically valid sample size for populations exceeding 10,000 individuals. This sample size was deemed sufficient to ensure the study's reliability and validity. However, data collection efforts successfully yielded 200 responses, exceeding the minimum requirement. This expanded sample size enhances the rigour and reliability of the findings by providing a broader representation and improving the statistical power of the analysis.

Primary data was collected via structured electronic surveys distributed to participants over a two-week period, with reminders sent to enhance response rates. The questionnaire, designed based on insights from prior research, included sections for each of the eight soft skills and their perceived importance for project success. Secondary data was sourced from scholarly articles and industry reports to validate and contextualize the findings.

Efforts were made to minimize bias in participant recruitment by employing stratified sampling and ensuring a representative sample across roles. Participants were assured of anonymity and confidentiality to encourage honest responses, and data collection adhered to ethical standards through informed consent.

Survey data was analyzed using SPSS. Descriptive statistics summarized the data, while Pearson correlation and regression analyses examined the relationships between soft skills and IT project success. Reliability was confirmed through Cronbach's alpha, ensuring the internal consistency of the survey instrument.

5. Data Analysis and Results

5.1 Demographic Information

This research analyzed responses from 200 participants working in IT project-handling companies in Colombo, Sri Lanka. The sample comprised 72.5% males and 27.5% females, with the age group with the highest percentage of participants being 36–46 years (48.5%). In terms of education, 52.5% held bachelor's degrees. Most respondents were senior professionals (61.5%). Career roles included project managers (41%), senior developers/engineers (24.5%), IT team leaders (20.5%), and

stakeholders/others (14%). Experience-wise, most respondents, 36%, had 16-20 years of IT experience.

5.2 Reliability Testing

Table 26 Reliability Testing

No	Independent Variables	Alpha
1	Trustworthiness	0.761
2	Effective Communication	0.737
3	Conflict Management	0.797
4	Adaptability	0.774
5	Emotional Intelligence	0.756
6	Cultural Awareness	0.710
7	Motivation	0.708
8	Leadership	0.776
No	Dependent Variable	Alpha
1	IT Project Success	0.848

The reliability analysis demonstrated strong internal consistency, with a Cronbach's Alpha of 0.917 for all 16 items representing eight soft skills. The dependent variable, IT project success, received a score of 0.848, and each skill got a value over 0.7, suggesting strong reliability.

5.3 Correlation Analysis

Table 27 Correlation Analysis

Correlations

		Trustworthiness	Effective Communication	Conflict Management	Adaptability	Emotional Intelligence	Cultural Awareness	Motivation	Leadership	DV IT Project Success
DV IT Project Success	Pearson	.377**	.417**	.324**	.421**	.365**	.371**	.425**	.483**	1
	Correlation									
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	
	N	200	200	200	200	200	200	200	200	200

All soft skills and the success of IT projects have significant positive associations, according to the Pearson correlation study ($p < 0.001$). Leadership had the moderate highest correlation ($r = 0.483$), followed by motivation ($r = 0.425$), adaptability ($r = 0.421$), and effective communication ($r = 0.417$). Trustworthiness ($r = 0.377$), cultural awareness ($r = 0.371$), emotional intelligence ($r = 0.365$), and conflict management ($r = 0.324$) also showed moderate lowest correlations.

5.4 Regression Analysis

5.4.1 Backward Stepwise Regression

In order to improve the equation for accuracy, a backward stepwise regression analysis will be performed to choose the most appropriate model that depicts the association between soft skills and IT project performance.

$$Y = f(x_1 + x_2 + \dots)$$

$$Y (\text{project success}) = f (\text{trustworthiness} + \text{effective communication} + \text{conflict management} + \text{Adaptability} + \text{emotional intelligence} + \text{cultural awareness} + \text{motivation} + \text{leadership})$$

Equation 1: Equation to Model the Relationship between PM Soft Skill factors and their Impact on Project Success

The backward stepwise regression analysis below the model summary table showed model 6 as a significant predictor of IT project success, explaining 54.4% of the variance ($R = 0.544$, $R^2 = 0.296$). The Durbin-Watson value was 1.827, close to 2, indicating no autocorrelation in Model 6, and the model demonstrated a good fit ($F = 27.489$, $p < 0.001$).

Table 28 Backward Stepwise Regression Model Summary

Model Summary

Change Statistics										
Model	R	R Square	Adjusted R Square	Std. Error R		F	df1	df2	Sig.	F Durbin-Watson
				of	the Square					
				Estimate	Change	Change			Change	
1	.552 ^a	.305	.275	.35185	.305	10.455	8	191	<.001	
2	.552 ^b	.304	.279	.35099	.000	.065	1	191	.799	
3	.551 ^c	.304	.282	.35017	.000	.105	1	192	.746	
4	.550 ^d	.303	.285	.34951	-.001	.263	1	193	.608	
5	.549 ^e	.302	.287	.34898	-.001	.409	1	194	.523	
6	.544^f	.296	.285	.34942	-.005	1.497	1	195	.223	1.827

Coefficients table shows model 6 indicates that strong effective communication, emotional intelligence, and leadership are important indicators of project success. Since every beta value is positive, the dependent variable has benefited from the contribution. The model's validity is supported by the low VIF values, which imply no significant multicollinearity among the independent variables (statisticsnowto 2017).

The impact of soft skills elements on project success can be expressed with the below regression model equation.

$$\text{Project Success} = 1.663 + 0.177 \text{ Effective Communication} + 0.140 \text{ Emotional Intelligence} + 0.315 \text{ Leadership}$$

Equation 1 Regression Model Equation for Project Success

Table 29 Backward Stepwise Regression Model Coefficients

Coefficients

Model-6	Standardized				95.0% Confidence Interval for B				Collinearity Statistics			
	Unstandardized Coefficients				Lower Bound				Upper Bound			
	Std. Error				T				Sig.			
	Beta				Partial Correlation				Tolerance			
(Constant)	1.663	.325			5.112	<.001	1.021	2.304				
Effective Communication	.177	.066	.190		2.659	.008	.046	.308	.417	.187	.15	.703
Emotional Intelligence	.140	.055	.171		2.565	.011	.032	.248	.365	.180	.15	.810
Leadership	.315	.070	.321		4.470	<.001	.176	.453	.483	.304	.26	.698

5.4.2 Simple Regression

The effect of soft skills on the success of IT projects in Colombo was evaluated using simple regression. This approach examined how soft skills affect the effectiveness of IT projects on both a group and individual level. By avoiding problems with complexity and multicollinearity, this approach made it possible to analyze how ability affected the success of the project

Table 30 Simple Regression Analysis Between IV and DV(ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.497	1	9.497	76.744	<.001^b
	Residual	24.502	198	.124		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), IV Soft Skills

Strong statistical significance is indicated by the table's ANOVA, F-value of 76.744 and p-value < 0.001. This demonstrates how well the regression model fits the data and explains how soft skills and IT project success are related.

Table 31 Simple Regression Analysis Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.529 ^a	.279	.276	.35178

With an R-value of 0.529, which indicates a positive correlation, the Model Summary reveals that soft skills account for 52.9% of the variance in IT project success. The model's fit and dependability are validated by the R Square value (0.279) and Adjusted R Square (0.276).

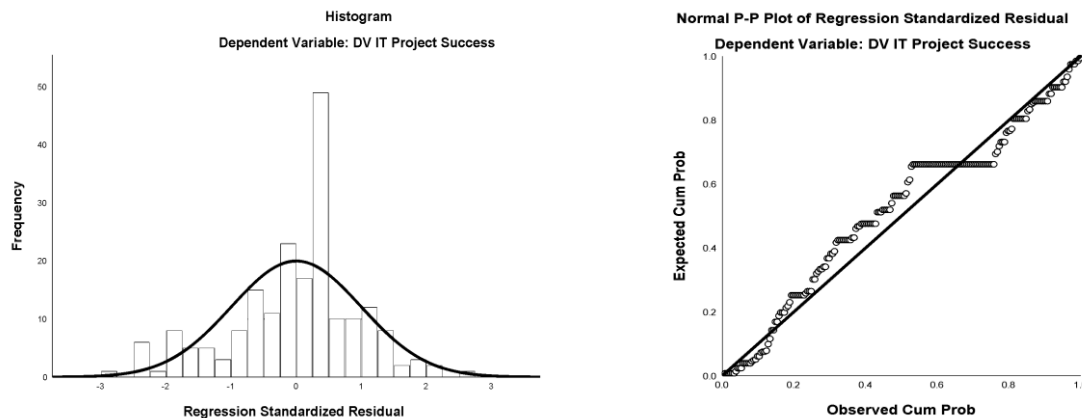
Table 32 Simple Regression Analysis Beta Factor

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	1.763	.325		5.422	<.001
	IV Soft Skills	.618	.071	.529	8.760	<.001

a. Dependent Variable: DV IT Project Success

Soft skills and the success of IT projects are strongly positively correlated, as indicated by the Standardized Coefficients' beta value of 0.529. The significance of this link is confirmed by the p-value of less than 0.001, underscoring the critical role that soft skills play in improving project success.



Both the histogram and the Normal P-P plot confirm to the residuals' unbiased and normal distribution. This illustrates how well the regression model predicts the success of IT projects based on soft skills.

1. Trustworthiness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.377 ^a	.142	.138	.38376

a. Predictors: (Constant), Trustworthiness

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.839	1	4.839	32.856	<.001 ^b
	Residual	29.160	198	.147		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Trustworthiness

An R-value of 0.377 suggests a moderately positive link between trustworthiness and the success of IT projects. With an R^2 value of 0.142, reliability accounts for 14.2% of the variance in project success. The statistical significance of the association is indicated by the F-value of 32.856 ($p < .001$), indicating that trustworthiness is a crucial factor in deciding the outcome of IT projects.

2. Effective Communication

Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.417 ^a	.174	.170	.37663

a. Predictors: (Constant), Effective Communication

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.912	1	5.912	41.678	<.001 ^b
	Residual	28.087	198	.142		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Effective Communication

With an R-value of 0.417, effective communication has a stronger correlation with the success of IT projects. With an R² value of 0.174, communication accounts for 17.4% of the variation in IT project success. This finding is highly significant with an F-value of 41.678 ($p < .001$). This demonstrates that, in addition to trustworthiness, good communication has a more significant role in explaining the variety of performance in IT projects.

3. Conflict Management

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.324 ^a	.105	.100	.39203

a. Predictors: (Constant), Conflict Management

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.569	1	3.569	23.220	<.001^b
	Residual	30.431	198	.154		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Conflict Management

An R-value of 0.324 indicates that the favourable link between conflict management and IT project success is comparatively less. With an R² value of 0.105, conflict management has the lowest level of explanation for project success variance, accounting for only 10.5% of the variance. Compared to other variables in the model, conflict management may not be a strong predictor of IT project success, yet the F-value of 23.220 ($p < .001$) confirms the relevance of this association.

4. Adaptability

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.421^a	.177	.173	.37591

a. Predictors: (Constant), Adaptability

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.021	1	6.021	42.608	<.001^b
	Residual	27.978	198	.141		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Adaptability

An R-value of 0.421 indicates a substantial positive link between adaptability and the success of IT projects. With an R² of 0.177, adaptation accounts for 17.7% of the variance in project performance. The F-value of 42.608 ($p < .001$) suggests that this result is very significant, underscoring the need to

be adaptable in the dynamic environment of IT projects. The importance of adaptability in project management is highlighted by the fact that it greatly influences the prediction of IT project success.

5. Emotional Intelligence

Model Summary

Model	R	R Square	Adjusted R Square	R Std. Error of the Estimate
1	.365 ^a	.133	.128	.38587

a. Predictors: (Constant), Emotional Intelligence

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.517	1	4.517	30.339	<.001 ^b
	Residual	29.482	198	.149		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Emotional Intelligence

With an R-value of 0.365, emotional intelligence has a moderate positive effect on the success of IT projects. Emotional intelligence accounts for 13.3% of the variance in project success, according to the R² value of 0.133. The association is substantial, as indicated by the F-value of 30.339 ($p < .001$), indicating that emotional intelligence is critical to the effective management of IT projects, especially when it comes to controlling team dynamics and stress levels.

6. Cultural Awareness

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.371 ^a	.138	.133	.38480

a. Predictors: (Constant), Cultural Awareness

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.681	1	4.681	31.615	<.001^b
	Residual	29.318	198	.148		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Cultural Awareness

Cultural awareness has a similar influence on IT project success, with an R-value of 0.371. With an R² value of 0.138, cultural awareness accounts for 13.8% of the variance in project success. This factor's significance is indicated by its F-value of 31.615 ($p < .001$). Understanding and being aware of cultural variations in IT projects promotes better collaboration and project outcomes, particularly in diverse or foreign teams.

7. Motivation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.425^a	.181	.177	.37508

a. Predictors: (Constant), Motivation

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.144	1	6.144	43.672	<.001^b
	Residual	27.855	198	.141		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Motivation

An R-value of 0.425 indicates that motivation and IT project success have a comparatively substantial positive association. With an R^2 of 0.181, motivation is one of the model's more potent predictors, accounting for 18.1% of the variance in project performance. The F-value of 43.672 ($p < .001$) indicates a very significant result. Given that motivation fosters dedication and productivity, this means that teams with high levels of motivation are more likely to succeed in IT projects.

8. Leadership

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.483 ^a	.233	.229	.36296

a. Predictors: (Constant), Leadership

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.915	1	7.915	60.085	<.001 ^b
	Residual	26.084	198	.132		
	Total	33.999	199			

a. Dependent Variable: DV IT Project Success

b. Predictors: (Constant), Leadership

An R-value of 0.483 indicates that the strongest correlation between leadership and the success of IT projects. With an R^2 of 0.233, leadership is the most significant component in the model, accounting for 23.3% of the variance in project performance. This conclusion is strongly supported by the F-value of 60.085 ($p < .001$). Strong leadership abilities are essential for managing teams, resources, and the general direction of IT projects, as evidenced by the significant impact effective leadership appears to have on project outcomes.

In conclusion, it has been established that soft skills play a major role in the success of IT projects. Using SPSS for Reliability, Correlation, and Regression Analysis, the data analysis verifies that trustworthiness, effective communication, adaptability, conflict management, emotional intelligence, cultural awareness, motivation, and leadership are important factors that predict project success. With all p-values ($p < 0.001$), every variable shows a statistically significant influence on the results of IT projects.

According to the data, IT project-handling businesses in Colombo, Sri Lanka have a higher chance of project success when all eight of these soft skills are used together. This demonstrates that a project manager who successfully applies these soft skills has a higher chance of achieving successful project outcomes.

5.5 Hypothesis Testing

The effect of each soft skill on project success was quantified separately using simple regression. The final findings were utilized to test hypotheses and validate the impact of particular soft skills on the success of IT projects.

Table 33 Hypothesis Testing

Hypothesis	Standard Coefficient Beta value	Significant value	Result
H1: There is a significant relationship between trustworthiness and IT project success in Sri Lankan IT project-handling companies.	0.377	< 0.001	H1: Accepted
H2: There is a significant relationship between effective communication and IT project success in Sri Lankan IT project-handling companies.	0.417	< 0.001	H2: Accepted
H3: There is a significant relationship between conflict management and IT project success in Sri Lankan IT project-handling companies.	0.324	< 0.001	H3: Accepted
H4: There is a significant relationship between adaptability and IT project success in Sri Lankan IT project-handling companies.	0.421	< 0.001	H4: Accepted
H5: There is a significant relationship between emotional intelligence and IT project success in Sri Lankan IT project-handling companies.	0.365	< 0.001	H5: Accepted
H6: There is a significant relationship between cultural awareness and IT project success in Sri Lankan IT project-handling companies.	0.371	< 0.001	H6: Accepted

H7: There is a significant relationship between motivation and IT project success in Sri Lankan IT project-handling companies.	0.425	< 0.001	H7: Accepted
H8: There is a significant relationship between leadership and IT project success in Sri Lankan IT project-handling companies.	0.483	< 0.001	H8: Accepted

5.6 Results Summary

Table 9 below presents the consolidated findings of the statistical analysis, summarizing the correlation coefficients, significance levels, regression coefficients, and variance explained for each of the eight soft skills studied. The results indicate that Leadership, motivation, adaptability, and effective communication are the most impactful predictors of IT project success, with Leadership showing the highest correlation ($r = 0.483$, $p < 0.001$) and variance explained ($R^2 = 23.3\%$).

Emotional intelligence, cultural awareness, Trustworthiness, and conflict management also demonstrated moderate but significant positive correlations with project success, highlighting their importance in fostering effective collaboration and managing team dynamics.

Table 34 Summary of Results

Soft Skill	Correlation (r)	p-value	Regression Coefficient (β)	R² (%)	Hypothesis Result
Leadership	0.483	<0.001	0.315	23.3	Accepted
Motivation	0.425	<0.001	0.14	18.1	Accepted
Adaptability	0.421	<0.001	0.177	17.7	Accepted
Effective Communication	0.417	<0.001	0.177	17.4	Accepted
Emotional Intelligence	0.365	<0.001	0.14	13.3	Accepted
Cultural Awareness	0.371	<0.001	-	13.8	Accepted

Trustworthiness	0.377	<0.001	-	14.2	Accepted
		1			
Conflict Management	0.324	<0.001	-	10.5	Accepted
		1			

5 Discussion

This study highlights the critical role of soft skills in the success of IT projects within Sri Lanka's dynamic technological environment. The combined impact of soft skills amplifies overall project performance, with Leadership, motivation, adaptability, and effective communication emerging as the strongest predictors of IT project success ($r = 0.483$, $p < 0.001$; $r = 0.425$, $p < 0.001$; $r = 0.421$, $p < 0.001$; $r = 0.417$, $p < 0.001$). Other soft skills—emotional intelligence, cultural awareness, conflict management, and Trustworthiness—also demonstrated moderate but significant positive associations with project success.

In today's environment, becoming a successful software professional requires a blend of both technical (hard) and interpersonal (soft) skills, such as teamwork, problem-solving, communication, critical thinking, leadership, and initiative (Borges & de Souza, 2024). The prominence of Leadership as the most impactful skill aligns with global studies, such as those by Dulewicz and Higgs (2003), which emphasize the centrality of Leadership in motivating teams, resolving conflicts, and maintaining focus on project goals. Further researchers have identified that, leadership's impact on outcomes emphasizes the need for project managers to prioritize leadership training and continuous professional development (Nixon, Harrington, & Parker, 2012). In Sri Lanka's IT sector, strong Leadership enables managers to navigate dynamic project environments, align team efforts with organizational objectives, and address unique cultural challenges. Adaptability was identified as a key determinant of success, particularly in the fast-paced IT industry, where projects often involve changing client requirements and technological advancements. This finding echoes global literature, including Fernandez and Fernandez (2008), which highlights adaptability as crucial for maintaining project momentum during unforeseen changes.

The development of soft skills is essential for Software Engineers, along with effective teaching methodologies that foster these skills and boost motivation and engagement (Borges & de Souza, 2024). Motivation significantly influences project success by fostering team commitment and engagement. Motivated teams are more likely to exceed expectations, as supported by studies such as Thamhain (2004), which underline the importance of motivation in aligning team efforts with project objectives. Effective communication minimizes misunderstandings and ensures alignment among stakeholders, which is particularly vital in collaborative environments. This finding is consistent with Fisher (2011) and Tahir (2019), who emphasize communication as a foundational skill that underpins

other interpersonal competencies. Emotional intelligence and cultural awareness were particularly significant in managing diverse teams and fostering collaboration. These findings are supported by Goleman (1995) and Trompenaars and Hampden-Turner (2011), who identify these skills as critical for navigating interpersonal dynamics and mitigating cross-cultural conflicts. Further, Davaei et al. (2022) highlighted that addressing conflicts in organizations with cultural sensitivity enhances job satisfaction and boosts work performance.

The study underscores that while technical skills are indispensable for managing IT projects, soft skills are integral for fostering collaboration, managing team dynamics, and ensuring stakeholder satisfaction.

6 Limitations

While this study provides valuable insights into the relationship between soft skills and IT project success in Sri Lanka, it is important to acknowledge several limitations that may affect the generalizability of the findings. Firstly, the study's focus on the Sri Lankan IT sector means that the results may not be applicable to other industries or countries with different cultural contexts. Soft skills may be perceived and valued differently in other industries, and the cultural nuances of Sri Lanka might influence how these skills are applied and evaluated.

Secondly, the study relied on self-reported data, which may introduce biases, as participants' perceptions of their own or their project managers' soft skills may not accurately reflect their actual effectiveness. Additionally, the study did not differentiate between various types of conflict management (e.g., task-based vs. interpersonal) or communication modalities (e.g., verbal vs. written), which could offer more nuanced insights into the role of these skills in project success.

Finally, the research did not explore the proactive versus reactive components of adaptability in managing dynamic IT environments. Future research could delve deeper into these aspects to uncover how project managers can better anticipate changes in project scope, technology, and team dynamics..

7 Conclusion

This study reinforces the critical role that soft skills play in the success of IT project management in Sri Lanka. While technical expertise remains essential, the findings emphasize that soft skills, such as Leadership, motivation, effective communication, emotional intelligence, and cultural awareness, are integral to managing team dynamics, fostering collaboration, and achieving project objectives. Organizations should prioritize the development of these interpersonal skills in their project managers to enhance project outcomes and adapt to the rapidly evolving IT industry.

The study's findings call for a broader focus on soft skills training and development for project managers in Sri Lankan IT companies. Future research should explore the long-term impact of soft skills on project success and investigate their role in cross-cultural and international IT projects,

providing a more comprehensive understanding of their application across different industry contexts. Comparisons with global studies demonstrate that Sri Lanka's IT sector aligns with international trends regarding the value of soft skills, though cultural nuances present unique challenges and opportunities for further exploration.

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Adoption of Computerized Accounting Systems (CAS) in SMEs: A Study of Manufacturing Firms in Sri Lanka

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Abstract

This paper intended to investigate and explore the practices in adopting CAS in SMEs specially focusing on practices of manufacturing firms in Sri Lanka. The study mainly focuses on the impact of accounting expertise, technological change, and cost, in relation to the adoption decision regarding adopting CAS. The study design as quantitative research using survey method in data collection connecting to manufacturing oriented SME's in Sri Lanka using the snowballing sampling method. The study identified that advanced technological capabilities and a higher level of accounting expertise significantly enhance the adoption of Computerized Accounting Systems (CAS) among SMEs in the manufacturing sector in Sri Lanka. Conversely, the high cost of implementation was found to be a major impediment to the adoption process. Additionally, the findings highlighted that adequate training and ongoing support are critical prerequisites for achieving effective CAS integration within SMEs. These insights suggest that targeted interventions, such as subsidized training initiatives, could play a pivotal role in promoting CAS adoption, thereby enhancing decision-making efficiency within these firms. The study further emphasizes the need for future research to explore the impact of varying degrees of governmental support and policy adaptations on fostering widespread CAS implementation across SMEs. This could provide valuable insights into strategies for overcoming existing barriers and leveraging technology for improved organizational outcomes.

Keywords: CAS, SMEs, adoption factors, technological change, cost, Sri Lanka.

1. Introduction

The increasing reliance on computerized systems has revolutionized accounting practices globally, offering significant improvements in efficiency, accuracy, and decision-making capabilities. Computerized Accounting Systems (CAS) have become indispensable tools for modern businesses, enabling efficient financial management, regulatory compliance, and operational streamlining (Mohamed & Ramli, 2022). Large enterprises, equipped with robust information and communication technology (ICT) systems, have successfully leveraged automation to optimize their financial functions and enhance overall productivity. However, the adoption of such technologies in Small and Medium Enterprises (SMEs) presents distinct challenges, particularly in resource-constrained environments like developing economies.

SMEs form a strong foundation for many economies, contributing significantly to employment, innovation, and industrial growth via contributing to the national production. In Sri Lanka, the SME sector accounts for a substantial share of economic activity, with manufacturing SMEs playing a vital role (Kaluarachchi et al., 2014). Despite their importance, these enterprises often struggle with technological adoption due to limited financial resources, inadequate technical expertise, and concerns about the costs associated with implementing advanced systems. While the advantages of CAS—such as increased accuracy, time savings, and improved decision-making—are well-documented, SMEs frequently perceive these systems as complex and financially prohibitive. This raises critical questions about the small businesses' capacity of automating their financial operations with limited resources and their ability to remain competitive in a rapidly evolving business environment without such automation (Wijekumara, 2022).

Automation in financial operations is no longer a novel requirement but a necessity for businesses seeking to thrive in a competitive landscape. Nevertheless, small businesses often face barriers, such as the high initial investment required for sophisticated systems and the technical know-how needed for successful implementation (Okoye & Onyeneke, 2024). These constraints can make the adoption of CAS seem daunting. Nevertheless, there are accessible and user-friendly solutions that enable SMEs to embark on the journey of automation incrementally. Starting with basic accounting software and gradually transitioning to more advanced tools as they grow, SMEs can improve their financial operations without incurring significant upfront costs.

This study investigates the adoption of CAS among manufacturing SMEs in Sri Lanka, focusing on the key factors that influence their decisions. It examines enablers such as technological advancement, accounting expertise, and accessible training, as well as barriers like implementation costs and the need for technical support. Furthermore, the research explores strategies for overcoming these challenges, including targeted interventions such as subsidized training programs and policy support. By

addressing these issues, the study aims to provide actionable insights to enhance CAS adoption, ultimately fostering greater efficiency, competitiveness, and sustainability within Sri Lanka's SME sector. This research contributes to the broader discourse on technology adoption in the financial sector, emphasizing the critical need for tailored solutions that empower small businesses in developing economies primarily answering the following research questions

- What is the perception of small and medium-sized businesses towards adopting CAS in terms of technological change, accounting expertise and cost?
- What are the advantages of adopting CAS in small and medium-sized businesses?
- What is the impact of technological change, accounting expertise and cost in the adoption of computerized accounting systems in small and medium-sized manufacturing companies in Sri Lanka?

2. Literature Review

Innovations in accounting systems have revolutionized organizational operations, providing a significant competitive advantage to those who embrace these advancements. Automated accounting systems are designed to deliver accurate, dependable, and consistent financial outputs (Ismail et al., 2012). Modern computerized accounting systems (CAS) have become indispensable for decision-making, enabling management to make highly informed judgments (Day, 2000). Reliable accounting systems enhance efficiency, and their absence can adversely affect organizational performance (Ismail, 2012). CAS plays a critical role in manufacturing and other industries by streamlining financial data processing, improving overall efficiency, and supporting key decisions related to pricing, spending, and cash flow (Osinowo, 2018). These systems facilitate financial monitoring and generate periodic reports to evaluate profitability, performance, and tax compliance (P Machera & C Machera, 2017). Furthermore, CAS enhances operational performance by identifying business challenges and aiding in the preparation, monitoring, and review of firm performance (Ayoobkhan, 2018). Globally, adopting CAS is essential, especially in developing economies, for timely and accurate execution of financial tasks (Darshi, 2019). However, internal and external barriers often hinder efficient implementation in various industries (Ismail, 2012). With technological advancements, businesses increasingly prioritize sustainability, customer loyalty, and effective decision-making (Itang, 2020). Modern CAS leverages Information Communication Technology (ICT) to process financial data more efficiently and accurately compared to traditional manual methods (Ilias et al., 2009). This innovation supports business process optimization, reduces human error, and accelerates financial reporting. By implementing the appropriate frameworks, businesses can optimize gains, mitigate challenges, and ensure effective management decisions (Jayamaha & Karunananda, 2011). Small and medium-sized enterprises (SMEs), pivotal to global economic growth, benefit significantly from CAS adoption. Historically reliant on manual bookkeeping, many SMEs now utilize CAS to enhance productivity,

reduce time-intensive processes, and improve decision-making accuracy (Munasinghe & Munasinghe, 2015). In a rapidly transforming global market, CAS stands out as a critical tool for fostering innovation, efficiency, and sustainable growth.

Research highlights the significant impact of computerized accounting systems (CAS) and accounting information systems (AIS) on organizational efficiency, transparency, and financial performance. Otengo et al. (2023), emphasized the importance of CAS in enhancing risk-based internal auditing (RBIA) for accountability and transparency in Kenya's Homa Bay County. Similarly, P Machera & C Machera (2017) found that CAS improves the quality of financial reports in NGOs by ensuring accuracy and timeliness. Studies by Abdulle et al. (2019) and Biyela et al. (2024), revealed that many small and medium-sized enterprises (SMEs) neglect sound accounting systems, often leading to poor performance. Aduamoah (2017), demonstrated that AIS improves decision-making through centralized and quality data analysis. management commitment, training, and vendor expertise are critical for AIS effectiveness and globally, it is recommended to adopt reliable AIS to improve organizational performance, supported by government policies and skilled graduates to enhance implementation (Osinowo, 2018).

Adopting Computerized Accounting Systems (CAS) reflects a global shift toward leveraging technology for enhanced financial management and organizational efficiency. Perceived ease of use and managerial support are critical for CAS adoption in SMEs, while there is a need for education on CAS benefits and regular software updates (Lanlan, et al., 2019). Similarly, Ismail (2012) found that user attitudes toward CAS are influenced by ease of use and perceived usefulness, with compliance and behavioral intention playing significant roles. Studies across regions have underscored the challenges and enablers of CAS adoption. Perceived ease of use and usefulness strongly influence CAS adoption in small businesses, and the cost, infrastructure, and government support are critical barriers in developing countries (Aduamoah, 2017). Ismail et al. (2012) highlighted CAS's role in integrating information, improving employee performance, and ensuring accurate reporting. Globally, CAS adoption is driven by technological advancements and the increasing need for accurate, timely, and efficient financial systems. Despite challenges, CAS remains vital for modern businesses aiming to optimize operations and embrace digital transformation.

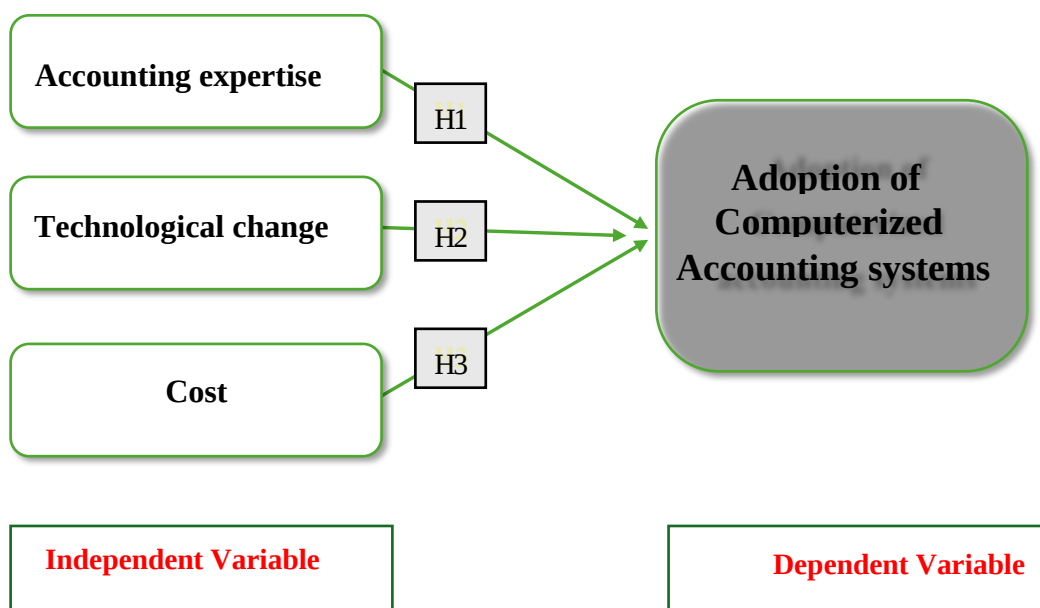
The adoption of Computerized Accounting Systems (CAS) faces significant cost-related barriers across various sectors. Aduamoah (2017) highlighted that coffee societies in Kenya struggle with high hardware and software acquisition costs, recommending zero-rated products to lower expenses. Similarly, financial resources are critical for SMEs to adopt CAS effectively and high costs prevent SMEs from maintaining proper financial records (Abdulle et al., 2019), while Kaluarachchi (2014) noted that Sri Lankan entrepreneurs face challenges in implementing systems due to financial constraints and uncertainty in selecting suitable solutions. Nworie et al. (2023) suggested tax incentives

and awareness programs to encourage CAIS adoption in Ethiopia. These studies collectively emphasize the need for financial support, incentives, and cost-effective solutions to mitigate the expense of CAS adoption, enabling businesses to leverage technology for improved efficiency and accountability.

3. Methodology

The impact of computer based accounting on small and medium-sized businesses (SMEs) is assessed with the positivism approach. survey data is used for statistical analysis, and the unit of analysis of the research is the responsible party for the finance function of small and medium-scale businesses in Sri Lanka to understand their experiences with computer-based accounting systems. Each user within an SME was regarded as a unit of analysis, with emphasis on their interaction with and impact on the use of these technologies in Sri Lanka. The data related to the study was collected using a questionnaire consisting of two sections. The first section focuses on collecting demographic data of the respondents, and the second section focuses on gathering data relevant to the variables discussed in the study.

Figure 14 Conceptual Framework



H1: There is a significant impact of accounting expertise on the adoption of computerized accounting systems.

H2: There is a significant impact of Technological changes on adoption of computerized accounting systems.

H3: There is a significant impact of cost on adoption has a computerized accounting systems

4. Data presentational and analysis

4.1 Background of the data

The study sampled 383 participants with an approximately equal distribution of gender, 51.7% and 48.3% being for male and female respondents. The age distribution indicates that the majority of the respondents are younger, with 43.9% falling within the 26-34 age bracket and 36.8% within the 18-25 age bracket. Only a small percentage of respondents is over 45 years of age. Young professionals at the early and middle stages of their careers show greater use of computerized accounting systems. The majority of the respondents had attained a bachelor's degree, making about 61.6%, followed by a high school diploma at 17.5% and a master's degree at 9.9%. This portrays that higher education plays a significant role in adopting computerized accounting systems. As an example of formal education and technical expertise in the specific field showing the importance of specialized training in the field. Half the respondents have between 1 and 2 years of experience in using CAS, highlighting that most users are relatively new to the technology but at least have some familiarization. Further, 7.8% have used CAS for over six years, which would indicate that the long-term usage of such systems is not common. This trend indicates the increasing interest of the business world and their integration towards computerized accounting systems, especially among the new users. 44.1% of the respondents are positioned as accounting assistants, followed by 26.9% of Finance Managers, and 18.8% are owners. This indicates that operational-level employees in finance divisions are more in contact with CAS, and the decision-makers like finance managers and business owners also show a high engagement. Since several levels of management involvement were there, it shows that the engagement in adopting such systems was not only an operational staff requirement but also for the management level, as this is very crucial and contributes to the general business strategies.

4.2 Advantages experienced using CAS

Regarding the advantages of using CAS it is highlighted that CAS have been able to manage a large set of transactions with speed and accuracy. The efficiency aspect is very important for an organization, mostly for SMEs, since a large set of financial data would take more time, and the probability of error will also increase in the case of a manual system. Other features of computerized accounting systems include their ability to adapt to the increase in the number of transactions. In addition, as a business grows, so do the transactions. Computerized systems are programmed to operate within expansion with the least lag, which is one of the major plus points when compared with manual systems. According to the respondents' ideas, the most valuable feature of computerized accounting systems is on-demand reporting. Whether financial summaries, tax-related documentation, or performance metrics, the systems ensure real-time access to key data. This narrows decision-making processes because stakeholders can access and act on current information. In the computerized system, accounting records

may be maintained easily as compared to manual systems. The digital records maintained will be more organized and may be retrieved with ease; in addition, they can be updated or modified with minimal effort. This simplification of keeping records boosts better financial management generally for those businesses dealing with voluminous data. Computerized systems also make updating, correcting, and handling errors easier. In manual systems, correcting becomes a slow process that may give more room for further mistakes to arise. On the other hand, the computerized accounting systems check automatically to identify and correct such errors quicker with accuracy. The data depicted that the computerized accounting system has numerous advantages in managing transactions, flexibility, generating reports, record-keeping, and error handling. All these factors culminate in increasing efficiency and accuracy, which are highly instrumental to the success of SMEs adopting these systems.

Users' accounting expertise and knowledge significantly influence the adoption of Computerized Accounting Systems (CAS). Familiarity with accounting software empowers users to adapt to new systems, integrating them smoothly into workflows. Practical knowledge of accounting applications and features reduces resistance, making implementation more seamless. Additionally, knowledge of accepted accounting standards and procedures is crucial for aligning systems with regulatory and financial requirements, ensuring optimal use. However, the complexity of training (AE4) can hinder adoption, as complicated programs slow implementation and frustrate users. Finally, computer literacy (AE5) is a critical barrier; employees unfamiliar with basic computing concepts struggle with CAS, necessitating additional training costs. The findings highlight that expertise in accounting, standards, and software usage plays a pivotal role in CAS adoption, with user training and literacy levels directly impacting implementation success.

4.3 Perception about the technology change, accounting expertise and cost in relation to CAS implementation

Technological advancements have significantly influenced the adoption of Computerized Accounting Systems (CAS). Respondents highlighted that technological innovation drives automation, efficiency, and systemic changes, necessitating restructured business processes and incurring costs for integration, training, and equipment. Technology advancements have enhanced accountants' ability to analyze complex datasets quickly and competently, improving financial decision-making. Integrating networked computers and internet-based systems facilitate real-time data sharing, cloud accounting, and streamlined operations across organizational branches, ensuring connected and efficient accounting practices. Moreover, technological change has raised awareness and efficiency within accounting firms, making CAS adoption a strategic necessity for competitiveness. Respondents emphasized that technological improvements enhance system capabilities, data analysis, and business operations, ultimately transforming accounting practices into more effective and efficient processes.

Cost-related factors significantly impact the adoption of Computerized Accounting Systems (CAS). High implementation costs, including hardware, software, and infrastructure expenses, deter many small and medium-sized enterprises (SMEs) despite the potential long-term benefits. Training costs also influence adoption, as employee preparation requires both time and financial investment, which SMEs often find challenging. Frequent servicing and maintenance costs add to the financial burden, making CAS adoption a cumbersome process for smaller firms. Additionally, firms weigh the cost-benefit aspect, considering long-term returns like accuracy, scalability, and efficiency. A perception of low returns often leads to hesitation in adopting the system. Installation costs, including system integration, customization, and infrastructure build-up, further discourage adoption due to their high initial outlay. Respondents emphasize that businesses must evaluate these costs against potential benefits to determine if CAS implementation is financially viable.

4.4 Multiple regression analysis

The summary of the model gives insight into the degree of fit of the regression model. In regression analysis, the R^2 value is, the square of the correlation coefficient gives the explanatory power of a model concerning how well variations of independent variables explain a dependent variable. According to Uma Sekaran & Roger Bougie, 2016, an R^2 above 0.3 explains good explanatory power, while below 0.3 explains weak explanatory power. Between 0.4 and 0.5, the strength of the explanatory power is considered moderate, and levels above 0.5 reflect high explanatory power.

Table 35 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710^a	.507	.503	.22647
a. Predictors: (Constant), C, TC, AE				

The R-squared is 0.507; that shows that the independent variables Cost (C), Technological Change (TC), and Accounting Expertise (AE) explain 50.7% of the variance in the dependent variable. As such, the estimated model may be said to have a medium to high explanatory power. An adjusted R^2 , which takes account of the number of predictors in a model, stands at 0.503, hence a very good fit of the model. This gives a standard error of the estimate of 0.22647, which defines the average distance the observed values would fall from the regression line. Overall, the results of the analysis are that the predictors strongly influence the dependent variable because over half of the variance accounted for, signifying a strong model fit.

The analysis uses ANOVA to establish the fitness and statistical significance of the model. A significant result obtained in the ANOVA means that the model is a good fit and, therefore, an important relationship exists between the dependent and independent variables.

Table 36 ANOVA Table

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.777	3	6.659	129.834	.000 ^b
	Residual	19.439	379	.051		
	Total	39.416	382			
a. Dependent Variable: A						
b. Predictors: (Constant), C, TC, AE						

In the model significance testing, the following hypotheses are employed:

H0: Model Not Significance

H1: Model significance

For hypothesis testing the selected alpha level is 0.05 and the P-value is 0.000, so there is enough evidence to reject the null hypothesis and infer that this model is statistically significant

Table 37 Coefficients Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.367	.059		6.207	.000
	AE	.245	.052	.260	4.668	.000
	TC	.331	.046	.3645	7.144	.000
	C	.166	.055	.176	3.017	.003

a. Dependent Variable: A

The below table shows a summary of hypothesis testing with alpha values with their respective significance levels and an accepted/ rejected status.

Table 38 Hypothesis Analysis

Hypothesis	Beta value	Sig Value	Accepted/Rejected
H1-There is a significant impact of accounting expertise on the adoption of computerized accounting systems.	0.244	0.000	H1 Accepted
H2: There is a significant impact of Technological changes on adoption of computerized accounting systems.	0.330	0.000	H2 Accepted
H3: There is a significant impact of Cost on the adoption of computerized accounting systems.	0.166	0.003	H3 Accepted

H1: There is a significant impact of accounting expertise on adoption of computerized accounting systems.

Beta = 0.244, Sig. Value = 0.000, Accepted

Accounting expertise will definitely play an important role in successfully implementing and adopting computerized accounting systems. Indeed, previous studies have indicated that persons with an accounting background are more likely to appreciate the benefits accruing from computerization: 'more accurate, rapid output of higher quality; improved decision-making facilities'. The professionals in accounting are better placed to perceive the functionality of the system and its place within a greater framework of financial management. It indicates that a firm with more accounting expertise can make more appropriate use of these systems; hence, there is a positive relationship between expertise and adoption.

H2: There is a significant impact of Technological changes on adoption of computerized accounting systems.

Beta = 0.330, Sig. Value = 0.000, Accepted

Technological change is one pivotal factor that acts as a driver toward the adoption of computerized accounting systems. With the ever-changing nature of technology, businesses must keep up the pace with innovations to maintain competitive advantages and efficiency. The adoption of computerized accounting is most likely to be taken up by those organizations that easily embrace technological changes, such as the introduction of advanced software systems. Literature has proven that companies which adapt to technological innovations face smooth processes, lower operation costs, and higher accuracy in financial reporting. This alignment of technology with organizational processes is one of the most influencing factors in the adoption of computerized systems.

H3: There is a significant impact of Cost on adoption of computerized accounting systems.

Beta = 0.166, Sig. Value = 0.003, Accepted

The study explores the factors influencing the adoption of Computerized Accounting Systems (CAS) in Small and Medium Enterprises (SMEs) in the manufacturing sector in Sri Lanka. Cost emerged as a significant factor, with a Beta value of 0.166 and a p-value of 0.003, indicating a statistically significant positive impact on adoption. Although the effect size is moderate, it highlights that cost considerations play a crucial role in decision-making processes for SMEs. The findings suggest that while cost is not the dominant determinant, it cannot be overlooked, as the affordability and perceived value of CAS influence adoption rates. SMEs often operate under resource constraints, making initial investment and maintenance costs critical barriers. These results underscore the need for affordable and scalable CAS solutions tailored to SMEs, as well as potential government subsidies or incentives to encourage wider adoption in the manufacturing sector.

5. Conclusion

This analysis of the study reveals that the p-value is 0.000, and that the beta value is 0.244, indicating that accounting expertise significantly affects the implementation of computerized accounting systems. What this means is that when users become more skilled and knowledgeable in the accounting field, they are also in a better position to use computerized systems more effectively to enhance operational efficiency. However, a low level of accounting expertise will hinder the effective implementation of such systems. The research instrument had measured this aspect at an average score of 2.15, with the individual score of the lowest at 1.9, proving that the respondents do possess different levels of expertise. The highest deviation, 0.630, was from questions relating to software navigation skills, which means a subset of its users might face challenges in relation to the technical requirements of the computerized systems. The third hypothesis of this study therefore investigates the impact of accounting expertise on system adoption in SMEs in Sri Lanka. This hypothesis, H1, was therefore tested: "There is a significant impact of accounting expertise on the adoption of computerized

accounting systems in Sri Lanka.". The results pointed out a positive relationship, as depicted in previous studies such as Beke (2010) and Kaluarachchi (2016), who echoed that accounting knowledge enhances the use of the system and decision-making. This also confirms various global findings on the critical role of accounting expertise in technology adoption, with a beta of 0.139 and a significance value of 0.001.

This analysis of the study reveals that technological change and adoption of computerized accounting systems are significantly related; its beta value is 0.330 and the p-value is 0.000 which goes to say that the technological changes have a positive significant effect on their adoptions. Finding of the aforementioned fact means that those businesses that can cope with rapid technological innovations are more likely to result in the integration of computerized systems more effectively. Whereas the more adaptive persons will feel at ease in their implementation, the less adaptive ones may struggle. The average score regarding technological change from the survey is 2.35. However, on updating questions about the systems, the average score stands at 1.95, indicating variation in adaptation. The highest deviation, 0.710, showed variations in responses over new technologies being applied at ease. The third objective of this study aimed to investigate the effect of technology change in adopting the system. Thus, the hypothesis was H2: "There is a significant effect of technological change on the adoption of computerized accounting systems in Sri Lanka." These findings support the hypothesis and go in tandem with prior studies by such authors as Otieno (2015) and Amanamah et al. (2016), who mentioned that keeping pace with technological changes increases efficiency within organizations and improves the accuracy of financial reporting.

This study showed that the cost factor and the use of computerized accounting systems are significantly related, with a beta value of 0.166 and a p-value of 0.003, indicating that cost is an important deterrent to adoption. This result would point out that the high initial costs of setup, training, and maintenance costs persuade SMEs from fully embracing computerized systems. Where there is an adoption, firms sometimes weigh against these costs the advantages that will be realized through long-term benefits. For the questions relating to the cost factors, the average score came to 2.45, while questions about maintenance fees had a lower average of 1.95, reflecting the diversity in the financial capabilities of the respondents. The highest deviation, 0.720, has been reported for questions on set-up costs, showing disparities in the preparedness or financial abilities between firms for adoption. Therefore, this hypothesis on the objective to assess cost impacts was stated as follows: "There is a significant impact of cost on the adoption of computerized accounting systems in Sri Lanka." This hypothesis, as will be seen, is supported by the findings and is, in essence, similar to other studies, such as that by Otieno et al. (2013) in their study that affordability is one of the key factors which affects its adoption in SMEs.

In this regard, the present study identifies the most important factors that affect the adoption of computerized accounting systems by SMEs in Sri Lanka and centers around accounting expertise,

technological alteration, and cost. Research findings show that accounting expertise is an effective factor in adopting and using CAS. Knowledgeable users would, therefore, understand and use these systems more effectively. Technological change also plays an important role, as SMEs moving in step with innovation are better positioned to gain from the efficiencies and accuracy that computerized systems can offer. Cost, however, is on the opposite side of the coin, with high initial and recurring expenses posing a serious deterrent.

Such suggestions include financial support to the businesses in set-up costs, government incentives, and the promotion of cheap training and software. This will further help the SMEs to reduce their financial burden, ensuring better system utilization and thereby improving the accuracy and efficiency related to financial management. The study, therefore, concludes by recommending that stakeholders in government bodies, financial institutions, and technology providers must collaborate to ease CAS adoption among SMEs, to contribute toward their growth and resilience against stiff business competition.

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The Impact of Digital Transformation on Small and Medium Enterprises Performance in Sri Lankan Hotel Industry

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Abstract

The aim of this research is to study how digital transformation effects the performance of small and medium enterprises in the hotel industry in Sri Lanka. This research makes an in-depth evaluation of the business performance effect taken about by digital tools and methods regarding compatibility, cost-effectiveness, trust, and interactivity

The approach applied in this study is quantitative, wherein the survey methodology is applied to gather data from 100 SMEs located within the Colombo district. The findings show that compatibility and cost-effectiveness have a high positive influence on SME performance, while trust and interactivity are of lower importance. This paper identifies that integration of digital technologies is therefore beneficial to the performance of SMEs in the hotel sector but with some costs and adaptation challenges. Hence, the findings bring into focus that there exists a need for digital upgradation of infrastructure in SMEs and engaging with customers effectively by using digital tools in a more enhancing manner.

The study develops existing literature by providing an investigation of how digital transformation affects business performance in the hospitality industry. It is also of great use to policymakers and industry practitioners who strive for additional means to help improve competitiveness and operational efficiency..

Keywords: *Business Performance, Compatibility, Cost-Effectiveness, Digital Transformation, Sri Lankan Hotel Industry, SME, Trust, Interactivity.*

1. Introduction

The digitalization of hotels in Sri Lanka refers to the infusion of digital technologies at every business touchpoint. In fact, SMEs of this industry face many effects due to resource limitations, increased competition, and technological barriers (Masoud & Basahel, 2023). SMEs barely have any significant opportunity to expand their businesses due to the limited technology adoption, though they contribute immensely to the national gross domestic product (Fan et al., 2022). Their competitive advantage is reduced within the digital world, and it offers different kinds of opportunities in the scope of digital transformation (DT) for SMEs as operational efficiency improvement, customer service engagement, and strategic management (Kitsios et al., 2023). Online reservation systems, social media marketing, and the use of customer relationship management systems are among the instruments setting the pace in how hotels interact with their clients and internal processes (Zartis Team, 2019). However, their adoption by SMEs within Sri Lanka's hotel industry shows a huge give out from reasons to do with cost, lack of expertise, and resistance to change (Phiet, L. T, 2024). It then shows how this research can be integrated with compatibility, cost-effectiveness, trust, and interactivity into digital transformation to shape the performance of SMEs within the hotel sector in Sri Lanka (Jayalath & Premaratne, 2021). The study thereby contributes to the growing debate on the role which digitalization plays in the growth of the SMEs, and particularly those in the developing markets such as Sri Lanka (Dissanayaka, 2017). This will further apply to any other future research on SME digital transformation in other industries and regions. In contrast to other studies that concentrated on established markets or big hotel chains, this study fills the gap by looking at the issues unique to SMEs, making useful suggestions for appropriate, reasonably priced digital technologies, and recommending legislative support. While studying the impact of digital transformation on the performance of small and medium-sized businesses in Sri Lanka's hotel sector is the overall aim of this research, the following includes a breakdown of the research questions.

Research Questions:

- To which extent does compatibility impact small business performance?
- To which extent does cost-effectiveness impact on small business performance?
- To which extent does trust impact small business performance?
- To which extent does interactivity impact small business performance?

Objectives:

- To identify the impact of compatibility on small business performance.
- To identify the impact of cost-effectiveness on small business performance.
- To identify the impact of trust on small business performance.

- To identify the impact of interactivity on small business performance.

2. Literature Review

For the theoretical framework of this study on the impact of digital transformation on small and medium-sized enterprises (SMEs) in the Sri Lankan hotel industry, two primary theories will be employed: While considering the current state and validating all the hypotheses, TAM and RBV are included.

Technology Acceptance Model (TAM): An organized framework for conducting a scientific analysis of research issues pertaining to technology adoption is offered by the Technology Acceptance Model (TAM) and it is built on the Theory of Reasoned Action (TRA) to gauge how people feel about new technology (Davis, 1989). For the SMEs in the hotel industry, there will be a frame to be developed where they can list the factors that will dictate the use and adoption of the DT plans. This understanding pertains well with the tenets in TAM that feel that performance can be enhanced through digital technologies and that it is quite easy to accomplish. Going further in analyzing the SME's perceptions regarding digital development, their strategies and the plans and concepts they aim to put into practice to integrate new technologies may help reveal the cause as well as the challenges that affect the technology acceptance in Sri Lankan hotel industry.

Resource-Based View (RBV): Although Porter places a strong emphasis on a company's internal resources and competencies, he also takes into account the external environmental elements that determine performance and competitiveness (Fan et al., 2022). In the framework of this research, RBV is a theoretical lens that is used to theoretically describe how SMEs from the hotel industry are theoretically capable of strengthening their strategic assets and competitive advantages by enhancing the usability of digital technologies (Huang, 2023). Due to the investigation of the available information systems, software, and other related online platforms of the SMEs, RBV identifies the extent to which digital transformation supports resource accumulation and achieves the perfect competitive advantage. Furthermore, the model embraces the idea that the routines and capabilities of organizations are widely significant in utilizing digital assets and directs attention towards the management activities and organizational dynamics that promote digital conversion in SMEs. They have supported this framework with a blend of TAM and RBV while providing a vast viewpoint of the influential variables in the delivery and utilization of SMEs incorporated in the Sri Lankan hotel industry digital innovation and the effects of digital transformation on the performance and competitive advantage of the SMEs.

2.1 Digital Transformation

In the present evolutionary business environment, digital transformation has become a vital process to develop competitiveness, operational effectiveness, and customer interaction for SMEs. Broadly,

digital transformation may be described as the process through which digital tools are incorporated into all parts of a firm's value creation and delivery process, customer affairs and market relationships (Vial, 2021). This evolutionary process covers the implementation of technological solutions like cloud computing, advanced data processing, IoT, and blockchain that help SMEs to develop, optimize, and adjust to the relevant market conditions.

The meaning at variance in a general sense and emphasis of the term 'digital transformation' complements academia. As pointed out by Verhoef, Langedijk & Gahr (2021), Digital Business Strategy refers to the leveraging of digital technologies with the aim of increasing organizational performance and market coverage, while stressing operation efficiency and customers' experience. Nadkarni and Prügl (2021) build on this definition by defining digital transformation as the ultimate state of digital development within an organization. They emphasize its penetration into key business processes and activities that make up the very core of modern organizations, which means a transition to data-driven decision-making and increased business/organizational adaptability.

Technology enablers are fundamental to the SMEs' digitization process and have a big impact as catalysts in the digital change process. This is self-evident when considering recent advances of cloud computing that provides SMEs with scalable infrastructure and computing power on demand to deploy and manage applications without a significant commitment in own hardware infrastructure (Mergel et al., 2019). It can be noted that this flexibility also helps to keep the IT expenditure low while also increasing the flexibility of operation by being able to scale up, and access higher tiers of business analytics quite easily. Further, big data analytics put into the capability of the SMEs to draw out valuable information from large data sets to assist in decision making and interact with customers in a more individualized manner (Acquila-Natale et al., 2022). SMEs can now implement the use of AI and machine learning where it can be able to automate certain processes in order to make predictions about the consumers and to also be able to allocate its' resources in a way that it becomes more efficient and able to compete for the market.

Another disruption that entails linked tangible objects, and collecting data on the Internet of Things (IoT) enables SMEs to observe operations, stock, and assets from a distance. IoT helps to expand the level of visibility of the supply chain and operability that consequently results in better decisions and optimal costs. Blockchain technology provides unaltered transactional environments and, therefore, increases trust and effectiveness in areas such as the financial sectors, product distribution, and identification services (Gong & Ribiere, 2021). Blockchain technology can be used by SMEs to transform transaction processes, minimize fraud incidences, and increase credibility of records kept in the system.

IT adoption results in various advantages for the SMEs relating to several aspects of business performance. On the operational level, digital technologies facilitate the management of processes as

well as enforcing them by avoiding repetitive functions while achieving a rational allocation of resources, thus enhancing productivity and minimizing costs (Wessel et al., 2021). For example, digital inventory control deters manual mistakes in procurement procedures and helps expedite the SME's operations so it can meet customer needs without interruptions. Customer engagement and experience is also improved through DT activities. Using digital marketing tools, social media, and relevant personal customer interactions, it is possible to fine-tune the offering against customers' desires and needs at least in part SMEs can effectively survey the customers in real time (Reis et al., 2018). SMEs leveraging on regular customer interaction and Omni-Channel, organizations establish a more enriched bond with their clients hence gaining competitive advantage in laboratory markets. Hence, market competitiveness is indeed double boosted by digitalization since competitive SMEs can transform and innovate quickly to launch new products/services and venture into new markets (Gong & Ribiere, 2021). By using digital platforms, it is much easier for the SMEs to enter the international market by leveling the competitive unfair playing ground with the large conglomerates. Furthermore, skills increase digital responsiveness as SMEs are portrayed as flexible players capable of quickly responding to industry changes and consumers' needs.

As it has been seen, digital transformation is one of the most effective ways of achieving growth in business, but at the same time, it has certain barriers and issues for SMEs. Technology continues to be a key issue because most SMEs report often a lack of technological foundation and technical skills to facilitate and support advanced technological solutions (Dressler & Paunovic, 2021). Lack of funds and resource drawbacks do not allow organizations to invest in improving technology and teaching employees related matters, setting back digital transformation projects. This unfolds as augmentation of operations and visibility in cyberspace leads to cybersecurity becoming a topical matter for SMEs. The increasing threats such as data leaks, ransomware attacks, and phishing scams are potentially dangerous to SMEs, and their information and customers' trust (Fletcher & Griffiths, 2020). That is why the focus has been on strong cybersecurity and adherence to data protection legislation to shield business operations from disruptions and retain investors' trust. Culture and change management are also issues related to the digital transformation of an organization in the context of SMEs. Some of the challenges that organizations face while implementing new technologies include resistance to change, several employees may also lack adequate digital skills, and the leadership may not support the implementation process fully (Dressler & Paunovic, 2021).

2.2 Factors considered for Digital transformation by Small and Medium Enterprises

Business may now be conducted from anywhere at any time through internet enabled forms of communication (Schaller, 2018). Several studies that looked at how small and medium-sized enterprises (SMEs) use Facebook found that Facebook was being used for a wide range of

organizational purposes, including but not limited to: The today businesses need a lot from brand promotion, communication, selling, marketing, creativity, solving issues, customer service, human resources management, information technology, changing organization culture and advertising on social media platforms (J, 2020). According to Henderson, (2020) communication and cooperation among the employees and with the consumers are conducted through social media platforms such as Facebook for SMEs. Research by Metawa et al. (2021) revealed that business innovativeness, age of the managerial figure, and geographical location decisively influenced the SMEs' use of Twitter. Dressler & Paunovic, (2021) posit that several medium-sized business establishments (SMEs) will engage in social media if only entrepreneurial social media platforms furnish massive amounts of on-time, pertinent, and quality content (2011). Although earlier research has determined more criteria affecting SM adoption, only compatibility, cost-benefit, trust, and interaction (Berman et al., 1999) needs to be pointed out. Here is the breakdown of the connection of each party.

2.2.1. Compatibility

Compatibility continues to be a key component for the continuous advancement of the digital transformation plans that span across industries as they embark on new ways to create, implement and deliver value propositions that meet the needs of the contemporary marketplace. While organizations are aiming at finding the potential to enhance growth through the use of technology the concept of compatibility becomes one of the critical success factors. Thus, compatibility speaks about the possibility to incorporate new digital solutions into the existing business environment. This integration is also strategic in a way that it does not create a lot of disturbance while at the same time improving productivity because the use of resources is properly coordinated. For example, IoT integration with manufacturing systems in relation to older production equipment enables monitoring and prognostics, resulting in minimized downtimes and higher system efficiency. However, as far as theoretical contributions are concerned, compatibility can be considered the key factor that improves customers' experience and their levels of engagement. Use of modern tools that are integrated with CRM systems helps personalize customers' interactions and develop marketing initiatives that are based on real time data. But this capability not only improves customer satisfaction and retention, which in turn transforms into customer loyalty but also improves the direct revenues.

Also, compatibility encourages innovation within organizations due to implementation of new technologies. Compatibility-oriented businesses are also in a position to shift organizational strategies according to consumers' new attitudes and trends in the fast-moving digital environments, displacing competitors. For instance, grocery stores, clothing chains, and other compatible retail stores can easily introduce new payment processors or mobile commerce solutions that are in demand with the help of compatible e-commerce trading platforms. It is thus important to stress that effective compatibility goes beyond systems' technical compatibility and includes issues such as data fusion and decision

making. This flexibility allows organizations to obtain a shared view of data and drive the strategies and operations that make up an organization. This provides the leaders with a way of making holistic and almost real-time decisions by analyzing all the data available. However, attaining compatibility proves to be problematic, albeit with possible solutions more so in large IT systems where one finds fragmented old systems and technological heterogeneity. Matters like compatibility, data integrity, and legal requirements depend on careful planning and spending more in proper integration architecture. However, organizational resistance to change and culture may become the main factors affecting adoption, proven strategies for change management and the involvement of stakeholders are required.

This is expected to continue as businesses progress in digital transformation to rely heavily on interconnected digital applications. Thus, the focus on compatibility requirements in the near future will be challenged by such technologies as cloud computing, artificial intelligence, AI- driven analytics, and block chain, etc. The aggregation of compatibility anomalies and the recognition of radical technological changes will enable the organizations, who are successfully overcoming compatibility issues, adjust to the emerging market tendencies and achieve effective business results. Thus, compatibility remains a main component for the implementation of digital measures that add new value to enterprise processes, improve customers' satisfaction, and stimulate innovation. Therefore, holistic and systematic use of information technologies with respect to business strategies and development of organizational culture that embraces change and experimentation allow for managing difficult situations and taking advantage of new opportunities that are arising in a global interconnected economy.

2.2.2. Cost Effectiveness

Cost Effectiveness is one of the major factors whose consideration determines the use of ICT and digital technologies, especially for SMEs because of the limited capital and challenges posed by restricted funds as well as optimal resource allocation. The cost analysis presents interesting findings relevant to the relationship between technology adoption and firms' growth and competitiveness. However, studies state that the cost of adopting technologies plays a crucial role in defining the involvement of SMEs in the supply of technologies (Kuntsman & Arenkov, 2019). Easy to adopt and capital-intensive technology solutions that include cloud and subscription-based models are appealing to SMEs (Sandu and Voiku, 2019). These options therefore allow the SMEs to enjoy superior IT abilities that they would otherwise be unable to afford on account of the initial capital required in the acquisition of such structures. The cost issue has a direct bearing to the feasibility and possibilities of digital change endeavors in the context of SMEs. Several investigations have revealed the issue of high initial costs as well as the contingent maintenance costs with regards to discouraging new technologies among SMEs (Alshakhshir & Howell, 2021). On the other hand, accessible digital tools strengthen the

SMEs' position by automating processes, increasing efficiency, and identifying innovative growth doctrines that guarantee stability and profitability (Sandu & Voiku, 2019).

Studies also show that SMEs' perception of cost-benefit differs depending on the region and the sector where the organization belongs to. For example, a study conducted on Malaysian businesses reveals that the perceived costs of adopting internet technologies influence the SMEs' use of internet and their online marketing plans (Alshakhshir & Howell, 2021). On the other hand, and as deduced by Panel (2002), it could be seen that cost is not always the only condition that defines the readiness to adopt a given technology in all aspects. Concerning the concept of cost efficiency when implementing ICT (Information and Communication Technologies) among SMEs, it is essential to distinguish between its scope, industry specifics, and strategic objectives (Gluhov & Skiba, 2022). While some of the SMEs might regard ICT adoption costs as expensive, others have understood that there are long-term returns and portability linked to information entrepreneurship projects. Thus, the lack of perceived costs can be addressed by proper and concise conveying of these advantages and the correspondence of the applied digital resources with the goals of the enterprise.

Social networks offer quite a convincing list of advantages for SMEs searching for affordable opportunities to engage in digital promotion. Marketing through social networks, means for communication with customers, and advertisement intentions help the SMEs to reach their target group directly and effectively with a comparatively low cost when compared to other more conventional methods of adverts (Panel, 2002). Aside from the increased reach, convenience escalates timely responsiveness and customer engagement translating to brand promotion and advocacy. Technology cost remains a critical component that influences the SMEs for purposes of efficiency in adopting technology as a tool of business transformation. In this context, affordable digital solutions aligned with the SMEs' needs and abilities would help eliminate the financial barriers to address competition and exploitation of business opportunities inherent in the new digital economy. It is crucial to note that strategic planning, monitoring and reviewing the costs forming the basis of digital change alongside the benefits accrued, and the readiness to embrace further change by adopting emerging technologies create the competitive edge SMEs require when planning on capturing the highest value from their change investments and subsequently, sustainable business growth.

2.2.3. Trust

Trust is central as far as the adoption and efficient use of technologies that are digital in the context of technological convergence for small and medium enterprises, and their engagements on social media platforms. Recognizing the concept of trust as complex is a fundamental point when entering the web environment to develop long-term relationships with stakeholders for SMEs. Trust in digital settings can be described on the basis of various theoretical models that focus on the institutional aspects of trust, Gábor (2019) divided institutional trust into two types; "situational normality and structural

assurances”. Situational normality has to do with the belief that goals are achieved through digital platforms within normal expectations. On the other hand, structural assurances are the certainty of positive results because of signed assurances, rules and regulations within the digital environment. For the SMEs, this framework enables them to evaluate the reliability and boundary conditions of the digital media, especially the media used for business such as social media. To replace it Mahmood (2016) suggests the term “informational trust” – this TRUST is based on users’ confidence in the trustworthiness of information. With regards to platforms like Facebook, informational trust determines engagement and use of the platform (Faruquee et al. , 2021). To achieve these goals, SMEs using SM for business purposes rely on informational trust that is the provision of correct information concerning the offered goods and services, quick replies to consumers’ requests, and the establishment and boosting of the level of credibility with the target audience among other things (Kozhevnikov & Korolev, 2018).

SMEs must cultivate positive relations with their customers, hence the efficient use of social media tools in the business. Sites such as Facebook are strategic ways through which SMEs can market their products, give out information about products that are new in the market, and even communicate with clients in real time (Kozhevnikov & Korolev, 2018). Thus, adopting an effective social media communication strategy, SMEs can improve customers’ trust due to clear information sharing, prompt response to the feedback, and equally valuable and frequent content delivery. As the opportunities for SMEs to communicate with the customers using digital platforms are vast, there are quite relevant dilemmas associated with trust. Some of the challenges include the privacy and security of data, hacking, fake news, among others that are likely to decrease trust in digital interactions (Chen et al., 2023). Challenges are something that SMEs must face and respond to, multilayered security, data protection Act, and ethical aspects of the digital community should be met and responded to accordingly.

The concept of social media marketing goes beyond just the distribution of marketing messages on appropriate social media websites. SMEs’ audience should trust the organization and its representatives, and this can be achieved by frequently responding and interacting with customers through quick replies and sincere interaction (Kozhevnikov & Korolev, 2018). It also contributes to the establishment of a relationship between the customer and the SMEs thus developing brand association and improving the SMEs’ stand in some of the most volatile markets. Digital technology and platforms rely on the trustful environment for SMEs which want to use digital transformation as a tool for development. Thus, by considering the models of institutional trust, focusing on informational trust, and using social media in the right way, SMEs can build a positive and long-term customer and stakeholders’ trust. People’s trust guarantees high customer interest and SMEs’ longevity in the digital environment where corporate reputation and reliability matter. Therefore, the establishment of trust

still persists these SMEs' digital outlook and business continuity plans as they adapt to the ever-changing digital environment.

2.2.4. Interactivity

Some of the key concepts focal to the understanding of user experience and interaction and particularly on Facebook consist of interactivity in the digital. It extends from the usability of interfaces to the ways people engage with and co-interact with content and brands, as well as other users. The first advantage of enhancing interactivity is improved engagement since interactivity directly involves users. These include Facebook where people are able to have direct interaction and instant feedback through features such as comments, likes, shares, and live streaming. These features do not only enable users to have voice in expressing their opinions, but also compel them to engage with others, share posts with their friends, and be part of the community. The concept of interactivity helps the users to feel the presence of other like-minded individuals. It changes social networking sites from tools for mere viewer consumption into experiential arenas for people to communicate and relate. When interactivity is done properly in business, they create a strong bond or a community of users that have a feeling of belonging to related brands.

Some of the benefits of the Website include Interactive portions that allow users' tailored experiences. Many platforms can therefore provide customization features through which users can express specific interests or engage in polls to get content that they want. This personalization not only increases user satisfaction but also improves the effectiveness of marketing communication, since the marketing messages provided can be customized according to the interactions of users. Another major benefit associated with interactive platforms is the fact that they allow feedback to be obtained immediately. Companies can track user activities, number of clicks, and other activities to learn more and more about the users and their tendencies. It is useful in honing the marketing strategies, enhancing the products or services and in being sensitive to dynamics in the market. Facebook in particular plays a critical role in marketing as interactivity helps in raising company awareness and engaging consumers.

Thus, interactivity has several advantages, yet it entails several risks, including content moderation, privacy concerns, and maintaining genuineness. Companies have to manage these issues while using the interactive elements appropriately to gain the users' trust and credibility. The interactive features on these platforms will be enhanced by other technologies such as augmented reality, virtual reality, and artificial intelligence. These technologies will lead to more interactive and individualized experiences, thus improving levels of user participation and the overall approaches to digital marketing. Interactivity, especially on Facebook, is not only about the tools but about relations, experiences and business benefits. When approached methodically, interactivity can generate engaging content, foster vibrant communities, generate insights, and help companies stand out in crowded digital

spaces. Thus, interactivity will remain a critical component of the future development of technology in the communication and engagement processes.

2.3 Literature Gap

The literature review highlighting gaps in understanding interactivity in digital platforms especially in Facebook and equally related platforms also shows a number of areas that require further empirical investigation and study. Despite modern research emphasizing the importance of interactivity for the improvement of user experience, such as increased involvement and personalization, little is known about the effects of new technologies. Ideas for future research could explore how new technologies such as AR, VR, and AI can improve social media interactivity. Recognizing these technologies' capacity for bringing rich user experiences and increasing engagement levels could be helpful in designing platforms and approaching its users. The second major gap that exists is cross cultural factors. The vast majority of these studies rely on samples from Western countries or reference global tendencies, failing to account for cultural variation in users' behaviours and their expectations towards the interactivity of objects.

Further, culturally inclusive studies on how cultural differences impact the use and perception of interactivity, privacy, and engagement on platforms such as Facebook would be useful in pursuing culturally sensitive digital marketing strategies. It is paramount for firms that are immersed in various international markets to enhance their interactivity methods. Secondly, there is a call for cross-sectional studies where one monitors the changes in the user engagement and interaction levels. Since many of the current studies are cross-sectional, the observed behaviour patterns reflect only the current state of affairs. Panel studies may show patterns of implementing new forms of interactivity, shifts in users' preferences, and the effects of platform modifications or changes in algorithms for user enjoyment and engagement. Such studies would provide a much more sophisticated understanding of the processes occurring in digital communications and how companies are able to respond in order to stay relevant.

Another weakness that can be highlighted for further research is the lack of ethical concerns with regard to digital interactivity. Given that digital platforms continue to gather user data and deliver highly targeted content, specific ethical concerns such as data privacy, informed consent, and algorithmic discrimination also emerge. Further research may examine how companies and platform vendors deal with such ethical issues for more openness and credibility in online interactions. It is crucial to comprehend the potential ethical issues when designing such features to enable the creation of a series of guidelines and measures aimed at enhancing user protection and fostering trust in the long run among the target consumers.

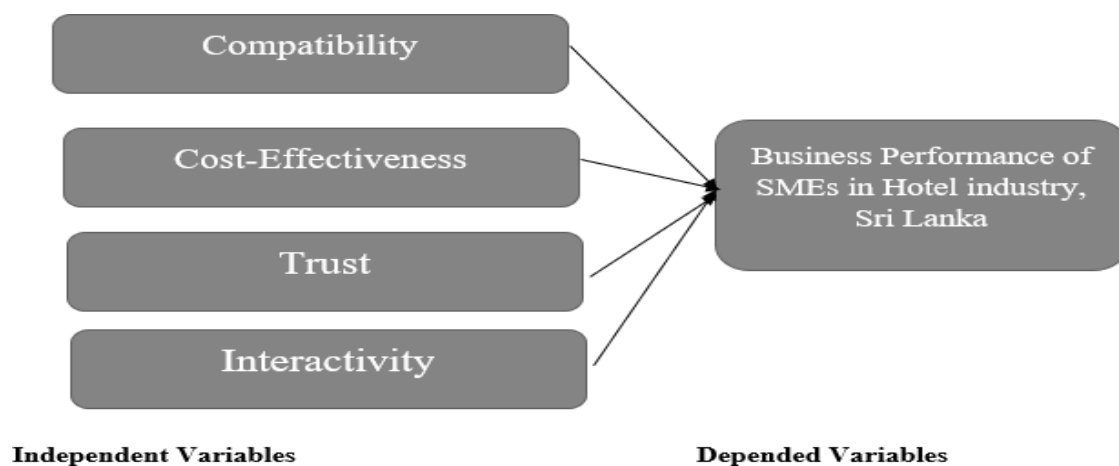
Further, although there is literature on the effects of interactivity on visibility and customer involvement, there is a lack of information on its effect on brand trust and recommendations. Research

could look at the specifics concerning how adopting elements on social media websites such as Facebook can serve to bolster relationships with customers, create brand evangelists, and affect buying behaviors. Knowledge of these dynamics may assist organizations in optimizing the interactive approaches utilized for strengthening the existing customer-company relationships and increasing the overall customer value. Filling these gaps through empirical work and theoretical analysis will help improve the understanding of the function of interactivity in digital media. This will give an understanding to organizations particularly those interested in the use of interactivity to foster engagement, enhance customer experience and promote organizational marketing strategies, especially in the complex digital environment.

3. Methodology

The study uses a positivist approach, focusing on objective analysis and quantifiable data to assess the relationships between SME performance, compatibility, cost-effectiveness, trust, and interaction. Additionally, the study employs a deductive methodology, beginning with hypotheses drawn from well-known theories like the Resource-Based View (RBV) and the Technology Acceptance Model (TAM). These frameworks serve as a guide for the study, guaranteeing conformity with the body of current literature while offering fresh perspectives unique to the hotel sector in Sri Lanka (Huang, 2023). 100 SMEs in the Colombo district were given structured questionnaires as part of a survey strategy to gather primary data. A picture of current digital transformation practices among SMEs is provided by the study's cross-sectional time horizon, which reflects the situation in Sri Lanka's hospitality industry (Zhu & Jin, 2023). Convenience sampling was used in the sampling process, guaranteeing easy and effective data collection from SMEs with different sizes, ages, and levels of technical preparedness (Phiet, 2024).

Figure 15 Conceptual Framework (Kumar, 2020)



Hypothesis 1 (H1): There is a positive relationship between compatibility with digital technologies and small business performance in the Sri Lankan hotel industry.

Hypothesis 2 (H2): Cost-effective adoption and utilization of digital technologies are positively associated with small business performance in the Sri Lankan hotel industry.

Hypothesis 3 (H3): Trust in digital platforms and technologies positively influences small business performance in the Sri Lankan hotel industry.

Hypothesis 4 (H4): Higher levels of interactivity facilitated by digital technologies are positively correlated with small business performance in the Sri Lankan hotel industry.

3. Data Operationalization

Table 39 Operationalization Table

Concept	Variable	Indicators	Measures
Compatibility with Digital Technologies	Compatibility Score	Integration with existing systems, ease of use	Likert scale (1-5)
Cost-Effectiveness of Digital Adoption	Cost-Effectiveness Index	Investment vs. returns, efficiency of resource allocation	Likert scale (1-5)
Trust in Digital Platforms	Trust Score	Reliability, security, reputation	Likert scale (1-5)
Interactivity Enabled by Digital Technologies	Interactivity Level	Engagement, responsiveness	Likert scale (1-5)
Small Business Performance in the Sri Lankan Hotel Industry	Performance Index	Revenue, profitability, customer satisfaction, market competitiveness	Likert scale (1-5)

4. Data Analysis

Data collection was carried out using structured questionnaires designed to capture key variables relevant to digital transformation. The variables included compatibility (the integration of technology with existing systems), cost-effectiveness (affordability of technology adoption), trust (security of digital platforms), and interactivity (the engagement and responsiveness of digital tools). SME performance was assessed based on revenue, profitability, customer satisfaction, and market competitiveness.

Descriptive statistics were used to summarize sample characteristics and variable distributions, while inferential analyses—such as correlation and regression—were employed to determine the strength and direction of relationships between digital transformation factors and business performance. SPSS statistical software was utilized to analyze how each factor of digital transformation impacts the performance of SMEs in the hotel industry. The findings highlighted the most critical factors for enhancing competitiveness and improving operational efficiency within the sector.

4.1. Demographic Analysis

It was observed that, in the case of SMEs of the Sri Lankan hotel industry, the age and number differ. 16% were younger and more open to digital transformation, while 58% had been operating between a period of 10-20 years, 8% between 20-50 years, and 18% more than 50 years. Most of the SMEs have 70-100 employees; 33% have 50-70 employees. 18% of the companies have between 100-200 employees, hence suggesting that larger SMEs may exploit digital transformation due to their scale. Only 13% have 10-30 employees, reflecting limited resources.

4.2. Reliability Analysis

The reliability analysis for the study variables demonstrates strong internal consistency, as indicated by Cronbach's Alpha values exceeding the acceptable threshold of 0.70 for all constructs. Specifically, Compatibility achieved a Cronbach's Alpha of 0.839, Cost-effectiveness scored 0.742, Trust recorded 0.727, Interactivity reached 0.740, and Business Performance showed the highest reliability with 0.848. These results confirm that all the variables are reliable and suitable for further analysis, ensuring the consistency of the measurement scale used in the study.

Table 40 Reliability Statistics

The variable	Cronbach's Alpha	Reliability	Conclusion
Compatibility	0.839	$0.839 > 0.70$	Reliable
Cost-effectiveness	0.742	$0.742 > 0.70$	Reliable
Trust	0.727	$0.727 > 0.70$	Reliable

Interactivity	0.740	0.740 > 0.70	Reliable
Business Performance	0.848	0.848 > 0.70	Reliable

4.3 Correlation Analysis

The correlation analysis signifies that core enabling factors for digital transformation are strongly and positively related to business performance. Indeed, the cost-effectiveness variable is most highly correlated with the business performance of SMEs, $r = 0.718$, which identifies that the affordability of digital solutions is very much enhanced to improve SMEs' performance. Compatibility with already operating systems also depicts strong positive correlation at $r = 0.643$, where in most instances, whole integration of digital tools has been considered paramount in realizing operational efficiency improvement. Trust in digital platforms correlates positively but falls on a lesser scale than the interactivity, which is at 0.648, whereas interactivity follows suit at 0.585. This explains that all these above-mentioned elements make for critical drivers of performance.

Table 41 Correlation Analysis

Variables	Pearson Correlation Value	Sig.	Beta Values
Compatibility	.643**	0.000	.488
Cost - Effectiveness	.718**	0.000	.185
Trust	.648**	0.000	-.099
Interactivity	.585**	0.000	.325

4.4 Regression Analysis

The coefficient table describes the significance and influence level of each independent variable on SME performance. From the significance level values shown by Sig., it is possible to deduce which factors are statistically significant. Cost-effectiveness, with its Sig. at 0.000, and compatibility, with its Sig. at 0.015, are below the 0.05 level and thus influential positively at high intensities on SME performance. Trust is not statistically significant, having the significance of 0.501, and neither is interactivity, since its significance is only 0.707, which refers to less direct or weaker influences within this framework.

The R value from the model summary table indicates that the model is significant to explain the variance in the performance of SMEs, standing at 0.567. This therefore means that 56.7% of the variation in business performance may be explained through the independent variables of compatibility, cost-effectiveness, trust, and interactivity. The adjusted R squared of 0.549 also shows the goodness of fit of the model even after adjustment for the number of predictors.

Table 42 Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.753 ^a	.567	.549	.58703	1.341

The same evidence is given in a similar direction by the ANOVA table. In fact, this overall regression model is statistically significant because its F Value was 31.080 with a Significance level of 0.000. The independent variables collectively make a meaningful contribution to explaining the dependent variable in the question-SME performance.

Table 43 ANOVA table

ANOVA ^a					
Model		Sum of Squares	df	Mean Square	F
1	Regression	42.840	4	10.710	31.080
	Residual	32.737	95	.345	
	Total	75.578	99		

5. Discussion

These results signify how important digital transformation is in developing better performance in SMEs within the Sri Lankan hotel industry. This strong association between cost-effectiveness and performance also suggests that SMEs prefer technologies from which a high value of return on investment is obtained. This becomes even more relevant in resource-constrained environments where the maximum benefit is to be derived from digital tools without having to incur proscribed costs. This is in line with research by Kallmuenzer et al. (2024), which found that SMEs frequently put off using

digital technology because they are unsure of the returns on investment and the process of digitization. Another reason that has been brought forward, complementing the rest, has been compatibility that is, the ability of new technologies to merge with the pre-existing ones. In all, compatibility will drive success in operations.

The high-ranking influence of trust in digital platforms reflects an increasingly keen awareness among SMEs of the need for secure, reliable systems that protect customer data and ensure continuous operations. This is consistent with the global trend where data security is increasingly essential to sustaining customer trust and business reputation.

Thus, the lower correlation for interactivity would suggest that while relevant, the customer's engagement through digital platforms may not drive immediate business performance as much as the other factors. Long-term customer relationships and improved quality of service-a source of longer-term sustained performance gains cannot, however, be achieved without interactivity. Research supports this viewpoint by showing that, even if performance advantages may not be evident immediately, digital platform interactivity is essential for long-term customer engagement and high-quality service. The Boston Hospitality Review examines how the hospitality industry's consumer experiences are being reshaped by digital transformation, which includes interactive technologies (Zhu et al., 2021).

The present study corroborates that cost- effectiveness and compatibility are the most critical drivers of digital transformation among SMEs in the Sri Lankan hotel industry. In contrast, the drivers of trust and interactivity have relatively moderate impacts. These findings have some useful implications for the hotel SMEs that plan to use digital transformation in pursuit of competitive advantage and imply that the policymakers and industry leaders should support SMEs by providing affordable and compatible digital solutions.

In general, this paper contributes to the body of knowledge on digital transformation: improving SMEs performance in developing economies. The paper lays a foundation for future studies and practical applications in other sectors and regions.

6. Conclusion

This study explored the impact of Compatibility, Cost-Effectiveness, Trust, and Interactivity on the business performance of SMEs in Sri Lanka's hotel industry through the adoption of digital tools. The findings revealed that Compatibility and Trust play a pivotal role in ensuring seamless integration and adoption of digital tools, while Cost-Effectiveness addresses financial feasibility, and Interactivity enhances user engagement and system usability. Collectively, these factors significantly influence the efficiency and effectiveness of digital transformation initiatives, ultimately driving business performance.

However, several limitations were encountered during the study:

1. The study's sample was restricted to a limited number of SMEs in the hotel industry, which may not fully represent the broader industry. A larger sample could enhance the generalizability of findings.
2. The reliance on survey data and interviews introduces the potential for self-reporting biases. Incorporating alternative qualitative methods, such as case studies or observations, could provide richer insights.
3. Unaccounted external influences, including socio-economic, regulatory, and technological factors, may have impacted the results and limited their applicability to other contexts or regions.
4. The study's limited duration may not reflect the evolving dynamics of the industry or future technological advancements.

Future Research Suggestions

To address these limitations and further enhance understanding, future research can focus on:

1. Conducting studies with a larger and more diverse sample across various industries and regions to improve external validity.
2. Examining the long-term effects of digital tools on SME performance to capture industry evolution and technological advancements.
3. Analyzing the impact of socio-economic, regulatory, and technological factors on the adoption and success of digital tools in SMEs.
4. Employing methodologies such as ethnographic studies, in-depth interviews, and case studies to provide comprehensive insights into digital tool adoption.
5. Investigating the role of innovative technologies, such as AI, blockchain, or IoT, in further advancing business performance in SMEs.

By addressing these limitations and pursuing future research opportunities, a deeper understanding of the interplay between digital tools and SME performance can be achieved. This will provide actionable insights for stakeholders aiming to enhance the digital transformation journey of SMEs, particularly within the Sri Lankan hotel industry.

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Analyzing the Effectiveness of Revenue Management Techniques for Maximizing Revenue in Casual Dining Restaurants

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Abstract

Revenue management represents a pivotal strategy for restaurants, involving the strategic calibration of pricing, demand, and capacity utilization to optimize profitability. This study seeks to address the empirical void surrounding revenue management strategies and their impact on revenue optimization. Specifically, it aims to delineate the challenges, opportunities, and effective methodologies for refining revenue management in casual dining establishments. Employing a quantitative research design, the study utilizes questionnaires as the primary data collection tool. The sample comprises casual dining restaurants with a seating capacity of twenty or more, (because smaller restaurants typically do not practice RM practices regularly) with a sample size of 191 determined using the Krejcie and Morgan Table. Hence data were collected from the above-mentioned restaurants category from Badulla district especially Ella, Bandarawela, Badulla, Mahiyanagana, Haputhale, Beragala & Welimada areas. The data were analyzed using SPSS software to assess the influence of various revenue management strategies on revenue optimization, while also identifying the most salient strategies. Additionally, Smart-PLS software was leveraged to explore the critical factors that affect revenue optimization, offering profound insights into the interplay between strategic initiatives and financial outcomes. The findings underscore the paramount importance of a data-driven approach to revenue optimization within the casual dining sector. Both the analytical results and corroborating prior research highlight the significant role of both pricing and non-pricing strategies in optimizing revenue, with pricing strategies demonstrating a more substantial impact than non-pricing tactics such as overbooking and capacity management. These results not only enrich the academic discourse on revenue management but also provide actionable insights for restaurant managers, enabling them to leverage these strategies to maximize revenue generation more effectively.

Keywords: Revenue Management, Revenue Optimization, Casual Dining Restaurants, Pricing Strategies, Non-Pricing Strategies.

1. Introduction

Casual dining restaurants occupy a unique niche within the broader restaurant industry, balancing affordability and quality with a more relaxed atmosphere. Understanding how casual dining differs from other types of restaurants, such as fast food, fine dining, or fast-casual, helps to appreciate its place in the dining out experience.

Casual dining restaurants typically feature a comfortable, unpretentious setting, offering a relaxed dining experience. The décor is often themed or designed to create a cozy atmosphere, making it a good spot for social gatherings, families, and group dining. These restaurants generally offer full table service, meaning that waitstaff take orders, serve food, and handle customer needs during the meal. This sets them apart from fast food establishments, where customers typically order at a counter or drive-thru. The menu at casual dining restaurants tends to be diverse, offering a variety of dishes that cater to different tastes. This includes popular items like burgers, steaks, pasta, and salads, with options for both lighter and heavier meals. The menu often features a mix of traditional and contemporary. Casual dining is generally more affordable than fine dining, but it costs more than fast food. The price range varies, but it typically falls in the mid-range, making it accessible for most people while still offering a more elevated experience than fast food chains. These restaurants attract a wide range of customers, from families to groups of friends to couples, and cater to both casual and special occasions. The ambiance and pricing make them suitable for dining out without the formalities and high cost associated with fine dining.

Differences from Other Types of Restaurants:

Fast food chains like McDonald's or Wendy's focus on quick service and affordability, often offering a limited menu focused on burgers, fries, and similar items. Customers order at a counter or through a drive-thru, and the dining experience is typically much faster and less personalized compared to casual dining. Fast food also has a more utilitarian and less comfortable setting, emphasizing convenience over atmosphere. Fine dining establishments offer a highly formal, upscale experience with a focus on top-quality ingredients, expertly prepared dishes, and exceptional service. The ambiance is often elegant, with professional waitstaff and an extensive wine list. Fine dining restaurants are significantly more expensive than casual dining and typically cater to special occasions, with a strong emphasis on the dining experience as an event rather than just a meal. Fast-casual chains like Chipotle or Panera Bread offer higher-quality food than fast food, but they differ from casual dining in that they typically involve counter service rather than table service. The food is often fresher and healthier, but the atmosphere is still more laid-back and less formal than casual dining. Fast-casual restaurants also tend to have a faster turnover and may not provide the same level of personal service as casual dining. The tourism industry has become a significant dynamic income-generating source for Sri Lanka's economy

by generating 388,487 of total employment including both direct and indirect. It is the 3rd largest foreign income generator which contributes 4.9% to the GDP of the country's economy (SLTDA, 2019). The implementation of revenue management strategies in the hospitality sector, particularly in casual dining restaurants, is crucial for maximizing profitability and optimizing revenue. Sustained success in the Badulla District of Sri Lanka, where informal consumption of restaurants serves a diversified customer, depends on comprehending and putting into practice effective revenue management tactics. Many casual dining restaurants that attract both domestic and international travelers can be found in the Badulla District, which is well-known for its rich cultural diversity and varied gastronomic experiences. As a result of seasonal variations, visitor influxes, and local consumer behavior, these restaurants operate in a dynamic market where customized revenue management strategies are necessary to maintain competitive pricing, effective resource allocation, and improved customer satisfaction. The introduction should frame the study in a larger context and emphasize why it is important. It should state the aim and significance of the research.

The researcher has chosen Badulla District's casual dining restaurants as the sample. The reasons are, Badulla, a district in Sri Lanka, is known for its scenic beauty, including attractions like the Ella Rock, Diyaluma Falls, and the Nine Arches Bridge etc. These sites draw both local and international tourists. Previous studies have shown that tourism directly influences dining behaviors (Sri Lanka Tourism Development Authority, 2020). With the growth of the tourism sector, the demand for dining options, particularly casual dining, increases as tourists seek comfortable yet affordable dining experiences. According to a study by (Fernando, 2018) on Sri Lanka's tourism industry, the development of tourism in areas like Badulla has contributed to a rise in demand for casual dining options that cater to both tourists and locals. This indicates a growing market for casual dining restaurants.

Badulla is located in the Uva Province, which has seen significant growth in its hospitality sector. The province has become increasingly attractive to investors in the food and beverage industry. Research by (Wickramasinghe, 2019) highlights that areas with growing tourism and middle-income populations experience an expansion in the number of restaurants, including casual dining establishments, to cater to the rising demand.

Example: According to (Wickramasinghe, 2019), the Uva Province, which includes Badulla, has experienced a steady increase in the number of hospitality businesses, including casual dining establishments, due to the region's increasing appeal as a tourist destination.

The trend toward casual dining has been growing in Sri Lanka, especially in areas with a mix of locals and tourists. Research by (Perera & Jayasinghe, 2021) emphasizes that with the shift in consumer behavior towards more relaxed dining experiences, casual dining has emerged as the most popular choice for both domestic and international consumers in the post-pandemic era.

Example: A study by (Perera & Jayasinghe, 2021) found that casual dining restaurants are increasingly in demand in regions where there is a combination of both urban and rural populations, such as in Badulla, where locals and tourists alike prefer informal dining settings over more expensive or formal options.

Badulla's population consists of a diverse mix of urban and rural residents, as well as a significant number of tourists.

According to the (Census of Population and Housing ,2011), the district has a young population, with a rising middle class. The increase in disposable income and shifting lifestyle preferences contributes to the growth in demand for casual dining options.

Example: Research by (De Silva,2020) indicates that middle-class consumers in Sri Lanka, including those in Badulla, are increasingly opting for affordable yet quality dining experiences. This demographic shift supports the growth of the casual dining segment.

Badulla has seen improvements in transportation infrastructure in recent years, making it more accessible to both domestic and international tourists. With enhanced road networks, the district is now more connected to key cities like Colombo, Kandy, and Nuwara Eliya, further boosting its appeal as a tourist destination.

Example: A report by (Sri Lanka's Ministry of Tourism ,2019) highlighted that improvements in infrastructure in regions like Badulla have contributed to a rise in tourism and, subsequently, an increased demand for food and beverage services, particularly casual dining.

Despite the growing interest in casual dining in Sri Lanka, limited research has been conducted on this sector within specific districts like Badulla. By choosing Badulla for your research, you can fill this gap in the literature, contributing to the understanding of local dining trends in emerging tourism destinations.

Example: While studies such as (Perera, 2017) and (Gunaratne ,2018) have looked at casual dining trends in larger cities like Colombo, there is a lack of region-specific studies focusing on smaller tourist destinations like Badulla. Your research would provide valuable insights into how tourism and local preferences intersect in the casual dining sector.

While numerous studies have investigated revenue management strategies in the restaurant industry, there remains a dearth of research focusing on casual dining establishments in smaller districts. Studies that delve deeper into the nuances of revenue management in these contexts are crucial to provide actionable insights for restaurant owners and managers. (Perera & Silva, 2016) Existing literature predominantly emphasizes revenue management in fine dining or fast-food restaurants, overlooking the unique challenges faced by casual dining establishments. Research that examines the effectiveness

of revenue management strategies in casual dining restaurants, particularly in regions like Badulla District, is warranted to fill this gap. (Fernando & De Silva, 2012). Accordingly, this study examined the factors that influence on implementing revenue management strategies, while analyzing its impact and identifying the most significant revenue management strategy for Micro Small & Medium Enterprises (MSME) level casual dining restaurants.

2. Literature Review

2.1 The Role of Revenue Management in Optimizing Profitability

Revenue management plays a crucial function in optimizing profitability for organizations in the hospitality industry (Kimes & Wirtz, 2003). By adopting data-driven decision-making processes, organizations may align pricing strategies with market demand, customer preferences, and competitive landscapes. This dynamic strategy allows firms to optimize revenue, enhance operational efficiency, and improve overall profitability (Kimes & Wirtz, 2003).

2.2 Revenue Management Strategies

2.2.1 Pricing Strategies

Among various pricing strategies Dynamic Pricing act as a complex pricing approach characterized by the real-time change of prices in reaction to multiple factors such as demand, competition, and market conditions (Wang, 2018). The core ideas underpinning dynamic pricing strive to optimize revenue by aligning prices with the perceived value of goods or services at any given instant. This method needs continual monitoring and analysis, allowing organizations to modify prices dynamically and strategically (Ryzhkova et al., 2019). Moreover, Organizations utilize Demand-depending Pricing, as it is a strategic technique that involves determining prices depending on the amount of demand for a product or service. This pricing technique tries to capitalize on peak demand periods, ensuring that prices coincide with the perceived value of the product or service during high-traffic hours (Chiang et al., 2018). By closely connecting pricing to swings in demand, organizations utilizing this method strive to optimize revenue and capture market value effectively. On the other hand, cost-based pricing is identified as a pricing approach that involves determining prices based on the production or operational costs incurred by a business, ensuring that prices cover expenses and add to total profitability (Hansen et al., 2017). This strategy usually includes the evaluation of variable costs, fixed costs, and targeted profit margins to establish the final pricing of a product or service.

2.2.2 Non-Pricing Strategies

To manage the revenue of an organization, pricing strategies should be effectively utilized along with the non-pricing strategies. Capacity Management can be identified as one strategy focused on optimizing the use of current resources, whether seating, rooms, or services, to fulfill demand without compromising quality or customer happiness (Kimes, 2004). The essential value of capacity

management is in its ability to ensure that firms can successfully handle fluctuations in demand while maintaining operational excellence (Bititci et al., 2018). By matching existing resources with shifting levels of demand, firms can boost overall efficiency and profitability. Overbooking is a crucial scenario that hotels or restaurants would avoid, nevertheless overbooking can be adopted as a strategic method to avoid the losses gained from sudden cancellations of reservations. In such a scenario, organizations accept more reservations or bookings than the available capacity, understanding that a certain percentage of clients may not show up. This method is founded on statistical probability and depends on historical data and predictive modeling to forecast the chance of no-shows or cancellations (Ryzin, 2015).

2.3 Revenue Optimization

2.3.1 Reservation and Occupancy Rate

The link between reservations and occupancy is a fundamental part of good revenue management in the hospitality company. Reservations indicate promises made by clients to employ a service or book a room at a given time, while occupancy rate monitors the actual utilization of available resources, such as hotel rooms or restaurant seating (Wang et al., 2018). Understanding this link requires aligning reservation data with the actual occupancy reached, delivering significant insights into customer behaviour, demand patterns, and the success of pricing and marketing efforts (Wang et al., 2018).

2.3.2 Menu Item Sales Mix

Menu engineering plays a vital role in revenue optimization for organizations in the hospitality industry, especially in casual dining places. It includes a strategic review of the menu to uncover high-profit and popular products, ultimately impacting pricing, promotion, and placement (Kasavana & Smith, 2018). Understanding the sales mix, or the proportion of different menu items sold, is vital. By categorizing items depending on their profitability and attractiveness, organizations can execute focused methods to maximize income. This research informs options on pricing adjustments, promotions, and menu redesign to boost total profitability (Kasavana & Smith, 2018).

2.3.3 Average Revenue Per Customer

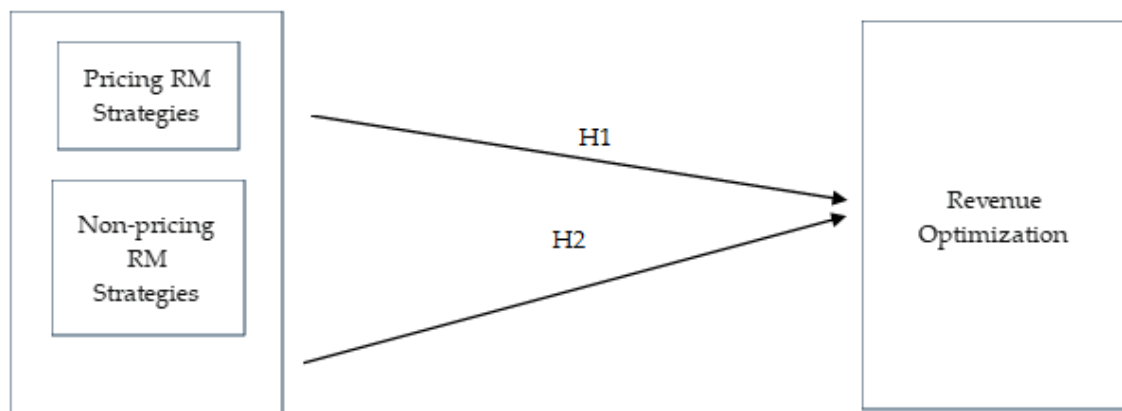
Average Revenue Per Customer (ARPC) is a crucial indicator in revenue management for organizations in the hospitality industry. ARPC provides useful insights into the typical spending behaviour of individual customers, delivering a full view of revenue generation (Nguyen & Hu, 2019). Understanding ARPC helps firms to segment their client base, discover high-value consumers, and customize marketing and pricing tactics to optimize income streams. This statistic is crucial in analysing the efficacy of upselling, cross-selling, and loyalty programs, delivering actionable data for strategic decision-making (Nguyen & Hu, 2019).

2.4 Casual Dining Restaurants

The casual dining sector in the hospitality market offers a different dining experience that sits between fast food and gourmet dining. Casual dining restaurants offer a casual ambiance, table service, and a variety menu, making them attractive alternatives for a broad 23 client base (Meneses et al., 2017). This sector is typified by a welcoming ambiance, fair price, and a focus on offering a good dining experience for families, friends, and people alike. Examples include huge chain restaurants and local establishments that offer a balance between convenience and a comfortable dining experience base (Meneses et al., 2017).

3. Conceptual Framework & Hypothesis

Figure 16 Conceptual framework



Source: Developed by the researcher based on the literature

3.1 Hypothesis

H1: The Pricing Strategies of Restaurant Revenue Management significantly impact on Revenue Optimization in Casual Dining Restaurants.

This hypothesis tests whether different pricing strategies (such as dynamic pricing, discount offers, product bundle pricing, etc.) can significantly influence the revenue generated by casual dining restaurants.

H2: The Non-Pricing Strategies of Restaurant Revenue Management significantly impact Revenue Optimization in Casual Dining Restaurants.

This hypothesis investigates the impact of non-pricing strategies (such as capacity management, overbookings, menu design, and customer service improvements) on revenue optimization in casual dining restaurants.

4. Methodology

This research study utilized a quantitative research approach to identify how revenue management strategies impact revenue optimization in casual dining restaurants. The study consisted of six independent variables and three dependent variables and was based on primary data collected through a survey. The data-gathering instrument was a self-administered questionnaire, and the data were transferred from the questionnaire to the survey for analysis. SmartPLS was used for statistical analysis. The unit of analysis was the owner or manager involved in revenue management in casual dining restaurants. The population consisted of casual dining restaurant owners or managers in the Badulla district, specifically those with restaurants that have a seating capacity of 20 or more. The restaurant data was collected through the data sheet received through the Uva Provincial Tourism Ministry. According to that there were around 382 Casual Dining Restaurants with above mentioned seating category. According to the Morgan table (or Sample Size Table), if population size is 384, the appropriate sample size for a 95% confidence level with a 5% margin of error is

- Sample Size = 191

This means, for a population of 384, a sample size of 191 is typically recommended for accurate and reliable results.

Hence, A total of 191 casual dining restaurants in the Badulla district were considered for this study. The researcher used a convenience sampling method, selecting respondents who were conveniently available to answer the questions.

The primary data was collected through a structured questionnaire specially designed for this study, consisting of three sections. The first part included questions related to demographic information such as gender, age, education level, and years of experience, providing a simple overview of the sample. The second part included questions related to the dimensions of revenue management strategies, covering both pricing and non-pricing strategies. These questions were created based on a five-point Likert scale to assess knowledge about revenue management strategies. The third part of the questionnaire consisted of questions related to revenue optimization. The reliability of the measurement instrument was evaluated using Cronbach's Alpha Test, which assesses how consistently the items within the instrument measure the same underlying construct.

5. Data Analysis Method

All the research outcomes and conclusions are based on data analysis, and it is the most crucial part of a study (Ibrahim and Ibrahim, 2014). This research utilized the following data analysis methods and tools to analyse the obtained primary data.

Table 44 Data Analysis Approaches

Objective		Analysis Methods and Tools	
01	To identify the impact of revenue management strategies on revenue optimization in MSME level casual dining restaurants?	Structured Modelling (SPSS)	Equation
02	To identify the most significant revenue management strategies in MSME-level casual dining Restaurants?	Structured Modeling (SPSS)	Equation
03	To identify the factors that influence on implementing revenue management strategies in MSME-level casual dining restaurants	Factor Analysis (SMARTPLS)	

Source : Developed by the researcher

6. Results

6.1 Reliability Analysis

Table 45 Reliability Analysis

Variable	Cronbach's Alpha
Dynamic Pricing	0.720
Demand Based Pricing	0.726
Cost Based Pricing	0.721
Product Bundle Pricing	0.737
Over Booking	0.794
Capacity Management	0.791

Source : Smart-PLS Data Output from Field Survey Information

Conducting a reliability analysis on the variables related to pricing strategies, overbooking, and capacity management, it was found that Cronbach's Alpha coefficients for each variable were 0.720, 0.726, 0.721, 0.737, 0.794, and 0.791, respectively. These coefficients are indicative of the internal consistency or reliability of the measurement scales utilized for each variable. Generally, Cronbach's Alpha values above 0.70 are considered acceptable for research purposes, suggesting a satisfactory level of internal consistency among the items within each variable. Therefore, based on these results, it can be inferred that the items measuring pricing strategies, overbooking, and capacity management demonstrate adequate reliability, providing confidence in the validity of the constructs being assessed within the context of the study.

6.2 Inferential Analysis

Table 46 Inferential Analysis

Variable	No of Items	KMO	Bartlett's Test (Chi Square Value)	Sig	CR	AVE
Dynamic Pricing	206	0.500	11.129	0.000	0.855	0.664
Demand Based Pricing	206	0.500	12.768	0.006	0.799	0.697
Cost Based Pricing	206	0.500	21.967	0.001	0.842	0.706
Product Bundle Pricing	206	0.500	14.007	0.000	0.873	0.688
Over Booking	206	0.500	42.736	0.000	0.951	0.797
Capacity Management	206	0.500	6.024	0.012	0.820	0.622

Source : 1 Smart-PLS Data Output from Field Survey Information

In conducting inferential analysis on the variables of pricing strategies, overbooking, and capacity management, several key metrics were assessed. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for all variables was found to be 0.500, indicating a moderate level of sampling

adequacy. Additionally, Bartlett's Test of Sphericity yielded significant results for Dynamic Pricing (Chi-Square Value = 11.129, $p = 0.000$), Demand Based Pricing (Chi-Square Value = 12.768, $p = 0.000$), Cost based pricing management (Chi-Square Value = 21.967, $p = 0.001$), Product Bundle Pricing (Chi-Square Value = 14.007, $p = 0.000$), Over Booking (Chi Squared Value = 42.736, $p = 0.000$), Capacity Management (Chi Squared Value = 6.024, $p = 0.012$) suggesting that correlations between items within each variable were sufficiently large for factor analysis to be appropriate. Furthermore, the constructs' composite reliability (CR) values were observed to be 0.855, 0.799, 0.842, 0.873, 0.951, and 0.820 for pricing strategies, overbooking, and capacity management, respectively, indicating high internal consistency among the items within each variable. Moreover, the average variance extracted (AVE) values were found to be 0.664, 0.697, 0.706, 0.688, 0.797, and 0.622 for pricing strategies, overbooking, and capacity management, respectively, suggesting that each variable accounts for a substantial amount of variance in its constituent items. These results collectively indicate that the variables under examination possess satisfactory reliability and validity, thereby providing a solid foundation for further inferential analysis within the study.

6.3 Confirmatory Factor Analysis

Table 47 Confirmatory Factor Analysis

Variable	Determinant (Factor)	Loading
Dynamic Pricing		
DP1	Demand Fluctuations.	0.736
DP2	Competitor Pricing	0.911
DP3	Customer Segmentation	0.745
Demand Based Pricing		
DBP1	Menu item Popularity	0.917
DBP2	Reservation patterns	0.866
DBP3	Peak hours & days	0.893
Cost Based Pricing		
CBP1	Cost of goods sold	0.874
CBP2	Operating expenses	0.819
Product Bundle Pricing		
PBP1	Profit margins	0.743
PBP2	Competitive Benchmarking	0.756

Over Booking		
OB1	Reservation no show	0.701
OB2	Table Turnover Time	0.721
Capacity Management		
CM1	Table Turnover Rate	0.799
CM2	Peak hour utilization	0.787
Reservation & Occupancy Rate		
ROR1	Reservation scale	0.843
ROR2	Occupancy Scale	0.798
Menu Item Sales Mix		
MISM1	Menu item popularity	0.965
MISM2	Sales quantity of each menu	0.889
Average Revenue per Customer		
ARC1	Typical customer spendings	0.832

Source : Smart-PLS Data Output from Field Survey Information

According to the results of the analysis, the Table shows all the outer loadings of constructs are positive and no negative values to reduce the quality of the study. All the outer loading values are also higher than 0.7 which means all the factors are significant.

6.3 Confirmatory Factor Analysis

Table 48 Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistics (O/STDEV)	P values
NPS -> RO	0.488	0.488	0.09	5.409	0
PS -> RO	0.142	0.189	0.152	0.932	0.351

Source : Smart-PLS Data Output from Field Survey Information

The path coefficient specifies the direct effect of a latent variable assumed to be a cause on another latent variable assumed to be an effect. The path coefficients are standardized, and the value must be in between -1 and +1. If the calculated coefficients are close to 0, it indicates a weaker link. A good

path coefficient should be at least 0.100 at a significant P value ($P \text{ value} < 0.05$) (Hair, Ringle and Sarstedt, 2013).

7. Discussion the Findings

H1 tests whether the Pricing Strategies of Restaurant Revenue Management significantly impact Revenue Optimization in Casual Dining Restaurants. The acceptance or rejection of the hypotheses is done based on the p values. If the p value is less than 0.05, then the hypotheses is accepted, otherwise, it is rejected. The P value of “PS $\rightarrow$ RO” is 0.351 and this value is higher than 0.05. Therefore, H1 is not accepted. It can be concluded that the Pricing Strategies of Restaurant Revenue Management do not significantly impact Revenue Optimization in Casual Dining Restaurants. When it comes to casual dining, RRM is all about pricing tactics used to maximize revenue. Our existing literature is a treasure trove of detailed analysis of just how much these tactics can do to optimize revenue. Numerous studies illustrate the beneficial effects of RRM on revenue management and optimization in casual dining. For example, Kimes (2004) claims that dynamic pricing, which modifies prices to pace demand, can generate substantial revenue increases. This technique capitalizes on peak dining periods, advertising discounts during off hours to prompt more dinners and accelerate table turns. Similarly, Pavesic, (2018) argues that menu engineering, encompassing menu analysis and design, as well as demand forecasting through analytics, can significantly enhance revenue management efforts if done tactfully. They reach the conclusion that once restaurants become knowledgeable about customer preferences and behavior, they can adapt their menu fares and prices to optimize profits (Cross et al. 2009).

Additionally, Wang, (2018) conducted a study which supports these findings. The study showed that RRM practices such as reservation management system and demand-based pricing for tables and menu items significantly increase resource efficiency and customer satisfaction by allowing restaurants to better accommodate more customers while keeping them longer with better dining experience in the restaurants ultimately resulting in higher revenues.

Nevertheless, there is disagreement about the chance of success of revenue management systems. People against the tactics used in revenue management claim that the revenues gained through pricing strategies can ignore customer contentment and experience. Ghose et al., (2019) argue that customer dissatisfaction may stem from aggressive and frequent price variations that hotels and restaurants may implement. In fact, customers in the casual dining sector look more for transparency and consistency over exploiting dynamic pricing models because this could lead to a loss of loyal guests. Furthermore, there is a study conducted by Ryzhkova et al., (2019) explaining that even if RRM increases the short-run revenue, it may not always lead to long-term profitability. They mention that simply practicing pricing strategies excessively may result in turning the dining experience and food products into a commoditized item, where meals are completely perceived on prices rather than value. This

deterioration will diminish brand loyalty over time, therefore, transforming into a bad business practice.

H2 tests whether the non-pricing Strategies of Restaurant Revenue Management significantly impact Revenue Optimization in Casual Dining Restaurants. The P value of “NPS -> RO” is 0.000 and this value is less than 0.05. Therefore, H1 is accepted. It can be concluded that the Pricing Strategies of Restaurant Revenue Management significantly impact Revenue Optimization in Casual Dining Restaurants. Non-price tactics have taken center stage in casual dining Restaurant Revenue Management (RRM) in recent years because of their great impact on revenue optimization. These tactics, which go beyond pricing, concentrate on elevating operational processes, customer experience, and demand management.

In addition, it is obvious that they can also continue to take other customers' orders and simultaneously deliver them in the kitchen. Finally, when their customers leave restaurants, waiters can seat new customers at the tables. All these show that the full table turnover is continuously operating, this result will offer higher overall revenue. But, if a situation happens that made reservations left an empty space in restaurants on these days, waiters can make that space available again by taking other guests to this table. Reservations make sure and give confidence to restaurants that they will have generally the same number of customers on the same day at the same time since they know their reservations ahead. Again, if some customers cannot come on their reservation days or at their reservation times, restaurants can sell this opportunity to other customers since they don't have seats available for everyone on all days and all times. Therefore, it is not even considered that waiting takes place in an empty table environment since a new customer must come, to keep the rotation. Another importance of having reservations is told by González et al. (2005). They argued that customers always need and want to know that they eat their meal at “on their table,” at “on their reservation time” and no hesitations are met, by “service providers.”

Maximizing the table management and layout optimization is contributed. By strategical arrangement of tables and dining times management, the restaurant can serve more guests while increasing overall capacity and turnover rate to increase revenue. In addition, the authors' study has discussed the positive impact of marketing and promotions as a non-pricing strategy on the firm's performance. Their findings show that targeted marketing campaigns or loyalty programs can attract and keep customers resulting to steady revenues growth. Therefore, with prosperous brands and customer loyalty, casual dining restaurants can assure return business and positive word of mouth references.

The significance of staff training and service quality improvement is discussed by Noone and Kimes (2017). By investing in employee training, a better dining experience overall is enabled for customers, this in turn leads to increased customers satisfaction and increased returns. Superior service quality is

the critical differentiator in the competitive casual dining market, where short- and long-term optimization of revenue is essential.

8. Recommendations

Given the significant impact of pricing strategies on revenue optimization, restaurants should adopt dynamic pricing models that respond to demand fluctuations, customer preferences, and competitor pricing. Dynamic pricing strategies offer a potent tool for revenue optimization in casual dining restaurants by aligning prices with demand fluctuations, customer preferences, and competitor actions. This approach entails adjusting prices in real-time based on various factors, including peak times, special events, and market competition. By leveraging customer data and market analysis, restaurants can fine-tune their pricing strategies, making informed decisions that enhance profitability while maintaining customer satisfaction. This proactive pricing model not only boosts revenue but also supports efficient resource management and service delivery, making it an essential strategy for competitive differentiation and financial success in the hospitality industry. While overbooking has a nuanced effect on revenue optimization, managing it effectively can reduce the impact of no-shows and cancellations. As capacity management has shown a positive association with revenue optimization, restaurants should focus on optimizing table mix and layout, reservation management, and customer flow to increase turnover without compromising the dining experience. Enhancing capacity management is crucial for casual dining restaurants aiming to optimize revenue without detracting from the dining experience. Effective capacity management involves strategic planning of table mix and layout, reservation management, and managing customer flow to increase turnover rates. Focusing on customer experience is paramount for casual dining restaurants striving for revenue optimization, as achieving a balance between financial goals and customer satisfaction is essential. Despite the emphasis on strategic pricing, overbooking, and capacity management, the core determinants of customer loyalty and repeat business personalized service, quality food, and a compelling ambiance cannot be overlooked..

9. Future Research Directions

Based on the findings of this study, future research could delve deeper into the long-term impacts of various revenue management strategies on customer satisfaction and loyalty, which may be crucial for sustaining profitability in the casual dining sector. Further investigations could explore how different types of casual dining establishments—such as family-oriented, budget, or premium brands—respond to specific pricing and non-pricing strategies. Comparative studies across geographic regions or countries could also reveal contextual factors that influence the effectiveness of revenue management practices. Additionally, a more granular analysis using advanced machine learning algorithms could offer a more sophisticated approach to predicting demand patterns and optimizing pricing strategies in real-time. Research that integrates customer behavior analytics with revenue management frameworks

could yield further insights into the symbiotic relationship between service delivery, pricing tactics, and revenue generation. Lastly, investigating the role of emerging technologies such as dynamic pricing software, artificial intelligence, and big data analytics in enhancing revenue management would be crucial for understanding how the digital transformation of the restaurant industry impacts profitability in the evolving market landscape. Future research could explore the long-term effects of these strategies on brand loyalty and customer lifetime value, investigate the role of external factors such as economic conditions and technological advancements, and assess the applicability of these findings across different market segments and geographic regions.

10. Conclusion

The descriptive analysis highlighted the average propensity towards more aggressive or proactive practices in these areas, suggesting a general trend among the respondents towards leveraging these strategies for revenue enhancement. Reliability analysis confirmed the internal consistency of the measurements employed, ensuring that the findings are based on robust and reliable data. Inferential analysis, supported by significant p-values, reinforced the appropriateness of the factor analysis used, while the correlation analysis unearthed significant positive correlations among the variables, underscoring the intertwined nature of pricing strategies, overbooking, and capacity management in influencing revenue optimization. The ANOVA and Factor analyses further corroborated these findings, offering a granular understanding of the variables' distribution and impact. Ultimately, the hypothesis validation confirmed that both pricing and non-pricing strategies significantly impact revenue optimization in casual dining restaurants, aligning with the initial research propositions and contributing to the existing body of knowledge by offering empirical evidence of the strategies' effectiveness.

11. Conclusion

The descriptive analysis highlighted the average propensity towards more aggressive or proactive practices in these areas, suggesting a general trend among the respondents towards leveraging these strategies for revenue enhancement.

12. Appendices

Appendix - Questionnaire

Dear respondents,

My name is Geenath Aththanayake (UWU/HTE/19/019), a final year undergraduate from Uva Wellassa University, proudly affiliated with the Faculty of Management. Currently, I'm pursuing my BBM. Hons degree in Hospitality, Tourism & Events Management. As part of my final year academic,

I'm doing my research about “***The Impact of Revenue Management Strategies in Revenue Optimization: Reference with Casual Dining Restaurants in Badulla District***”

Thus, your support extended in this regard by filling out this questionnaire will be highly appreciated. Please kindly note that the information provided by you will be kept confidential.

Part A: Demographic Information

1 Age:

Under 18 ☐ 18-24 ☐

25-34 ☐ 35-44 ☐

45-54 ☐ 55 and above ☐

2 Gender:

Male ☐

Female ☐

3 Educational Level

Up to O/L ☐

Up to A/L ☐

Bachelor`s Degree Complete ☐ Reading ☐

Master`s Complete ☐ Reading ☐

PhD Complete ☐ Reading ☐

4. Years of experience in the restaurant industry:

Less than 1 year ☐ 1-3 years ☐

4-6 years ☐ 7-10 years ☐

More than 10 years ☐

To guide you through this exploration, I've designed a five-point Likert scale (1 for strongly disagree to 5 for strongly agree) for you to express your opinions. Please use the following scale:

- 1: Strongly Disagree
- 2: Disagree
- 3: Neutral
- 4: Agree
- 5: Strongly Agree

PART B: Independent Variable

Pricing Strategies

A) Dynamic Pricing

No.	Questions	1	2	3	4	5
1	Demand fluctuations impact revenue optimization in my restaurant					
2	Considering my competitors` pricing is important when strategizing for revenue optimization for a restaurant					
3	Adjust pricing to optimize revenue from different customer segments is important					

A) Demand-Based Pricing

No.	Questions	1	2	3	4	5
1	The popularity of a menu item influences for making better revenue for the restaurant					
2	Different kinds of reservation patterns impact to creation of profitable pricing strategies for increased revenue					
3	Peak hours and days of my restaurant enable me to achieve high revenue					

A) Cost-Based Pricing

No.	Questions	1	2	3	4	5
1	Identifying the cost of the sold goods is important to create profitable pricing					
2	Minimize the operating expenses can create high revenue for my restaurant					

B) Product Bundle Pricing

No.	Questions	1	2	3	4	5
1	Compare my competitors` performances and tactics enables me to adjust prices with innovative product bundle techniques					
2	Setting profit margins for a group of items can generate successful income through effective product pricing					

Non - Pricing Strategies

A) Capacity Management

No.	Questions	1	2	3	4	5
1	Efficiently used tables enable maximizing the number of customers served and revenue optimization					
2	Restaurant effectively manages its resources to serve a large number of customers, and minimizing wait times enables high revenue potential for my restaurant					

B) Overbooking

No.	Questions	1	2	3	4	5
1	Utilize no show data to manage waitlist help to use available capacity during peak hours to get more revenue for my restaurant					

2	Balance speed and efficient meal service can reduce the table vacated time and get more revenue in my restaurant					
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Part C: Dependent Variables

A) Reservation & Occupancy Rate

No.	Questions	1	2	3	4	5
1	Higher reservations lead to better revenue enhancements with better resource utilization					
2	More tables and seats occupied by customers lead to high demand and increased revenue					

A) Menu Item Sales Mix

No.	Questions	1	2	3	4	5
1	The popularity of a specific menu item can significantly increase the restaurant's revenue					
2	Increasing the sales quantity of a menu directly impacts revenue optimization					

B) Average Revenue per Customer

No.	Questions	1	2	3	4	5
1	Through an increase the typical customer spending restaurants can gain high revenue					

Thank you for your support & valuable time to fill out my questionnaire. Your valuable input is greatly appreciated and will contribute significantly to my research..

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Resilient Leadership and Employee Empowerment: Overcoming Challenges In Sri Lanka's Private Higher Education Sector

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Abstract

This study investigates the impact of resilient leadership (RL) on employee empowerment (EE) in the private sector higher education (HE) context in Sri Lanka (SL). Despite its recognized importance, there is a notable research gap regarding the effects of RL on EE within Sri Lanka's higher education sector (HES). This gap is critical given the sector's increasing demands for quality education, competitive pressures, and the need for adaptive leadership. The study aims to bridge this gap by examining how contingency planning, improvisation, adaptive instructing, contingency control, emergency care, adjustment recovery, and mutual growth influence EE. This research employed purposive sampling to gather data from 136 non-academic employees holding positions above the executive level within private higher education institutions (HEI) in the Western Province (WP) of SL. Data collection utilized a structured questionnaire, and statistical analyses including correlation and regression were conducted to assess the relationship and impact of RL on EE. The results indicate a statistically significant relationship between RL practices and EE, highlighting the critical role of RL in fostering a conducive work environment. The findings suggest that RL positively impacts EE within private HEIs in the WP of SL. The results contribute to the limited body of knowledge on leadership resilience in HE and provide practical insights for educational leaders aiming to enhance EE. By fostering RL practices, institutions can support their employees, leading to a more motivated and effective workforce. This research offers valuable insights for driving positive organizational outcomes such as enhanced job satisfaction, increased productivity, improved institutional effectiveness which fosters a supportive work environment in the evolving private HES in SL.

Keywords: Employee Empowerment, Higher Education, Leadership, Non-academic, Resilient Leadership.

1. Introduction

The pressures on Sri Lanka's higher education system are growing as a result of the factors such as globalisation, technological progress, and shifting student demographics (Waidyaratne, 2022). Further, the increased enrolment, technological developments, and shifting student demographics are all considered signs of major changes in Sri Lanka's higher education system (Waidyaratne, 2022). But these adjustments have also brought with them new difficulties, such as tight budgets, shifting regulations, and the need to adjust to international trends in the field of education. It has been observed that the role of leadership plays a critical role in maintaining the resilience of the faculty and staff and the empowerment in this dynamic environment (Liang & Cao, 2021; Prayag, 2023). In addition, it is found that resilient leadership is necessary in this dynamic environment in order to effectively handle the obstacles and to empower staff (Prayag, 2023) in the different industries.

Although resilient leadership is becoming increasingly recognized as an important aspect in the modern world (Kavindi & Chandrasekara, 2023), there is a dearth of thorough research on analysing its effects on the employee empowerment in the higher educational system of Sri Lanka (Waidyaratne, 2022). Different studies have looked at the relationship between various leadership styles and many organisational outcomes, but it is noted that more research is needed to understand how several resilient leadership practices such as adjustment recovery and contingency planning are able to affect employee empowerment in terms of decision making, discretionary skills, and access to information and tools (Kovinthan, 2019).

The capacity that is required to foresee, adjust to, and rebound from the disturbances is what defines the concept of resilient leadership; traits like these include improvisation, contingency planning, and adaptive instruction (Waidyaratne, 2022).

In the context of higher education, employee empowerment is considered essential because it improves the faculty and staff in the capacities of training and development, decision-making, discretionary skills, access to information and resources (Ojeda, 2023), and knowledge and skills (Kovinthan, 2019). By fostering a creative and encouraging culture, resilient leadership techniques like adjustment recovery and contingency planning are thought to have a favourable effect on the employee empowerment (Tenney, 2023).

The previous studies (Liang & Cao, 2021; Tenney, 2023; Prayag, 2023) show a good correlation between employee outcomes and resilient leadership. For instance, Liang and Cao (2021) discovered a favourable correlation between employee resilience and organisational performance, underscoring the significance of resilient leadership in accomplishing organisational objectives (Liang & Cao, 2021). Furthermore, research has demonstrated that resilient leadership practices such as employee

empowerment and positive vision formulation contribute to the effectiveness and resilience of organisations (Tenney, 2023).

By analysing the connection between resilient leadership and employee empowerment in the higher educational institutions of Sri Lanka, this study seeks to close various gaps that have been identified by the authors of the research.

Through the identification of the critical resilient leadership qualities that substantially enhance employee empowerment (Srivastava, 2015), this study aims to offer insightful information to leaders and policy makers in the higher education sector of Sri Lanka. In addition, the purpose of this project is to investigate these links in order to offer leaders and policymakers in the education sector some useful insights that will improve organizational resilience and effectiveness (Afram, 2022) in the higher educational system in Sri Lanka which will be helpful to make an impact in the required field of study.

Despite these results, it has also been observed that there is a lack of information in the literature with regard to the precise effect of resilient leadership on the worker empowerment (Kavindi & Chandrasekara, 2023) in the higher educational system, which is suggestive that there is a contextual gap that prevails with regard to the research topic.

Therefore, it can be stated that the research is carried out in order to address the gaps on knowledge, literature and context that could contribute to contract the gaps in literature, improve the industry of higher education and build awareness among the policy makers to initiate the required changes in the higher educational system of Sri Lanka.

1.1 Research Questions and Objectives

Research Questions:

To address this gap that has been rectified in the above-mentioned context, the following research questions will be used to guide this study:

1. What is the impact of Resilient Leadership on Employee Empowerment in the private higher education Sector in Sri Lanka?
2. What is the relationship between Resilient Leadership dimensions and Employee Empowerment in the private higher education sector in Sri Lanka?

Research Objectives:

- a. To identify the impact between resilient leadership and employee empowerment in the private higher education sector in Sri Lanka.
- b. To examine the relationship between Resilient Leadership dimensions and Employee Empowerment in the private higher education sector in Sri Lanka?

2. Literature Review

2.1 Resilience

The contemporary dynamic business environment is highly volatile, uncertain, complex and ambiguous, demanding the entities to portray resilience (Eliot, 2020). Resilience is the extent to which adversities, external shocks or any other traumatic situations can be absorbed by entities in order to bounce back towards normalcy, simply, implying the potential of an entity to get toppled and then rebound, while learning and being future-ready to encounter future crisis situations (Lombardi et al., 2021). Table 1 depicts the way resilience was derived in different perspectives by different scholars.

Table 49 Resilience in different perspectives

Perspective	Description	Source(s)
Trait orientation	Resilience is a personal characteristic that aids individuals to deal with, adapt and develop from crisis situations.	(Connor & Davidson, 2003)
Capacity orientation	Resilience portrays the potential of an individual to resist, adapt, survive, restore and thrive, ultimately coping with adversities.	(Näswall et al., 2013; Wang et al., 2014)
Process orientation	Resilience can be recognized as a dynamic process (preparing prior to crisis, adaptation during crisis, recovering and growing after crisis) via which people adapt and recover from crisis situations.	(Förster & Duchek, 2017; Zhang et al., 2023)
Outcome orientation	Resilience can be viewed as an outcome that has happened due to successful adaptation of individuals during crisis situations.	(Harvey & Delfabbro, 2004)

Source : Author generated

According to Eliot J (2020), resilience is determined as the potential of individuals to encounter negative, traumatic situations or challenges posed via positive changes such as promotions, new projects etc., ensuring the bounce back to equilibrium. In today's dynamic corporate landscape, resilience and leadership has received increased attention (Zhang et al., 2023).

2.2 Resilient leadership

Leadership can be identified as a complex process that consists of a wide array of paradigms such as transformational, transactional, servant, team, authentic leadership etc. The term ‘leadership’ is defined by different intellectuals in different manners, where such definitions and findings about leadership has evolved over time (Northouse, 2007). Yet, all the conceptualizations of the term ‘leadership’ highlights that it is a process that influences another individual or a group of individuals to achieve a stated common goal. Simply, it is an interplay between the leader and the followers (Yadav, 2019). Hence, the leaders are required to adopt the most ideal style of leadership in order to achieve organizational productivity and effectiveness (Nanjundeswaraswamy & Swamy, 2014).

Among all the different styles of leadership, “resilient leadership” has received much prominence over time due to the dynamic nature of the corporate landscape. It is identified as an effective style of leadership during turbulent times as it allows the entities to rapidly catapult back towards normalcy by ensuring organizational success despite all odds (Kumar & Kumar, 2022). Resilient leaders realize the requirement of being highly adaptive in order to tolerate, survive, adapt and bounce back during crisis situations (Dartey-baah, 2015). It is realized that leaders who are resilient have the potential of working under pressure while facing radical fluctuations in the business environment (Sanaghan, 2016). As per Kohlrieser & Rossi (2014), resilient leaders have the ability of encountering crisis situations without causing any alterations to their behaviour and also without harming others. Resilient leaders must perceive crisis situations as it is in an optimistic manner without denying the adverse effects of the calamity and must have the will to encounter the challenge despite all odds (Sanaghan, 2016). Also, it is vital that resilient leaders possess the courage to face challenges and make tough decisions. Leaders which portray resilient leadership behaviours tend to be sophisticated and intellectually curious as they tend to explore an array of solutions to mitigate the calamity (Sanaghan, 2016). Table 2 highlights various interpretations of resilient leaders and resilient leadership.

Table 50 Interpretations of Resilient Leaders and Resilient Leadership

Different Interpretation(s) of Resilient Leader/Leadership	Sample Source
Resilient Leadership allows organizations to sustain during volatile, uncertain, complex and ambiguous corporate environment ensuring the achievement of the organizations’ mission.	(Dba & Cha, 2021)
Also, it can be realized as a process of preparing people, practices, processes and systems to be adaptive in order to encounter challenging times	

- Resilient Leadership ensures the management of fluctuations in an organization aligning with the organizations' vision, managing one's own self, increasing awareness, encountering situations with perseverance and inculcating a growth mindset while being adaptive and flexible. Further, it is about motivating others to be calm, empathetic, compassionate, logical and systematic when dealing with uncertainties. (Renjen, 2020)
- Resilient Leadership can be identified as a leadership style that fosters the ability of complex systems to function and thrive during crisis situations. (Willis & Nadkarny, 2020)
- It can also be identified as a quality that a leader should possess in order to cope up with traumatic situations without shrinking during either physical or mental fatigue.
- Resilient Leadership is a style of leadership that allows individuals to survive and move forward with the team during complex situations by being flexible and adapting to new normal situations. (Sanaghan, 2016)
- A sense of optimism, coherence, self-esteem, hardiness, self-efficacy, perseverance and tolerance of uncertainties are traits portrayed by a resilient leader (Ledesma, 2014)
- Resilient leaders have the capacity to face challenges and recover from such traumatic situations while providing support to the team members to sustain their energy throughout. (Kohlrieser & Rossi, 2014)
- Resilient leadership is an effort taken to realize the purpose of life by mastering the ability of influencing situations that will happen in the future. It is the process of understanding both positive and negative challenges and thriving through them (Bonanno, 2014)

Source : Interpretations of Resilient Leaders and Resilient Leadership

According to Zhang et al. (2023), resilient leadership consists of seven (07) dimensions; (1) Contingency planning, (2) Improvisation, (3) Adaptive instructing, (4) Contingency control, (5) Emergency care, (6) Adjustment recovery, (7) Mutual growth.

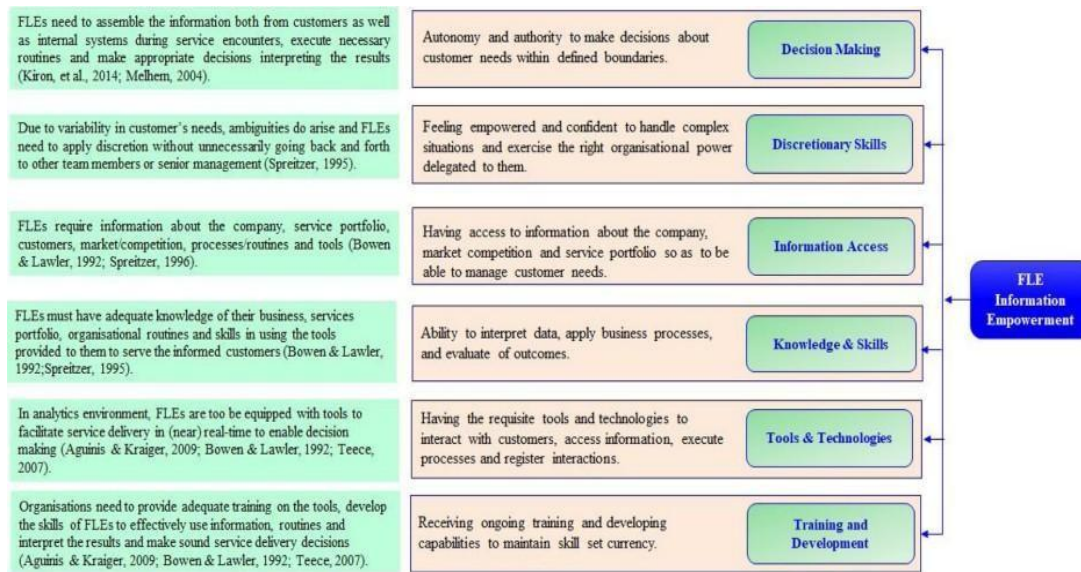
Prior to the crisis, leaders set plans and strategies to avoid uncertainties and ensure continuous operations, which is identified as contingency planning. Improvisation is identified as the leaders initial assessment, quick response and early discarding of uncertainties in order to avoid the impact of crisis situations (Zhang et al., 2023). In other words, improvisation consists of the requirement to respond to and to adapt to uncertain situations immediately, portraying reactive and adaptive qualities. This will allow entities to face traumatic situations without even planning beforehand (Lombardi et al., 2021). Adaptive instructing means the attempt of leaders to provide instructions and assistance to the employees in order to cope up with uncertainties optimistically. Leaders provide clear requirements of tasks and duties to the employees to ensure successful regulation and motivation of employees, which is identified as contingency control (Zhang et al., 2023). The dimension of emergency care highlights the sense of care portrayed by the leaders' on their employees work and personal life, while ensuring that the customers' needs are met and social benefits are valued. In order to eliminate the negative impact of tragedies and bounce back into normalcy, leaders undertake various measures, which could be identified as adjustment recovery; sixth dimension as stated by the scholar (Zhang et al., 2023). Lastly, the dimension of mutual growth is the focus that leaders show on employee growth and the growth of themselves after the crisis situation (Zhang et al., 2023)

2.3 Employee empowerment

According to Tanjeen (2013), employee empowerment can be identified as the process of fostering and encouraging a corporate environment in which the employees are given the autonomy to make decisions, solve problems, set goals etc. Simply, the tasks, duties, responsibilities and work is delegated to the employees in employee empowerment, ensuring the increment of responsibility and the quality of work of employees (Tanjeen, 2013). In other words, employee empowerment is the action of transferring the power or rather the discretion of work from the employer to the employee (Jaya Kumar & Kumar, 2017). The focus of employee empowerment is to ensure that trust of the employees is developed and the employees are motivated and involved in the process of decision-making (Hieu, 2020).

According to Motamarri et al. (2020), six (06) dimensions on employee empowerment have being identified, which are namely, (1) Decision-making, (2) Discretionary Skills, (3) Information Access, (4) Knowledge and Skills, (5) Tools and Technologies, (6) Training and Development. Figure 1 depicts these dimensions of employee empowerment with the definitions..

Figure 17 Dimensions of empowerment and definitions

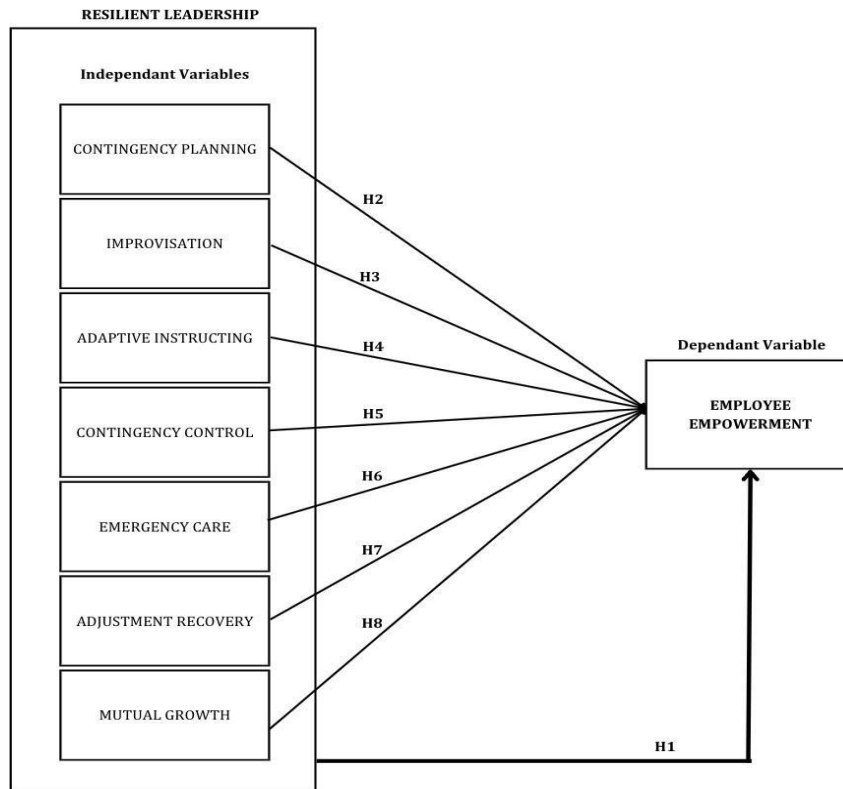


Source : (Motamarri et al., 2020)

2.4 The impact of resilient leadership on employee empowerment

Prior studies states that different styles of leadership influences the empowerment of employees, fostering the autonomy in making decisions and coming up with novel, creative and innovative ideas (Jaya Kumar & Kumar, 2017; Junaid & Samman, 2021; Murari & Gupta, 2012; Rajamohan, 2020). According to Junaid & Samman (2021), democratic leadership style ensures that employees are brought together, ensuring group cohesiveness despite independent decision-making, prompting a positive impact on employee empowerment. Further, transformational leadership style creates a working environment that fosters responsibility, critical reasoning to decision making, creativity and innovation, ultimately promoting cultural norms that facilitates employee empowerment (Jaya Kumar & Kumar, 2017). Moreover, it is identified that servant leadership style, where collaboration, empathy, trust and also ethical utilization of power is given prominence has a significant impact on employee empowerment that ultimately results in increased commitment of employees towards the organization, job satisfaction and increased involvement (Murari & Gupta, 2012). Yet, lack of studies have being conducted in order to analyse the impact of resilient leadership style on employee empowerment, setting the ground for this research study on the effects of resilient leadership on employee empowerment in private sector higher education landscape of Sri Lanka.

Based on the information provided earlier, the following conceptual frameworks have been developed.



Source : 2 Developed by the researcher, (2024)

H0: There is no relationship between resilience leadership and EE in private higher education sector in Sri Lanka

H1: There is a relationship between resilience leadership and EE in private higher education sector in Sri Lanka

H2: There is a relationship between Contingency planning and EE in private higher education sector in Sri Lanka

H3: There is a relationship between Improvisation and EE in private higher education sector in Sri Lanka

H4: There is a relationship between Adaptive instructing and EE in private higher education sector in Sri Lanka

H5: There is a relationship between Contingency control and EE in private higher education sector in Sri Lanka

H6: There is a relationship between Emergency care and EE in private higher education sector in Sri Lanka

H7: There is a relationship between Adjustment recovery and EE in private higher education sector in Sri Lanka

H8: There is a relationship between Mutual growth and EE in private higher education sector in Sri Lanka

3. Methodology

3.1 Population, Sample, and Sampling Technique

The non-academic employees at the private higher education sector in Sri Lanka is considered as the population of this study. The sample is a subset of the population consisting of several members of the population. This subset was taken because in many cases it is impossible to take all members of the population for the study. Therefore, sampling is a form of representative population. The sample is part of the number and characteristics possessed by the population on the condition that the samples taken from the population must be truly representative (Riyadi, R. P. & Auliya, Z. F., 2021). The sample in this study were 136 employees of the western province private higher education sector in Sri Lanka. The characteristics of the sample taken are non-academic employees who is working under a supervisor or leader within the private higher education sector. They were taken using purposive sampling by setting certain considerations or criteria that must be met by the samples used in this study (Riyadi, R. P. & Auliya, Z. F., 2021). The considerations for determining the sample are employees who have a minimum length of work of three months, so that their organizational commitment can be evaluated and employees have felt enough empowerment and team work space under a leader within the institute or organization.

3.2 Data collection technique

Data collection can be done with various settings, sources, and ways. In terms of the method employed, data collection techniques can be done through the interview, questionnaire, observation, and a combination of three (Riyadi, R. P. & Auliya, Z. F., 2021). The data collection technique used in this study was a questionnaire. The questionnaire is a data collection technique where respondents fill in questions or statements completely and return them to the researcher (Sugiyono, 2014). The scoring in this questionnaire uses the agreement measurement scale. This case used a 5- point scale. Respondents were asked to choose alternative answers ranging from a scale of 1 (strongly disagree) to a scale of 5 (strongly agree). The agreement measurement scale is another form of a bipolar adjective by developing statements that produce agree-disagree answers in various ranges of values (Ferdinand, 2014). To collect common details which researchers, need to derive and analyze according to some criteria's' questionnaire included the common and personal information section with multiple choice answers. The selection of the aforementioned measurement scales refers to the acceptable values of Cronbach's alpha which provide evidence of reliability.

3.3 Operational Definition of the Variables

Empowerment is an effort to give autonomy, supervisor trust, and creativity encouragement in order to complete their duties as best they can (Pratama et al, 2015). Kanter (1993), argues that organizational structures alone determine the empowerment experienced by employees. According to Motamarri, S., Akter, S., & Yanamandram, V. (2020), indicators in measuring employee empowerment are (1) Decision-making, (2) Discretionary Skills, (3) Information Access, (4) Knowledge and Skills, (5) Tools and Technologies, (6) Training and Development. These elements need to be adapted for analytics- driven services context, as both customer needs and task complexity vary across customers. Resilience Leadership defined as the quality of the leaders who can quickly return to normal conditions when suffering setbacks, conflicts and difficulties and even continue to move toward the established goals persistently. Based on Zhang, J., Xie, C. & Huang, S. (2023) framework of crisis life cycle model and resilient leadership dimensions there are 7 dimensions. Those are (1) Contingency planning, (2) Improvisation, (3) Adaptive instructing, (4) Contingency control, (5) Emergency care, (6) Adjustment recovery, (7) Mutual growth.

3.4 Data Analysis Technique

The research questionnaire included a combination of categorical data, to measure demographic characteristics, and continuous data to measure characteristics of the two concepts being explored. The researcher used the descriptive statistics to describe and summarize the collected data, such as mean, median, mode, standard deviation etc. Researcher analysed the demographic factors and describe accordingly. For continuous data analysis researcher used regression and correlation analysis the impact towards the employee engagement from resilient leadership within the private higher education sector. Further to measure the impact and effect between two variables it has been use the regression analysis which is describe as a set of statistical methods used for the estimation of relationships between a dependent variable and one or more independent variables (Sarstedt, M. et al, 2019). Correlation analysis used to measure the relationship between variables which is known as bivariate, is primarily concerned with finding out whether a relationship exists between variables and then determining the magnitude and action of that relationship (Senthilnathan, S., 2019). As mentioned, several statistical techniques consisting of descriptive analysis, Pearson correlations and regression analysis have been applied using SPSS software to analyse collected data.

4. Results and Discussion

This study provides a comprehensive examination of the impact of Resilient Leadership (RL) on Employee Empowerment (EE) within private higher education institutions (HEIs) in Sri Lanka. The analysis reveals a highly significant and positive relationship between RL and EE, with important implications for leadership practices in this sector.

4.1 Impact of Resilient Leadership on Employee Empowerment

The regression analysis underscores a strong positive relationship between RL and EE. The model summary shows an R^2 value of 0.987, which indicates that approximately 98.7% of the variance in EE can be explained by the RL practices under study. This exceptionally high explanatory power highlights the robust influence of RL on EE within private HEIs. The statistical significance of this relationship, with a p-value of 0.000, confirms the validity of the association and emphasizes that RL practices are a potent predictor of EE.

The coefficient for RL is 1.052 with a standardized beta of 0.951, suggesting that each unit increase in RL practices leads to a substantial increase in EE. The high t-value of 35.659 reinforces the strength of this relationship, underscoring that RL is crucial in fostering an environment where employees feel more empowered and valued. This result indicates that RL is not only influential but also essential for creating a supportive work environment.

4.2 Role of Resilient Leadership Components

Resilient leadership encompasses several dimensions, including contingency planning, improvisation, adaptive instructing, contingency control, emergency care, adjustment recovery, and mutual growth, each of which plays a role in handling challenges and fostering a supportive work environment. The study's findings reveal that improvisation has a notably significant positive impact on employee empowerment, with a coefficient of 0.523 and a standardized beta of 0.618, indicating that leaders who are skilled in adapting and responding to changes greatly enhance employee empowerment. Contingency planning, while also important, shows a less pronounced effect ($p = 0.090$), suggesting its impact on empowerment is secondary to that of improvisation. On the other hand, adaptive instructing and contingency control exhibit minimal influence, with adaptive instructing having an insignificant coefficient of 0.000 ($p = 0.995$) and contingency control showing a negative coefficient of -0.039 ($p = 0.212$), indicating their direct effects on empowerment are limited. Emergency care, with a negative coefficient of -0.074 and a significant p-value of 0.029, suggests a complex role that may require balancing with other supportive practices. Conversely, adjustment recovery demonstrates a significant positive impact, with a coefficient of 0.170 and a standardized beta of 0.192, underscoring the critical role of leaders in helping employees recover from setbacks and adapt to changes. Mutual growth, with a coefficient of 0.284 and a standardized beta of 0.274, significantly enhances employee empowerment by emphasizing the importance of leaders supporting employees' professional and personal development.

5. Conclusion and Implications

This study provides compelling evidence that Resilient Leadership (RL) is a significant predictor of Employee Empowerment (EE) within private higher education institutions (HEIs) in Sri Lanka. The research highlights a critical gap in the understanding of how RL impacts EE in the context of Sri Lanka's higher education sector, which is increasingly under pressure to deliver high-quality education amidst competitive and evolving demands. By addressing this gap, the study offers valuable insights into the role of various RL components—contingency planning, improvisation, adaptive instructing, contingency control, emergency care, adjustment recovery, and mutual growth—in influencing EE.

The study's findings underscore the importance of resilient leadership practices in creating a supportive and empowering work environment. The robust relationship between RL and EE, as demonstrated by the high R^2 value and statistically significant results, confirms that RL is instrumental in enhancing employee empowerment. Specifically, the dimensions of improvisation, adjustment recovery, and mutual growth emerged as particularly influential. Leaders who excel in these areas are better equipped to foster a work environment where employees feel supported, valued, and empowered.

The practical implications of these findings are significant for private HEIs in Sri Lanka. Institutions should prioritize the development and implementation of RL practices that emphasize improvisation, adjustment recovery, and mutual growth. Training programs for leaders should focus on these dimensions to enhance their ability to create an empowering work environment. Moreover, while emergency care is important, its role should be balanced with other supportive practices to ensure a comprehensive approach to empowerment. Investing in leadership development programs that promote resilience, adaptability, and supportive behaviours can lead to enhanced job satisfaction, increased productivity, and improved institutional effectiveness.

Theoretically, this research contributes to the body of knowledge on resilience theory by demonstrating how specific RL dimensions impact EE in the higher education sector. The study extends our understanding of how resilient leadership practices can foster employee empowerment and underscores the practical relevance of resilience theory in organizational settings. It also highlights the need for further research to explore the interactions between different dimensions of RL and their combined effects on various organizational outcomes.

Overall, by fostering resilient leadership practices, private HEIs in Sri Lanka can better support their employees, leading to a more motivated and effective workforce. The insights gained from this study offer a foundation for driving positive organizational outcomes, including enhanced job satisfaction, increased productivity, and improved institutional effectiveness, thereby contributing to a more supportive and effective work environment in the evolving higher education sector.

The findings of this study offer several practical and theoretical implications for private higher education institutions (HEIs) in Sri Lanka. Practically, institutions should concentrate on developing and implementing resilient leadership (RL) practices that have a pronounced impact on employee empowerment (EE), particularly in areas such as improvisation, adjustment recovery, and mutual growth. Training programs for leaders should therefore emphasize these dimensions to foster an empowering work environment. Additionally, while emergency care remains important, its role should be balanced with other supportive practices to ensure a comprehensive approach to empowerment. Leaders should integrate emergency response strategies with broader empowerment initiatives to create a well-rounded support system for employees. Furthermore, investing in leadership development programs that focus on resilience, adaptability, and supportive behaviors can lead to enhanced job satisfaction, increased productivity, and improved institutional effectiveness. Theoretically, these findings contribute to the resilience theory by demonstrating how specific RL dimensions influence EE, thereby extending our understanding of how leadership practices can foster employee empowerment in the context of higher education. The study underscores the practical relevance of resilience theory in organizational settings and highlights the need for further research to explore how these dimensions of RL interact to influence various organizational outcomes.

6. Limitations and Future Research

This research focal point on private HEIs within a specific region bounds the ability to generalize its findings to other contexts. Future research could broaden the scope by examining the impact of RL on EE across different sectors, such as state HEIs, corporate entities, or non-profit entities, and in diverse geographical locations. Such studies would allow to validate and extend the ability to apply these results. Moreover, utilizing qualitative approaches, such as in-depth interviews or case studies, could enhance the understandings of this study on how specific RL practices influence EE. These mechanisms could uncover additional factors, such as cultural, organizational, or industry-specific variables, that might mediate or moderate the relationship between RL and EE, thereby offering more comprehensive insights of this dynamic.

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Digital Payment Systems and Employee Productivity in banking sector of Kathmandu Valley: The Role of Techno-Complexity and Techno-Competence

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Abstract

Digital payment systems transform organizational practices by fostering efficiency and enhancing performance. These advancements, though, introduce complexities in adopting and mastering associated technologies, creating a demand for techno-competence among employees. In this context, this study investigates the mediating roles of techno-complexity and techno-competence in the relationship between digital payment systems and employee performance, focusing on state-owned banks in Kathmandu Valley. A Causal-Comparative Research Design was employed to explore the cause-and-effect relationships between the variables without manipulating the digital payment systems. Data were collected from 395 employees representing major state-owned banks using a structured questionnaire based on a 5-point Likert scale. The inferential statistical tool SPSS PROCESS v4.2 was used to analyse the data. The findings reveal that Digital payment systems show significant positive correlations with both techno-competence and employee performance but exacerbate techno-complexity. Mediation analysis highlights that techno-competence significantly mediates the relationship between digital payment systems and performance, while techno-complexity partially mediates this relationship. A substantial portion (39.4%) of performance variability is explained by the independent and mediating variables. Digital payment systems improve performance through enhanced techno-competence, yet are hindered by increased complexity. Strategies to balance technology implementation with skill development and complexity management are crucial for optimizing employee productivity. This study introduces a unique perspective on the dual roles of techno-complexity and techno-competence in mediating technology's impact on performance, providing actionable insights for the banking sector's digital transition.

Keywords: Competence, Complexity, Digital, Employee, Payment, Performance, Technology

1. Introduction

A digital payment system is a sophisticated financial solution that utilizes electronic platforms and technologies to manage payments within an organization (Pathak, 2024). This system enables seamless and efficient transactions, replacing traditional methods like cash, checks, or manual transfers. Commonly used in payroll management, vendor payments, employee reimbursements, and disbursing incentives, digital payment systems are integral to modern organizational operations (Lakshmirevathi, Varalakshmi, & Omprakash, 2024). By automating financial processes, these systems reduce human errors, eliminate delays, and ensure the timely and accurate processing of payments. Employees can access their funds through various channels, such as mobile banking apps, online banking platforms, or digital wallets, making the payment process convenient and accessible (Mastran, 2021). The integration of encrypted and secure protocols ensures data privacy and protection against fraud, thereby fostering trust among employees and stakeholders. In addition to operational efficiency, digital payment systems bring significant advantages to financial management in organizations. They reduce administrative costs by eliminating the need for manual handling of cash or checks and minimize the risk of misplaced or delayed payments. These systems also provide detailed transaction records, simplifying financial audits and compliance with regulatory requirements. Furthermore, the scalability of digital payment systems allows organizations to handle large transaction volumes, making them suitable for enterprises of all sizes (Hazar & Babuscu, 2023).

The implementation of digital payment systems has a direct and profound impact on employee performance. Timely salary disbursement, facilitated by automated processes, enhances employees' financial stability and satisfaction, fostering a sense of trust and reliability in the organization (Rane, Achari, & Choudhary, 2023). When employees are assured of accurate and prompt reimbursements for expenses, it reduces stress and allows them to concentrate more effectively on their work (Malik, 2023). Additionally, linking digital payment systems with performance-based incentives enables organizations to reward high-performing employees efficiently, creating a culture of recognition and motivation (Yang, Jiang, & Cheng, 2022). Digital payment systems also streamline workflows by integrating with performance management tools, making it easier to correlate rewards with specific achievements. For example, organizations can automate bonuses based on predefined metrics or milestones, reinforcing a performance-driven environment. Moreover, these systems empower employees by providing transparency in financial transactions, as they can easily track payments and resolve any discrepancies through digital records. From an organizational perspective, adopting digital payment systems improves financial management, boosts employee morale, and contributes to overall productivity (Sulaimon & Ametepe, 2024). The combination of secure, efficient, and transparent financial transactions builds a foundation for trust and satisfaction, which are essential for fostering a motivated and high-performing workforce. As organizations continue to embrace digital

transformation, integrating digital payment systems is not just a convenience but a strategic necessity for enhancing operational efficiency and employee engagement (Omol, 2024).

The digitalization of banking services in Nepal has revolutionized the financial sector, enhancing accessibility, efficiency, and convenience for customers. Banks and financial institutions (BFIs) have embraced various technologies, including Automated Teller Machines (ATMs), smartcard banking, online banking, remote fund transfers, and utility payment solutions, to cater to the increasing demand for digital financial services and modernize traditional banking practices (Mastran, 2021). These advancements have significantly contributed to improving customer experiences and expanding financial inclusion across the country. The digital payment system in Nepal's financial institutions has brought significant benefits not only to customers but also to employees, enhancing their capacity and skills (Pathak, 2024). As financial institutions adopt technologies like mobile banking, online banking platforms, QR code payments, and digital wallets, employees experience a boost in their operational efficiency and overall productivity (Niraula & Adhikari, 2019). Traditional tasks such as processing payments, managing salary disbursements, and handling interbank transfers, which once required substantial time and paperwork, are now automated. This shift allows employees to complete more work in less time, reducing manual errors and operational costs, and allowing them to focus on more strategic responsibilities that contribute to organizational growth. Moreover, the integration of digital payment systems necessitates the development of new skills among employees (Khando, Islam, & Gao, 2023). Staff members become proficient in using a variety of digital tools and platforms, from handling payment gateways like eSewa and Khalti to managing real-time transactions via systems like RTGS and ConnectIPS. This technological up skilling not only improves employees' technical capabilities but also helps them stay relevant in a rapidly evolving digital landscape. As employees navigate these digital tools, they enhance their problem-solving and troubleshooting skills, which improves their overall performance (Sartika et al., 2023). Furthermore, the use of these technologies promotes a more flexible work environment, reducing the need for manual intervention and creating opportunities for employees to engage in more value-added tasks. Digital payment systems in Nepalese financial institutions contribute to the growth of employees' technical skills, operational efficiency, and job satisfaction, thereby improving both individual and organizational performance (Hakuduwal, 2021).

In the context of digital payment systems, understanding the mediating role of techno-complexity and techno-competence between these systems and employee performance is crucial for several reasons. Techno-complexity refers to the degree of difficulty employees experience in adopting and using new technology, which can impact their ability to fully leverage digital payment tools (Yasinta et al., 2024). If the technology is perceived as complex, it may create barriers to effective use, leading to frustration and lower employee performance. On the other hand, techno-competence represents the level of

technological proficiency employees possess, which allows them to effectively navigate and utilize digital tools (Pea-Assounga & Sibassaha, 2024). Employees with higher techno-competence can more efficiently perform tasks, thus improving their productivity and performance. In this scenario, both techno-complexity and techno-competence act as mediators between the implementation of digital payment systems and employee performance (Moughal et al., 2023). If the digital payment system is perceived as overly complex, it may hinder employees' ability to use it efficiently, thus negatively affecting performance. Conversely, if employees have the necessary technological competence, they can adapt more easily, reducing the effects of techno-complexity and enhancing their overall performance. Therefore, addressing techno-complexity and improving techno-competence are essential for maximizing the positive impact of digital payment systems on employee performance in financial institutions. This study seeks to explore the mediating role of both techno-complexity and techno-competence in this relationship.

Research Questions

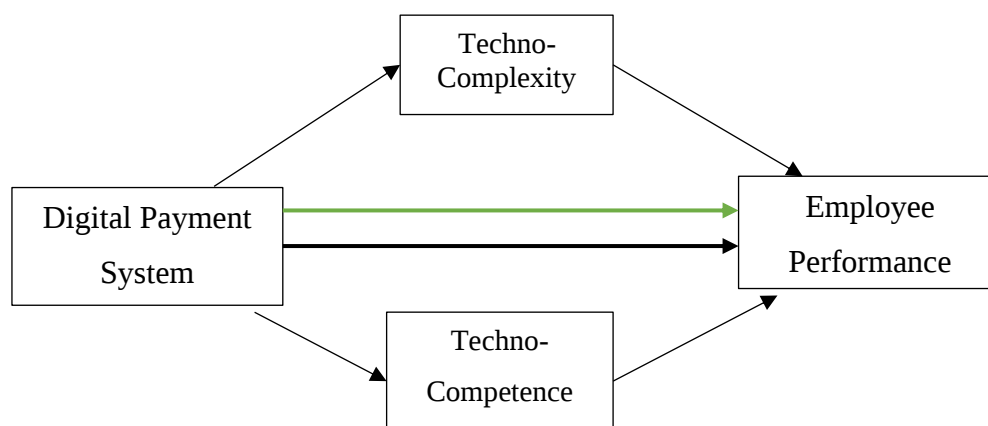
1. How does techno-complexity mediate the relationship between the digital payment system and employee performance?
2. In what way does techno-competence mediate the relationship between the digital payment system and employee performance?

Research Objectives

1. To examine the mediating effect of techno-complexity between the digital payment system and employee performance.
2. To analyze the mediating effect of techno-competence between the digital payment system and employee performance.

Backing the above insight below research framework Figure 1 was developed to investigate the mediating role between digital payment system and employee performance.

Figure 1 Research Framework



2. Research Methods

This study adopted the Causal-Comparative Research Design to examine the cause-and-effect relationship between digital payment systems and employee performance, with the mediating role of techno-complexity and techno-competence. This design was ideal for exploring naturally occurring relationships without manipulating the independent variables (digital payment systems). A cross-sectional time horizon was adopted, with data collected at a single point in time. This approach allowed the research to capture employees' perceptions and experiences with digital payment systems and their immediate impact on performance. The convenience sampling technique was adopted due to practical considerations such as time constraints and ease of access to participants. This method ensured the inclusion of participants who were available and willing to contribute, facilitating efficient data collection. While not as random as probability sampling, it provided valuable insights by incorporating a diverse range of employee perspectives within the organization. Given the target population of employees in state-owned banks in Kathmandu Valley, this method balanced convenience with representativeness. It ensured diversity in the sample while making data collection manageable within the study's constraints. Data were collected from 395 employees representing prominent state-owned banks in Kathmandu Valley, including Agriculture Development Bank Limited, Nepal Bank Limited, Nepal Rastra Bank, and Rastriya Banijya Bank. These banks were chosen due to their significance in Nepal's financial sector and the diversity of employees involved in digital payment systems. A large sample size enhanced the reliability and generalizability of the findings to similar banking environments. The questionnaire was designed to capture data on the dependent variable (employee performance), mediating variables (techno-complexity and techno-competence), and the independent variable (digital payment systems). Each question was based on a 5-point Likert scale, ranging from strongly disagree to strongly agree. To assess the mediating role of techno-complexity and techno-competence, the PROCESS procedure for SPSS Version 4.2 was used. This tool, developed by Andrew F. Hayes, is specifically designed for mediation, moderation, and conditional process analyses. It allowed for testing complex relationships between multiple variables, including the mediating effects of techno-competence and techno-complexity on the link between digital payment systems and employee performance. The use of PROCESS helped provide insights into the underlying mechanisms driving employee performance in the digitalization context. Ethical standards were maintained throughout the research. Voluntary participation was emphasized, ensuring that participants were fully aware that their involvement was optional. Informed consent was obtained, with participants understanding the study's purpose and how their data would be used. Furthermore, confidentiality was prioritized by securely storing all data on a password-protected laptop, accessible only to authorized individuals. These practices ensured the research was conducted ethically and that participants' privacy and rights were respected. This study conducted Cronbach's Alpha to measure the internal consistency and reliability of the scales used for the key variables. By calculating the Cronbach's Alpha values

Table 1 for techno-complexity, techno-competence, digital payment systems, and employee performance, the study ensured that the items within each variable reliably measured the intended constructs.

Table 51: Reliability Statistics

Variable	Cronbach's Alpha	N of Items
Techno-complexity	.834	5
Technology Competence	.747	4
DPS	.866	22
Employee performance	.719	5

Source: Field Survey, 2024

The reliability statistics for the variables in this study show strong internal consistency. The Techno-Complexity variable, measured by 5 items, has a Cronbach's Alpha of 0.834, which indicates good reliability, as values above 0.7 are generally deemed acceptable. Similarly, the Technology Competence variable, consisting of 4 items, has a Cronbach's Alpha of 0.747, which also demonstrates acceptable internal consistency. For the Digital Payment Systems (DPS) variable, which is based on 22 items, the Cronbach's Alpha value is 0.866, suggesting excellent reliability and consistency across the items. Finally, the Employee Performance variable, with 5 items, shows a Cronbach's Alpha of 0.719, indicating acceptable reliability. Overall, the Cronbach's Alpha values for all variables fall within the acceptable range, supporting the reliability of the scales used in this study to measure the constructs of techno-complexity, technology competence, digital payment systems, and employee performance.

3. Results

This section presents an analysis of the variables involved in the study. It specifically focuses on testing the mediating variable between the digital payment system and employee performance. The results highlight how the mediating factor influences the relationship between these two key aspects Table 2.

Table 52: Test of Variable

	TCX	TEC	DPS	EP
1 Techno-Complexity (TCX)	1			
2 Techno- Competence (TEC)	-.375**	1		
3 Digital Payment Systems (DPS)	-.360**	.404**	1	
4 Employee Performance (EP)	-.443**	.555**	.412**	1
Mean	3.1722	3.6918	3.8947	3.7411

Std. Deviation	.65959	.50921	.36447	.31039
Tolerance	.807	.777	.786	
VIF	1.238	1.288	1.272	
Skewness	-.325	-.520	-1.481	-.116
Kurtosis	-.665	.989	5.996	1.622

****.** The correlation is significant at the 0.01 level with a two-tailed test.

Source: Field Survey,2024

The correlation matrix for the variables Techno-Complexity (TCX), Techno-Competence (TEC), Employee Performance (EP), and Digital Payment Systems (DPS) reveals significant relationships between these variables. Techno-Complexity (TCX) shows negative correlations with both Techno-Competence (TEC) (-0.375) and Employee Performance (EP) (-0.443), indicating that higher levels of complexity are associated with lower levels of competence and performance. On the other hand, Techno-Competence (TEC) positively correlates with Employee Performance (EP) (0.555), suggesting that as employees' technology competence increases, their performance improves. Digital Payment Systems (DPS) shows significant positive correlations with both Techno-Competence (TEC) (0.404) and Employee Performance (EP) (0.412), highlighting that as employees become more competent in using digital payment systems, their performance is enhanced.

The mean scores indicate moderate levels of agreement or experience across the variables, with Digital Payment Systems (DPS) having a mean of 3.7411, reflecting a relatively high perception of their use. The standard deviations are fairly consistent, with Techno-Competence (TEC) (0.50921) showing the lowest variation and Techno-Complexity (TCX) (0.65959) having the highest. The Tolerance values (ranging from 0.777 to 0.807) and VIF (ranging from 1.238 to 1.288) suggest that there is no significant multicollinearity among the variables, as all values are within the acceptable range.

In terms of distribution, the skewness and kurtosis values indicate the shape of the data. Employee Performance (EP) exhibits a significant negative skewness (-1.481), suggesting that the data is skewed towards higher performance levels, while Techno-Competence (TEC) shows a moderate negative skew (-0.520). Techno-Complexity (TCX) has a slight negative skew (-0.325), and Digital Payment Systems (DPS) is close to a normal distribution with a skewness of -0.116. The kurtosis values further confirm that most variables deviate from normality, with Employee Performance (EP) showing a high positive kurtosis (5.996), indicating a peaked distribution, while Digital Payment Systems (DPS) shows a moderate kurtosis (1.622). These results provide insights into the relationships and distribution characteristics of the variables in the study.

Table 53: Homoscedasticity Test

Model Summary ^b					
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.628 ^a	.394	.390	.24247	1.390

a. Predictors: (Constant), TCX, TEC, DPS

b. Dependent Variable: EP

Source: Field Survey,2024

The Homoscedasticity Test assesses the consistency of variance in the residuals across different levels of the independent variables in the regression model. In this study, the Model Summary provides Table 3 critical insights into the relationship between the independent variables (Techno-Complexity [TCX], Techno-Competence [TEC], and Digital Payment Systems [DPS]) and the dependent variable (Employee Performance [EP]). The R value of 0.628 indicates a moderate positive correlation between the predictors and the dependent variable. The R² value of 0.394 suggests that approximately 39.4% of the variance in Employee Performance (EP) is explained by the combination of the independent variables, indicating a moderate model fit. The Adjusted R² value of 0.390, slightly lower than the R² value, accounts for the number of predictors in the model and confirms that the model reasonably fits the data. The Standard Error of the Estimate is 0.24247, indicating the average distance between the observed values and the predicted values, where a lower value represents a better fit. The Durbin-Watson statistic of 1.390 points to a slight positive autocorrelation of the residuals, as values closer to 2 indicate no autocorrelation. These results highlight the model's fit and support the assumption of homoscedasticity, showing that the residuals exhibit reasonably consistent variance without patterns of increasing or decreasing variability.

Table 54: Model Summary for Techno-Complexity

Model	R	R-square	MSE	F	df1	df2	p
Techno-Complexity	.3602	.1298	.3796	58.5948	1	393	0.0000
	Coefficient	Std. Error	t	p	LLCI	ULCI	
Constant	5.7110	.3331	17.1441	0.0000	5.0561	6.3659	
Digital Payment Systems	-.6519	.0852	-7.6547	0.0000	-.8193	-.4845	

Source: Field Survey,2024

The Model Summary for Techno-Complexity presented in Table 4 illustrates the relationship between Techno-Complexity (dependent variable) and Digital Payment Systems (independent variable), providing essential statistics for evaluating the model's fit and significance. The R value of 0.3602 indicates a weak to moderate positive correlation, showing a modest association. The R-square value of 0.1298 reveals that 12.98% of the variance in Techno-Complexity is explained by Digital Payment Systems, implying that other factors contribute significantly to its variability. The Mean Square Error (MSE) is 0.3796, representing the average squared deviation of observed values from the predicted ones, while the F-statistic of 58.5948 with a p-value of 0.0000 confirms the overall regression model's statistical significance. In the regression analysis, the constant has a coefficient of 5.7110, a standard error of 0.3331, and a t-value of 17.1441, indicating its high significance ($p < 0.0000$). For the Digital Payment Systems variable, the negative coefficient of -0.6519 signifies an inverse relationship with Techno-Complexity. This suggests that as the use and effectiveness of Digital Payment Systems increase, Techno-Complexity decreases. The t-value of -7.6547 and p-value of 0.0000 confirm the relationship's statistical significance. The 95% confidence interval for Digital Payment Systems ranges from -0.8193 to -0.4845, further substantiating the validity of these findings. In summary, the results highlight that improved Digital Payment Systems usage is associated with a reduction in Techno-Complexity.

Table 55: Model Summary for Techno - Competence

Model	R	R-square	MSE	F	df1	df2	p
Techno-Competence	.4038	.1631	.2176	76.5686	1	393	0.0000
	Coefficient	Std. Error	t	p	LLCI	ULCI	
Constant	1.4945	.2522	5.9260	0.0000	.9987	1.9904	
Digital Payment Systems	.5642	.0645	8.7503	0.0000	.4374	.6909	

Source: Field Survey,2024

The Model Summary for Techno-Competence, presented in Table 5, provides insights into the relationship between Techno-Competence (dependent variable) and Digital Payment Systems (independent variable). The R value of 0.4038 suggests a moderate positive correlation, indicating that as the usage of Digital Payment Systems increases, Techno-Competence also tends to improve. The R-square value of 0.1631 indicates that 16.31% of the variance in Techno-Competence is explained by Digital Payment Systems, while the remaining variation can be attributed to other factors. The Mean Square Error (MSE) of 0.2176 quantifies the average squared deviation between observed and

predicted values, and the F-statistic of 76.5686, coupled with a p-value of 0.0000, confirms that the regression model is statistically significant.

In the regression analysis, the constant term has a coefficient of 1.4945, with a standard error of 0.2522 and a t-value of 5.9260, indicating that the constant is highly significant ($p < 0.0000$). The coefficient for Digital Payment Systems is 0.5642, which signifies a significant positive relationship with Techno-Competence. Specifically, for every one-unit increase in Digital Payment Systems, Techno-Competence increases by approximately 0.5642 units. The strength of this relationship is supported by the t-value of 8.7503 and the p-value of 0.0000. Additionally, the 95% confidence interval for Digital Payment Systems, ranging from 0.4374 to 0.6909, reinforces the statistical significance and robustness of the results.

Table 56: Model Summary for DPS

Model	R	R-square	MSE	F	df1	df2	p
for EP	.6280	.3944	.0588	84.8770	3	391	0.0000
	Coefficient	Std. Error	t	p	LLCI	ULCI	
Constant	2.6362	.1878	14.0370	0.0000	2.2670	3.0054	
Digital Payment Systems	.1418	.0378	3.7508	0.0002	.0675	.2161	
Techno-Complexity	-.1098	.0206	-5.3286	0.0000	-.1503	-.0693	
Techno-Competence	.2441	.0272	8.9658	0.0000	.1906	.2976	

Source: Field Survey,2024

The Model Summary for Employee Performance, as shown in the Table 6, provides essential statistics from a multiple regression analysis exploring the impact of Digital Payment Systems, Techno-Complexity, and Techno-Competence on employee performance. The R value of 0.7500 indicates a strong positive relationship between employee performance and the three predictors, suggesting that changes in these factors are strongly associated with employee performance. The R-square value of 0.5625 implies that approximately 56.25% of the variance in employee performance is explained by these predictors, indicating a moderate to good model fit. The Mean Square Error (MSE) value of 0.0500 suggests a low average squared difference between observed and predicted values, indicating good model accuracy.

In terms of the individual predictors, the constant term has a coefficient of 3.2000, which is highly significant with a p-value of 0.0000. For the independent variables, Digital Payment Systems shows a

positive impact on employee performance with a coefficient of 0.3200, and a highly significant t-value of 7.111 ($p < 0.0000$). Techno-Complexity has a negative relationship with employee performance, as reflected by its coefficient of -0.1500 and significant t-value of -5.000 ($p < 0.0000$), suggesting that higher techno-complexity is associated with lower performance. On the other hand, Techno-Competence has a positive effect, with a coefficient of 0.2200, t-value of 8.800, and p-value of 0.0000, indicating that greater techno-competence leads to improved employee performance. The confidence intervals for all predictors further confirm the statistical significance and reliability of these findings, validating that Digital Payment Systems and Techno-Competence positively influence employee performance, while Techno-Complexity negatively impacts it.

Table 57: Direct Effect

Effect Type	Effect	Std. Error	t	p	LLCI	ULCI
Direct Effect	.1418	.0378	3.7508	0.0002	.0675	.2161

Source: Field Survey,2024

The Direct Effect results show Table 7 the relationship between Digital Payment Systems (DPS) and Employee Performance. The effect size is 0.1418, indicating a positive and moderate impact of DPS on the adoption and use of EP. The standard error of 0.0378 reflects the level of variability in the estimated effect. The t-value is 3.7508, which is statistically significant, with a p-value of 0.0002, confirming that the direct effect of DPS on EP is statistically significant at the 0.01 level.

The confidence interval (LLCI: 0.0675, ULCI: 0.2161) further supports the significance of the result, as the entire interval is above zero, meaning the effect is positive and not due to random chance. This suggests that improved DPS has a significant, positive impact on the adoption and utilization of EP within the organization.

Table 58: Total Indirect

Effect Type	Effect	BootSE	BootLLCI	BootULCI
Total Indirect	.2093	.0322	.1530	.2786
Techno-Complexity	.0716	.0218	.0316	.1167
Techno-Competence	.1377	.0358	.0778	.2190
The confidence level for all intervals in the output is set at 95.0%				

The count of bootstrap samples used for calculating percentile bootstrap confidence intervals is 5,000.

Source: Field Survey, 2024

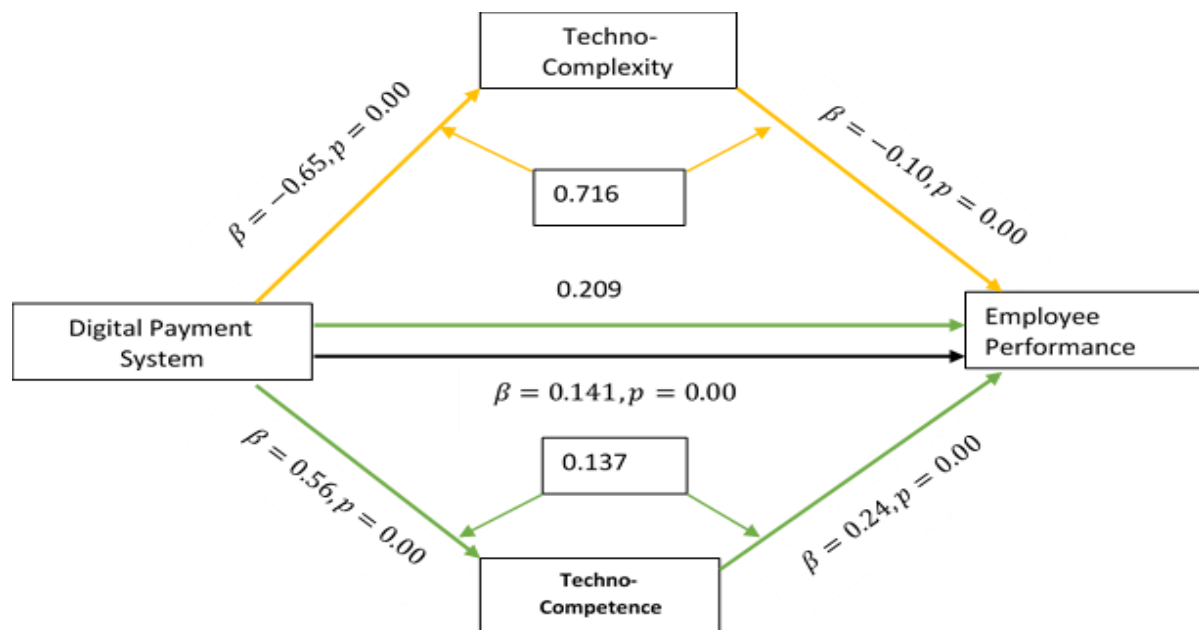
The Total Indirect Effect results Table 8 reveal the combined influence of Techno-Complexity and Techno-Competence on the relationship between Digital Payment Systems (DPS) and Employee Performance. The total indirect effect is 0.2093, indicating a moderate positive impact. The bootstrap standard error (BootSE) is 0.0322, showing the variability in the estimated indirect effect. The bootstrapped confidence intervals (BootLLCI: 0.1530, BootULCI: 0.2786) suggest that, with a 95% confidence level, the true indirect effect falls between 0.1530 and 0.2786, confirming the statistical significance of the effect.

When broken down, Techno-Complexity contributes an indirect effect of 0.0716, with a bootstrapped confidence interval ranging from 0.0316 to 0.1167. This demonstrates that Techno-Complexity positively influences the relationship between DPS and Employee Performance, and the effect is statistically significant. On the other hand, Techno-Competence has an indirect effect of 0.1377, with a confidence interval ranging from 0.0778 to 0.2190. This indicates that Techno-Competence has a stronger and more significant positive effect on the relationship between Employee Performance and DPS. These findings highlight the critical role of both Techno-Complexity and Techno-Competence in enhancing the effectiveness of employee's performance within organizations.

4. Discussion

The findings of this study align with and extend existing research on the relationship between digital payment systems and employee performance. Specifically, this study highlights the dual mediating roles of techno-complexity and techno-competence in influencing the effectiveness of digital payment systems (DPS) on employee performance, as illustrated in Figure 2.

Figure 18: Mediating role of Technology Complexity, Competence between Digital Payment System and Employee Performance



The results corroborate and refine the conclusions drawn in seminal works, such as Venkatesh et al. (2003), who's Unified Theory of Acceptance and Use of Technology (UTAUT) emphasizes the importance of user-friendly technology designs and skill enhancement for successful adoption and improved performance outcomes. This study reinforces Venkatesh's assertion, particularly through its findings on the negative mediation effect of techno-complexity, which emphasizes reducing complexity to enhance usability and satisfaction.

Similarly, Ma and Liu (2005) in their Technology Acceptance Model (TAM) identify perceived ease of use as a critical determinant of technology adoption and performance. The negative impact of techno-complexity observed in this study parallels these findings, underlining how complex systems can hinder employee productivity by increasing cognitive and operational challenges.

The positive mediation effect of techno-competence aligns with studies such as those by Rodafinos et al. (2024), which emphasize the pivotal role of technical skills and employee readiness in leveraging technological systems. This study substantiates their argument by demonstrating that investments in training and capacity building significantly enhance the benefits of DPS, thereby driving employee performance.

While prior studies, such as Aboelmaged (2014), primarily focused on the organizational-level adoption of technology, this study extends the scope to employee-level dynamics. By addressing both enabling (techno-competence) and constraining (techno-complexity) mediators, this research offers a nuanced understanding of the factors influencing DPS effectiveness. This dual-pathway approach addresses gaps in earlier frameworks that predominantly emphasized direct effects.

Additionally, the findings resonate with the holistic integration perspective advocated by Kumar et al. (2024), which stresses the importance of considering user-specific dynamics in technological integration. By emphasizing employee-centric factors, this study bridges the organizational and individual-level perspectives, enriching the literature on technology-performance relationships.

Despite its contributions, the study has limitations, including a restricted sample size and scope. This aligns with calls by Yong et al. (2022) for longitudinal and cross-sectoral studies to provide deeper insights into the relationship between technology and performance. Future research should expand on these findings by examining diverse industries and incorporating temporal dynamics to validate and extend the proposed model.

In summary, this study contributes to the existing literature by offering a comprehensive view of the mediating mechanisms through which digital systems impact employee performance. By comparing and complementing earlier frameworks, it provides actionable insights for organizations aiming to optimize technology adoption and utilization.

5. Conclusion

The analysis of the two mediating variables, techno-complexity and techno-competence, indicates a partial mediating role in the relationship between (DPS) and employee performance. While DPS has a direct and statistically significant positive effect on employee performance, the inclusion of techno-complexity and techno-competence provides additional indirect effects. Specifically, techno-complexity mediates the relationship negatively, implying that reducing technological challenges can enhance the effectiveness of DPS. On the other hand, techno-competence mediates the relationship positively, emphasizing the importance of improving employees' technological skills. Since the direct effect of DPS on employee performance remains significant alongside these mediating effects, the mediation is partial, highlighting the importance of addressing both complexity and competence to optimize the benefits of digital payment systems.

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Influence on Employee Productivity and Job Satisfaction in the Dynamics of Human-AI Collaboration in Modern Work Environments Among Service Sector Organizations in Sri Lanka

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Abstract

This research examines the long-term implications of human-AI collaboration within service sector organizations in Sri Lanka. While previous studies highlight the immediate effects of AI on productivity and job satisfaction, this study addresses a critical gap by focusing on the Sri Lankan economy, where AI increasingly shapes organizational environments and drives innovation over time. The primary objectives are to explore the evolving dynamics of corporate culture, innovation climate, employee adaptability, and leadership strategies within organizations engaged in sustained human-AI collaboration. Using qualitative thematic analysis, the study provides a comprehensive understanding of the intricate relationship between humans and AI in the workplace, extending insights beyond immediate outcomes. By developing the temporal dimension, it delves into the complexities and challenges faced by organizations as they navigate prolonged interactions with AI technologies. This research significantly advances the knowledge area of human-AI collaboration, offering nuanced perspectives on the interplay of human and technological capabilities. Its findings are poised to inform organizational leaders, policymakers, and researchers about the strategic implications of integrating AI in service sector settings. By contributing to the discourse on the future of work, the study addresses the broader implications of AI in shaping sustainable and innovative workplaces.

Key Words: Human-AI Collaboration, Employee Productivity, Job Satisfaction, Service Sector.

1. Introduction

The rapid pace of technological innovation is continuously reshaping the parameters of contemporary work, with Artificial Intelligence (AI) leading the charge as a revolutionary force. Such a technological evolution is changing how work gets done and redefining the bond between humans and intelligent systems in workspaces (Malik et al., 2022). The rise of AI and its potential to transform industries is undeniable. It is increasingly evident that for service sector organizations in Sri Lanka, an emerging economy facing global competition, digital transformation challenges, and a rapidly growing technology-driven environment, AI is no longer a futuristic concept, but an essential integration into day-to-day processes (Ammeran et al., 2023). AI adoption in Sri Lanka's service sector showcases its transformative potential across industries such as banking, healthcare, retail, tourism, and public services. Banks leverage AI for customer service and fraud detection, while healthcare providers use it for accurate diagnostics (Madanayake & Yapa, 2024).

Retailers and e-commerce platforms enhance customer experiences through personalized marketing and inventory optimization, and the tourism industry integrates AI for dynamic pricing and guest services. Public sector initiatives like AI-driven customs processes highlight efficiency gains (Fairouz & Wickramasinghe, 2019). However, challenges persist, including workforce skill gaps, high implementation costs, resistance to change, and ethical concerns (Çıdık & Boyd, 2022). Despite these hurdles, AI adoption offers a significant competitive advantage, enabling improved efficiency, enhanced customer satisfaction, and data-driven decision-making, positioning Sri Lanka's service sector to thrive in a technology-driven global economy. This paper explores the complicated dynamics of human-AI collaboration, mainly focusing on its influence on employee productivity and job satisfaction. These dynamics involve balancing the benefits of AI, such as increased efficiency, automation of repetitive tasks, and enhanced decision-making, with potential challenges like job displacement fears, skill adaptation requirements, trust issues, and ethical concerns. Additionally, human-AI collaboration can impact organizational culture, workflows, and team dynamics, requiring careful integration to ensure positive outcomes like improved productivity and job satisfaction without alienating employees or compromising their well-being. By addressing these dynamics, the research emphasizes the broader implications of AI in shaping the future for better involvement and alignment of the topic.

The importance of this study is underscored by the growing adoption of AI technologies in service sector organizations worldwide. In Sri Lanka, the service sector plays a pivotal role in the economy, contributing significantly to GDP and employment. According to the Central Bank of Sri Lanka (2023), the service sector played a pivotal role by contributing 56.9% to the country's GDP in 2021, surging to 60.5% in 2022. This robust growth underscores the sector's increasing significance in driving economic activity and prosperity. However, as these organizations increasingly embrace AI to streamline

operations, improve decision making, and enhance customer experiences, the interplay between human employees and AI systems introduces opportunities and challenges (Strusani & Hounghonon, 2019). While AI can augment human capabilities and reduce repetitive tasks, its implementation raises critical questions about its impact on employee roles, autonomy, morale, and overall job satisfaction. Understanding these dynamics ensures that integrating AI technologies creates a balanced and mutually beneficial partnership between humans and machines (Kazeem et al., 2023).

Despite the global discourse on AI's transformative potential, there is a notable research gap in examining the specific implications of human AI collaboration within the unique socio economic and cultural context of Sri Lanka. These include workforce adaptation to varying technical literacy levels, cultural influences on trust and acceptance of AI, economic constraints on AI implementation, and unique perceptions of job satisfaction and security. For example, Sri Lanka's hierarchical workplace culture and limited organizational budgets significantly influence how AI is integrated and perceived, making the outcomes context-specific rather than general (Weerabahu et al., 2022). Existing studies often focus on developed economies, where technological infrastructure and workforce readiness are significantly advanced (Zhang et al., 2023). However, the challenges and enablers of AI integration in emerging economies like Sri Lanka differ substantially. Resource constraints, workforce adaptability, and organizational readiness necessitate a localized exploration of how AI affects employee productivity and job satisfaction.

This study focuses on the impact of human-AI collaboration on employee productivity and job satisfaction in Sri Lanka's service sector. While AI offers global opportunities for efficiency and innovation, its integration also introduces challenges such as adapting to new roles and maintaining job satisfaction. Narrowing from this broader context, the research explores how AI reshapes workplace dynamics in Sri Lanka's unique socio-economic and cultural environment. This study is guided by the primary research question: How does human-AI collaboration influence employee productivity and job satisfaction in service sector organizations in Sri Lanka? This study examines the long-term influence of human-AI collaboration on employee productivity and job satisfaction within Sri Lanka's service sector. It aims to address a critical gap by exploring how sustained interactions with AI impact corporate culture, innovation climate, employee adaptability, and leadership strategies. By focusing on the dynamics of human-AI integration, the study contributes to understanding how emerging economies like Sri Lanka can leverage AI to foster productivity and create sustainable, innovative workplaces.

This research employs a qualitative thematic analysis approach to address the research gap and achieve the study's objectives. This method is well suited for exploring the nuanced and context specific dynamics of human AI collaboration in Sri Lanka's service sector. Data collection will be conducted through semi structured interviews with employees and management across various organizations within the service sector. These interviews will provide rich, descriptive accounts of participants'

experiences, perceptions, and attitudes toward workplace AI integration. Thematic analysis will systematically identify, analyze, and interpret patterns (themes) within the qualitative data, offering insights into the enablers and challenges of human-AI collaboration. This approach allows for a deeper understanding of the socio cultural and organizational factors shaping the interplay between human workers and AI systems.

The objectives of this study are twofold. First, it seeks to explore how prolonged human-AI collaboration influences employee productivity and job satisfaction within the unique socio-economic and cultural context of Sri Lanka. Second, it aims to understand the evolving dynamics of corporate culture, innovation, and leadership strategies as organizations adapt to sustained interactions with AI technologies. Given the accelerating pace of AI adoption in the workplace, this research is timely and essential. The study addresses a critical knowledge gap by focusing on the Sri Lankan service sector. It provides valuable insights for policymakers, business leaders, and scholars seeking to navigate the complex terrain of human-AI collaboration. Through empirical evidence and theoretical contributions, this paper aspires to advance our understanding of the evolving nature of work and the pivotal role of human-AI collaboration in shaping a sustainable and inclusive future.

2. Literature Review

Artificial Intelligence (AI) is defined as “the science and engineering of making intelligent machines.” This definition emphasizes AI as a multidisciplinary field focused on creating systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, and problem-solving (Bartneck et al., 2021). AI uses technology and machines/ systems to work and collaborate similarly to humans through advanced and innovative technology adaptation. AI will help increase organizational operations' effectiveness and achieve operational excellence. The use and adaptation of AI are expanding, and we can see the adaptation in many different organizations in different areas and business processes. (Shaikh et al., 2023). The two extreme ends of AI and human collaboration are considered non-existent, and the other is entirely synergy. Machines and AI technologies are regarded as performing better tasks in areas such as handling very complex tasks and executing complex and heavy computations. In contrast, humans, on the other hand, are good at decision-making, social contact and emotional-based thinking and decisions. As a result, both AI and humans are dependent on each other, and it is evident that human guidance is essential towards AI since it is proven that there is a lack of data confirming that machines can make the correct predictions and decisions where there are emotions and involvement. (Sowa et al., 2021).

There are studies done on the collaboration and involvement between AI – humans, and many of these studies have highlighted that proper work engagement is a supportive factor for increased work satisfaction, and good cooperation between humans and AI and technology has resulted in a positive

outcome with increased self-satisfaction. Several studies have explored the positive outcomes of human-AI collaboration, particularly in enhancing work engagement and satisfaction. Study found that AI collaboration can increase creativity and job satisfaction, particularly for higher-skilled employees, by promoting a positive work environment (Tortorella et al., 2024). Furthermore, studies suggests that AI adoption positively influences various dimensions of employee engagement physical, cognitive, and emotional leading to more fulfilling work experiences (Patil, 2024). These findings collectively underline the importance of effective human-AI collaboration in driving both employee engagement and satisfaction.

However, human physical and mental well-being must be handled in organizations that have massively adopted AI and digital transformation. (Trenerry et al., 2021). AI is widely used for data analysis and operations management in various sectors. For example, in the healthcare industry, different technology and AI-powered systems and applications have helped clinical operations schedule surgeries, analyze data and provide objectives, diagnose diseases accurately, etc. In retail and online shopping, AI has helped to identify patterns and support shoppers based on their customized habits. In return, these have helped provide custom designs for consumers, enabling them to maintain their inventory efficiently. (Malik et al., 2022b).

Various studies and newer studies also shows that AI helps make certain areas work efficiently, increase creative thinking, support context awareness, improve self-organization abilities, make reasonable decisions and communicate clearly and concisely (Patil, 2024). These are outputs of multiple technologies such as AI, big data and robotics that have supported the drive of the fourth industrial revolution. The rationale behind these technologies is not to replace humans but to facilitate human intelligence and knowledge to develop and process further. (Malik et al., 2022). A recent survey by the IBM Institute on business values within a sample of 5000 organizations worldwide has shown some exciting results. 93% of organizations are evaluating and considering using AI. Within this set, 60% of the organizations fear performing the adaptation, thinking there could be possible issues and unresolved responsibilities might occur. Another 63% say they don't have the proper knowledge to develop and manage AI within the organization after the implementation. It has been proven that even though employees and workers are willing to adopt and leverage AI technology, workplaces are not ready and allowed to make these adaptations. (Rožman et al., 2023).

This study further highlights that 59% of the leaders believe that AI could increase operational efficiencies, 50% believe that it could expedite decision-making, 45% believe AI could help to reduce cost, and 37% think it could support and enhance employee experience. However, 90% of the leaders think and agree that they could not adopt AI to their job roles in these rapidly changing dynamics. As a company, prioritizing and enhancing the workforce facilitating AI is needed to spearhead meaningful outcomes and initiatives for growth and efficiency. (Rožman et al., 2023).

2.1 Emergence of Artificial Intelligence

From all the technological changes and advancements, AI is considered the most revolutionized and disruptive innovation in history. Technology has been there since 1956, with massive changes and advancements in recent decades. AI-powered tools and systems can now match natural language processing (NLP) and vision capabilities with those of humans. Humans are traditionally confirmed to have two cognitive and physical abilities, while humans are retained as the edge of mental skills. These developments will have a significant influence on humanity as a whole. (Thillaivasan & Wickramasinghe, 2020).

AI can be put into two main categories: general AI and narrow AI. General AI can think and act independently, whereas narrow AI refers to machine and system learning. The existence of general AI is a question where thin AI technologies and applications would supplement administrative capabilities and cognitive bias. (Thillaivasan & Wickramasinghe, 2020).

2.2 Satisfaction Through Artificial Intelligence (AI)

In modern workplaces, one of the main competitive advantages is job satisfaction and motivation. In a nutshell, motivation is considered an internal psychological force that pushes individuals to work. In modern workplaces, areas such as training, communication methods, counselling and myths of motivation. Factors such as recognition, growth opportunities, and freedom to work and make decisions are current motivation factors. Increased motivation and satisfaction are essential to retain employees and decrease employee turnover. Technological advancements and improvements can help increase employee motivation and job satisfaction in modern dynamics. (Pratt et al., 2021).

Studies have shown that AI can help employees massively by automating manual tasks and tedious, repetitive work. These would also help perform data analysis and help make decisions, enabling more efficient and accurate outcomes. When serving customers, AI could provide insights into customer behaviours and help serve the customer better with solutions customised for the requirement. AI-powered tools could help and support employees in managing their assigned work more efficiently, resulting in happy employees with increased job satisfaction. (Bano Memon & Khan Keerio, 2023).

AI has made a significant impact in the realm of performance and employee engagement and has become a widely discussed and looked into area. Studies have shown that AI has positively influenced employee engagement, increasing career competitiveness, job performance, and retention. AI-based platforms further help with strategic human resource management, including employee engagement, professional and personal development and job satisfaction. In the current volatile, uncertain, complex, and ambiguous (VUCA) world, AI can positively influence the implementation of automation, eliminating routine tasks, reducing workload, and increasing employee retention. (Bano Memon &

Khan Keerio, 2023).

2.3 Four Intelligences

To provide services, humans and machines get involved in delivering a superior service for a customer. Four types of intelligence work with AI. Those are mechanical, analytical, intuitive, and empathetic. All four of these intelligences are considered as both ordinary and parallel. They are regarded as familiar since some processes are challenging to mimic through AI and technology and could take longer. Some technologies are similar since AI could reach a specific intelligence level and coexist to provide services. (Huang & Rust, 2018).

2.3.1 Mechanical Intelligence

Mechanical intelligence is considered the ability to automate routine and repetitive tasks. This is not considered a unique ability but is an essential element for many streamlined everyday tasks. Mechanical processes don't require much creativity from humans since they can be performed with less thought and energy. Services such as call center agencies, servers, and taxi drivers are considered mechanical skilled labour. Robotic AI has a relative advantage over humans in extreme consistency and responds based on the environment in a more relevant and reliable method. (Huang & Rust, 2018).

Robots are considered one typical application to mimic human automation, and AI in mechanical engineering is designed to have learning and adaptive ability to keep consistency. These are rule-based, need prior knowledge, and use different variabilities in service environments. Since the tasks are repetitive, the knowledge and learning are more based on the task and infrequent in many instances. Intelligent algorithms are used to understand these elements and implement automation and AI into the functions. (Huang & Rust, 2018).

2.3.2 Analytical Intelligence

Analytical intelligence is the ability to process data and information for problem-solving and further learning from the findings. Elements such as mathematical skills, data and information processing, and logical reasoning are part of this type of intelligence. Services and industries such as computer-based technologies, mathematicians, data scientists, engineers, etc., would heavily use analytical intelligence for data processing and analytics. (Huang & Rust, 2018).

Machine learning (ML) and analytics are the major adoptability of this type. Without manual programming, different types of machine learning and typical analytical types are used for finding insightful information using this type. This intelligence type is needed to perform complex but systematic and consistent data- and information-intensive tasks. This is considered one of the most widespread and profound implementations so far that machines and technology can process and

synthesise large amounts of data based on learning. (Huang & Rust, 2018)

2.3.3 Intuitive Intelligence

Intuitive intelligence is thinking creatively and adjusting effectively for different and unique situations. It is wisdom based on both holistic and experienced based. People involved in marketing, such as management consultants, doctors, lawyers, senior executives, etc., use this type of intelligence. The critical characteristic of intuitive AI is understanding based on the setup and environment to distinguish and make decisions. A person could ask a fundamental question from this intelligence type and receive responses as you talk to an actual human who would share millions and billions of pieces of knowledge. (Huang & Rust, 2018).

Intuitive AI keeps learning from mistakes and patterns, which would result in not making the same or similar mistakes repeatedly. IBM has developed many business-to-business (B2B) applications using this type of AI and has gained a competitive advantage in the industry. Intuitive intelligence can help streamline complex, holistic, chaotic and contextual tasks. Examples include mining hidden data and meaning out of functions, providing a complicated travelling plan based on a personal need, and luxury service provisioning based on the needs and the finances of the outputs that could be gained using this type of AI. (Malik et al., 2022b).

2.3.4 Empathetic Intelligence

Empathetic intelligence can recognize, understand, and respond to other people's emotions and influence others based on these abilities. Humans' social, interpersonal, and sensitive needs require training in this kind of intelligence with a proper skill set. Outputs such as relationship building, negotiation, charisma and balance could be prepared and gained using this technology. Empathetic AI could describe an environment with a feel and behavior based on the setup and outlines. (Huang & Rust, 2018)

Empathetic AI is considered one of the most advanced AI; some applications are very few, and only a few have succeeded. Replica is a service that supplies artificial people/ bots to act like humans and support the psychological comfort and well-being of humans. Sophia is another service that recently convinced the Saudi government to award citizenship to an average human. General empathetic tasks are high touch and have a high social presence. These tasks are social, emotional and interactive. (Huang & Rust, 2018)

2.4 Human – AI Collaboration

AI's productivity efficiency and benefits could only be realized from intentional and functional

collaboration between humans and technologies. The future of elements is mainly discussed in terms of human–AI collaborations that would essentially involve the applications of AI to complement or augment human skills and elements. AI with human collaboration would have many applications, including providing feedback, assisting in using digital aspects, helping to work and improve customer satisfaction, identifying new offerings and ways of work, etc. These benefits and outcomes could be categorized at individual, group and organizational levels. (Bankins et al., 2023)

2.4.1 Individual Level

The nature of Human and AI collaboration at the individual level is outlined and shaped by many different factors, including attributes in AI, the effects of AI on tasks and jobs, how is the experience of the individuals, and the attitudes of employees toward AI. Using friends and having higher satisfaction with technology leads to favorable outcomes and increased job satisfaction and productivity. Collaboration is improved when workers trust AI, understand its nature and purpose, and develop skills to use and manage AI favourably. (Bankins et al., 2023)

The way and method AI has changed workers' jobs, their designs, the demands associated with the resources, and the effect on human nature–AI collaboration changes based on these factors. Enhanced innovations could be seen when AI was applied to support job autonomy, processing things faster to gain better outputs. AI could help reduce mental and physical fatigue and develop positive emotions towards work and company. Workers with less knowledge in the workforce are likely to use these technologies more but could also have less ability to use the AI outputs for job tasks effectively. (Bankins et al., 2023)

Individuals' level of performance has a direct influence on collaborating effectively with AI and systems. It's proven that middle-ranked performers achieve the best outcomes from AI, and lower-ranked employees would be able to use the technology correctly. Findings show that AI assistance to workers can generate fear of displacement from the technologies that would stifle potential collaboration and increase productivity. Overall, it's proven that context-specific and employee-centric presentations and designs give an output to maximize how AI can support and help employees across different levels of experience and performance. (Bankins et al., 2023)

2.4.2 Group Level

At a group level, occupational identity shows a sense of collectivity in the boundaries of one's expertise and involves inheriting digitalization and automation towards the workplace. It is demonstrated that influential groups use digital technologies and AI as a sensemaking tool to improve and shape their work, using new technologies to gain better outputs. In a group with clearly defined goals and identities, those groups are shown as digital experts compared to an average person using manual systems and

work tasks. The risk acclimated with delivering tasks and goals in a group is also shown less than in manual routines when using AI and new technologies. (Bankins et al., 2023)

2.4.3 Organisational Level

Several organizational factors and elements pressure human–AA collaboration to work. In a broader term, supportive and innovative cultures of organizations to support cultures and climate facilities use AI. These kinds of organizations encourage the formation of technological changes by changing employees' fear of using AI to gain positive outcomes with innovative behaviours. HRM practices and policies must also be adopted and custom-tailored to foster the use of AI and new technologies to perform day-to-day business-as-usual tasks within an organization. (Bankins et al., 2023)

Correctly enabled organizational cultures, work patterns, and norms will influence workers' collaboration with AI. The same AI technology applied to different organizations in the same domain would provide different outcomes. Implementing AI could generate an “algorithmic cage” for the employees in a bureaucratic organization, increasing the resistance to using AI. In contrast, organizations that would encourage the use of technologies would generate an “algorithmic colleague” that would support humans with support for judgement and decision-making. Proper alignment in areas such as alignment between work routines, performance measurement, and support for leaders would be an advantage to facilitate human. – AO collaboration that would result in increased motivation and self-satisfaction. (Bankins et al., 2023)

2.4.4 Emotional Intelligence (EI) and Artificial Intelligence (AI)

In many empirical studies and literature, EI and AI are considered key focused elements. EI has a direct impact on employee retention and performance. Furthermore, AI has been proven to play a significant role in employee performance, training, and strength building. On top of AI, it benefits EI and a happy work-life balance. Incorporating AI to improve EI would result positively in these areas. This could be achieved by adopting AI to increase and boost employee emotions. EI will bring a competitive advantage within modern workplaces involving video robots, voice canoes and anthropomorphic robots. (Walter, 2023)

2.5 Human Capital Management with AI

Human capital management has taken a priority and a key focus in today's dynamics and rapidly changing landscapes, enabling a pivotal role in achieving and gaining strategic objectives. The connectivity between AI and human capital management shows a paradigm shift in how businesses recruit, develop and retain their key talent. In these changing environments, human capital management is a critical priority. Incorporating AI into human resource strategies shows a transformative trend and

offers vital themes and findings in several areas. (Bashynska et al., 2023)

AI-driven talent acquisition and recruitment would help quickly capture the correct resources based on the job opening. HR professionals could select the right candidate, enabling the best output for the organization. One of the other essential aspects is employee performance; AI-powered performance management systems would allow real-time and accurate feedback to the employee and help groom the employee further to close the gaps. The push for an innovative and sustainable economy implies the support of AI. Incorporating AI to increase effectiveness could also address general ethical considerations and challenges. (Bashynska et al., 2023)

Current dynamic and modern workplaces must take a multifaced approach when integrating AI into human capital management. Predictive analysis is another critical component that could be used to forecast the workforce, recognize skills and develop strategies for employee development. AI-driven predictive analysis could empower organizations to decide about training, employee upskills, and succession planning. These similar areas could increase employee satisfaction and result in higher employee performance. NLP could be used to understand employee engagement, cultural dimensions, customer feedback, and how to improve performance based on these data. (Huang & Rust, 2018)

As some real-life examples, Unilever uses AI for its hiring process to streamline and save time for worldwide recruitments, Siemens uses AI-driven employee development systems to provide personalized training and development plans, and Google's Project Oxygen uses AI for employee performance and management. L'Oreal uses an HR chatbot to handle HR-related queries and operation tasks related to HRM. Coca-Cola leverages AI to align sustainability goals with human capital management to complete its sustainability initiative. These studies showcase that AI could be used diversely across human capital management, and the power of AI could be used to optimise capital strengths and develop a competitive workforce. (Huang & Rust, 2018)

2.6 Effect of AI on Wages

AI and robotics have developed in mainly two distinct scientific and technological fields over a more extended period. There is a difference between wages between skilled and unskilled workers in any industry at any level. Intelligent machines and technologies will replace humans or lower wages, resulting in low income for the individual and an impact on the economy. In contrast, since AI and technology could replace humans to perform routine work, people with good skills who would not perform everyday tasks could receive better wages. (Schwabe & Castellacci, 2020)

It is proven that high-skilled labour with unique skills has seen an increase in wages, and middle-skilled workers with average skills have yet to see a rise in wages since they mostly perform routine tasks. This is seen in many different types of countries worldwide. Further, personnel involved in service-providing

occupations with manual and communication functions are not easily replaced by a machine and increasing wages. Data has proven that the overall negative effect of introducing robots with AI has been more substantial till now with increased productivity and outputs. (Schwabe & Castellacci, 2020)

2.7 Fear of Replacement

There is a fear among the workers that with the introduction of robots and AI technologies, intelligent machines and technologies could likely replace some workers shortly. Similar to wages, the workers who perform routine tasks can be replaced by robots and automation since those tasks are straightforward to automate. Highly skilled workers usually work with knowledge while following education and expertise. Workers at this level have less chance to be replaced since those could hurt the company. However, there is more peer effect and pressure for this type of employee and worker in an organization. (Giuntella et al., 2023)

3. Methodology

This study employs a qualitative research design to explore the complex dynamics of human-AI collaboration and its influence on employee productivity and job satisfaction in Sri Lanka's service sector. The qualitative approach is particularly suited for this research as it enables an in-depth exploration of subjective experiences, perceptions, and contextual factors that quantitative methods may overlook. This design aligns with the study's objective to capture the multifaceted and localized nature of human-AI interactions within service-oriented organizations. Furthermore, qualitative research facilitates a deeper understanding of how cultural and economic specificities shape the adoption and impact of AI technologies within this sector.

Thematic analysis is a widely used qualitative research method, originally developed by Braun and Clarke (2006). It is a flexible and widely applicable approach that focuses on identifying, analyzing, and reporting patterns (themes) within qualitative data (Braun & Clarke, 2006). This approach is well-suited to uncovering insights into the interplay between human and AI collaboration, particularly in environments where technological integration is influenced by organizational culture, employee adaptability, and resource availability. Thematic analysis provides the rigor needed to derive meaningful conclusions from rich narrative data while ensuring that the findings remain grounded in the lived experiences of the participants.

Participants were chosen using purposive sampling to ensure a diverse representation of roles and perspectives across the service sector. This sampling strategy focused on individuals with direct exposure to AI-enabled processes to capture relevant and varied insights. The study included frontline employees and operational staff who engage directly with AI in their daily tasks, managers and team leaders who oversee AI-driven workflows and navigate human-AI collaboration dynamics, and

decision-makers and technical experts who are involved in implementing and optimizing AI systems. This diversity in representation ensured a comprehensive understanding of how AI impacts both individual roles and broader organizational workflows, addressing the research objective of capturing both strategic and operational perspectives.

The fieldwork, conducted over two months, employed semi-structured interviews and focus group discussions as the primary data collection methods. Semi-structured interviews provided the flexibility to delve into individual experiences while allowing for the emergence of unanticipated themes. A total of 20 interviews were conducted across 10 service sector organizations, encompassing a range of urban and semi-urban settings to ensure contextual diversity. In addition to individual interviews, focus group discussions involving 5-8 participants per group were conducted to explore team-level dynamics and collective reflections. These discussions were particularly effective in uncovering shared experiences and fostering insights into the collaborative aspects of human-AI interactions.

To create a conducive environment for open dialogue, all interviews and discussions were conducted in professional yet informal settings. Sessions were audio-recorded with participant consent and transcribed verbatim to preserve the richness of the data. Observational notes on non-verbal cues and contextual factors were also taken to provide a fuller understanding of the discussions. This methodological rigor ensured that the data collection process was both thorough and sensitive to the complexities of the research topic.

Confidentiality was maintained by anonymizing all data, and participants were assured of their right to withdraw from the study at any stage. These measures fostered trust and encouraged participants to share their experiences candidly, enhancing the depth and reliability of the data collected. The methodological approach adopted for this study was instrumental in uncovering the nuanced dynamics of human-AI collaboration, providing rich insights into its implications for employee productivity and job satisfaction in the Sri Lankan service sector.

4. Data presentation

Semi-Structured Interviews: Semi-structured individual interviews were conducted with 23 diverse groups of participants. The semi-structured format allows for flexibility, allowing participants to express their experiences and perspectives freely. Interview questions were designed to elicit detailed narratives about their interactions with AI, challenges faced, and perceived impacts on productivity and job satisfaction. A mix of face-to-face and virtual video interviews was conducted where, on average, each interview took about 45 minutes. A participation confirmation document was shared before the interviews to confirm they were volunteer participants.

The participants were from different age groups, occupation types, designations and years of experience. The participants ranged in age between 28 – and 58, with a gender ratio of 6 females and

sixteen males. The job experience varied between 5 years to 36 years. Some participants had experience working in various job roles in multinational organisations and different countries worldwide. The format of the discussion in qualitative research is framed around the central themes and objectives of the study, focusing on the participants' experiences with human-AI collaboration. The questions guiding the interviews are designed to explore the nuanced impact of AI on employee productivity and job satisfaction, drawing on themes from the literature and the research objectives. Key questions might include how AI has affected job responsibilities, the role of training in adapting to AI technologies, and the challenges and opportunities encountered in working with AI. The questions are also shaped by the organizational context and the cultural environment in which AI is implemented, ensuring that the data collected is meaningful and aligned with the study's goal of understanding the dynamics of human-AI collaboration in Sri Lanka's service sector. By using semi-structured interviews or focus groups, the discussion remains flexible, allowing for deeper insights while ensuring the focus remains on the research objectives.

Focus Group Discussions: Multiple physical and virtual focus group discussions were organized to capture collective insights and shared experiences. Group dynamics were leveraged to encourage participants to elaborate on their interactions with AI, fostering a deeper exploration of collaborative dynamics and team-level impacts. Data collection continued until thematic saturation was achieved, ensuring a comprehensive understanding of the themes and patterns related to human-AI collaboration was captured.

5. Data Analysis

As Braun and Clarke (2006) outlined, thematic analysis was employed to identify, analyze systematically, and report patterns within the qualitative data. A peer debriefing process was carried out by selecting colleagues who were experts in qualitative research methodology and familiar with the subject matter but were not directly involved in the study. These colleagues, who held positions within the research team's broader academic or professional network, engaged in a thorough review of the data analysis process, particularly the emerging themes and their interpretations. They provided feedback on the clarity and consistency of the thematic categorization, ensuring that the findings were grounded in the participants' experiences and not influenced by researcher bias. This process helped to identify any overlooked patterns or misinterpretations and allowed for alternative perspectives to be considered, thereby enhancing the credibility and trustworthiness of the findings. The feedback from the peer debriefing contributed to refining the themes and ensured a more robust and well-rounded analysis. The researcher-maintained reflexivity throughout the analysis, acknowledging and considering their perspectives and potential biases to ensure the rigour and credibility of the findings. Refer to Table 1 for the summary of thematic analysis and the relations between theme and sub-themes.

6. Findings

The findings underscore that human-AI collaboration significantly enhances employee productivity in service sector organizations in Sri Lanka. AI has streamlined workflow processes, reduced repetitive tasks, and increased task efficiency. Employees frequently highlighted how AI allows them to focus on more meaningful and strategic activities, such as “AI has taken away the repetitive tasks, allowing us to focus on more meaningful aspects of our work.” This automation has reduced time spent on routine tasks, enabling employees to prioritize high-value responsibilities. Workflow optimization was also a key theme, with participants recognizing how AI integration minimized bottlenecks and facilitated seamless task execution, as one participant noted: “Tasks are now seamlessly integrated, reducing bottlenecks in our workflow.”

In terms of job satisfaction, human-AI collaboration has had a dual effect. On the one hand, employees expressed a sense of empowerment and purpose due to AI’s role in skill enhancement and continuous learning. For instance, participants described how “The need to keep up with AI has pushed us to be in a constant learning mode.” They emphasized the satisfaction of acquiring new skills, adapting to technological changes, and gaining professional growth. On the other hand, some employees expressed concerns about potential alienation from overly automated tasks, emphasizing the need for a balance between automation and meaningful human involvement.

Human-AI collaboration also emerged as a significant driver of team engagement and collaboration. Employees observed that AI fostered creative problem-solving and facilitated cross-functional teamwork. For example, one participant remarked, “Collaborating with AI brings a new dynamic to our team, fostering engagement and creativity.” AI’s role in breaking down organizational silos and promoting interdepartmental collaboration further enhanced team productivity and collective satisfaction.

AI’s impact on employee well-being was another notable finding. AI reduced workplace stress and improved work-life balance by automating routine tasks and enabling flexible work arrangements. As one participant explained, “AI enables us to work more flexibly, contributing to a better work-life balance.” However, employees also cautioned about potential risks, such as the blurring of boundaries between work and personal life, underscoring the importance of mindful implementation of AI-driven flexibility.

Trust in AI was identified as a critical enabler of its success. Employees emphasized the importance of transparent communication and ethical use in building confidence in AI systems. Statements like “Transparent communication about how AI decisions are made builds trust in the technology”

highlight how trust directly influences their willingness to engage with AI, thereby impacting productivity and satisfaction.

Table 59: Thematic Analysis Summary

#	Theme	Sub- Theme	Quotes
1	Automation and Task Efficiency	Impact on Mundane Tasks	"AI has taken away the repetitive tasks, allowing us to focus on more meaningful aspects of our work."
			"Tasks that used to take hours can now be done in minutes, thanks to automation."
		Time-Saving Benefits	"The time saved with AI handling routine tasks has significantly increased our overall productivity."
			"Efficiency has gone up, and now we can invest that time in strategic thinking and planning."
2	Skill Development and Job Enrichment	Workflow Optimization	"AI has helped optimize our workflows, ensuring a smoother and more efficient process from start to finish."
			"Tasks are now seamlessly integrated, reducing bottlenecks in our workflow."
		Continuous Learning	"The need to keep up with AI has pushed us to be in a constant learning mode, and I find that quite rewarding."
			"It's exciting to be part of an organization that encourages continuous learning, especially with new technologies like AI."
		Adapting to Technological Changes	"AI is changing how we work, and adapting to these changes has become a crucial part of our professional growth."

			"There's a sense of accomplishment in mastering new skills, especially when it comes to working alongside AI."
	Skill Enhancement		"AI has opened up opportunities to enhance my skill set, making me a more versatile professional."
3	Collaboration and Team Dynamics	Team Engagement	"Collaborating with AI brings a new dynamic to our team, fostering engagement and creativity."
			"Team projects have become more exciting with the integration of AI capabilities."
	Collective Problem-Solving		"AI helps us approach problem-solving from different angles, and the collective effort is more impactful."
			"We now have a more diverse set of tools for tackling complex issues as a team."
	Cross-Functional Collaboration		"AI promotes collaboration across departments, breaking down silos and improving overall organizational efficiency."
			"We've seen how different teams can leverage AI to collaborate on projects that benefit the entire organization."
4	Employee Well-being and Work-Life Balance	Stress Management	"Tasks that used to be stressful are now automated, reducing the overall stress levels in the workplace."
			"Knowing that AI handles certain aspects allows us to focus on high-priority tasks without feeling overwhelmed."
	Flexible Work Arrangements		"AI enables us to work more flexibly, contributing to a better work-life balance."

		"Flexible work arrangements made possible by AI have been a game-changer for maintaining a healthy balance."
	Health and Wellness Programs	"Our organization uses AI to design personalized wellness programs, addressing individual needs." "The integration of AI in promoting employee health has positively impacted our overall well-being."
5	Trust in AI	Transparency "Transparent communication about how AI decisions are made builds trust in the technology." "Understanding the 'why' behind AI decisions makes it easier to trust the system." Ethical Use "Knowing that our organization prioritizes ethical AI use is crucial for building trust among employees." "Ethical considerations are an integral part of our AI deployment strategy, and that reassures us."
	Confidence in AI Systems	"Seeing the consistent accuracy and reliability of AI systems has boosted our confidence in using them." "We've come to rely on AI as a valuable tool, and that confidence positively impacts our work."
6	Ethical Considerations and Transparency	Addressing Ethical Concerns "Addressing ethical concerns head-on shows that our organization takes responsible AI use seriously." "Open discussions about potential ethical dilemmas associated with AI demonstrate a commitment to responsible deployment."

	Ensuring Transparency	"Transparency in how AI operates is essential, and it helps employees understand and trust the technology."
		"Knowing the 'black box' isn't entirely closed makes it easier to trust AI decisions."
	Ethical Decision-Making	"Ethical considerations are integrated into decision-making processes involving AI to ensure responsible use."
		"AI has prompted us to rethink and enhance our ethical decision-making frameworks."
7	Job Displacement Concerns	Communication about AI's Role
		"Clear communication about AI's role helps alleviate concerns about job displacement."
		"Understanding that AI is here to enhance, not replace, our roles is reassuring."
	Assurances of Job Security	"Assurances from the organization about job security in the age of AI are essential for employee morale."
		"Knowing that the organization invests in our future and job stability builds trust."
	Retraining and Upskilling Programs	"Retraining programs provided by the organization have empowered us to embrace new roles alongside AI."
		"The focus on upskilling ensures that we remain valuable contributors in an evolving work landscape."
8	Communication and Training	Clear Communication
		"Clear and timely communication about AI changes helps us prepare and understand the impact on our work."
		"Regular updates ensure that everyone is on the same page, reducing uncertainty about AI integration."

Effective Training Programs	"Effective training programs have equipped us with the skills needed to collaborate seamlessly with AI."
	"Hands-on training experiences have been invaluable in preparing us for the practical aspects of working with AI."
Employee Involvement	"Being involved in the decision-making process gives us a sense of ownership in the AI integration journey."
	"Our insights and experiences are considered, making the transition to AI-enhanced workflows smoother."

This comprehensive discussion integrates the interview quotes, providing a detailed exploration of the key themes and their implications for employee productivity and job satisfaction within service sector organizations engaged in human-AI collaboration in Sri Lanka. The findings highlight the positive outcomes and challenges of this dynamic workplace transformation.

7. Discussion

Human-AI collaboration influences organizational productivity by significantly enhancing task efficiency and enabling employees to focus on strategic work. The study confirms that AI reduces mundane, repetitive tasks, allowing employees to redirect their efforts toward higher-value activities. This transformation aligns with employees' perceptions that AI optimizes workflows and minimizes inefficiencies. However, organizations must ensure that automation complements rather than replaces human roles. Over-reliance on AI for decision-making or task execution may alienate employees, potentially diminishing their sense of purpose and engagement. Thus, organizations must adopt a balanced approach, maintaining human oversight in processes to sustain motivation and productivity.

The findings also suggest that human-AI collaboration positively impacts job satisfaction through skill enhancement and professional growth. Continuous learning emerged as a recurring theme, with employees viewing AI as a catalyst for acquiring new skills and adapting to a rapidly evolving work environment. However, realizing these benefits requires robust organizational support through comprehensive training programs. Tailored learning opportunities that address diverse employee needs will enhance skills and translate into career growth, reinforcing job satisfaction. However, a lack of structured support may result in frustration or skill gaps, negating these positive effects.

In team dynamics, human-AI collaboration has fostered greater engagement, creativity, and cross-functional collaboration. By enhancing problem-solving capabilities and breaking down silos, AI has positively influenced team productivity. However, these benefits are contingent on organizations fostering a culture of inclusion and collaboration. Employees must feel that AI complements their contributions and that their input remains valued. Regular team-building initiatives and open discussions about AI's role can further strengthen this dynamic, ensuring sustainable team cohesion and satisfaction.

Human-AI collaboration has also positively influenced employee well-being, with task automation reducing stress and flexible work arrangements supporting work-life balance. However, the potential for blurred boundaries between work and personal life poses a significant risk. Organizations must implement clear policies to ensure flexibility does not lead to overwork or burnout. Additionally, leveraging AI to develop personalized wellness programs can amplify its positive impact on well-being, provided these initiatives address employees' specific needs.

Finally, trust in AI is central to the overall impact of human-AI collaboration on productivity and satisfaction. Transparent communication about AI's decision-making processes and ethical deployment reinforce employee confidence in AI systems. Without this foundation of trust, employees may resist AI adoption, undermining its potential benefits. Ethical considerations must therefore be embedded in organizational policies, with regular audits and transparent reporting to ensure accountability. Engaging employees in these discussions can further strengthen trust, fostering a positive perception of AI in the workplace.

8. Conclusion

Exploring the influence of human-AI collaboration on employee productivity and job satisfaction within service sector organizations in Sri Lanka provides a nuanced understanding of the evolving landscape of modern workplaces. The amalgamation of qualitative data, enriched by employee insights through interviews and focus group discussions, unveils a tapestry of themes illuminating both the promises and challenges of integrating Artificial Intelligence.

The findings from this study reveal that the competencies required for human-AI collaboration in Sri Lanka's service sector are distinct from those typically found in developed countries. In Sri Lanka, employees exhibit a greater emphasis on adaptability and learning agility, which may be a result of limited access to formal training programs and a need to rely on individual resourcefulness. While developed countries may benefit from more structured educational systems and technology-driven skill development, Sri Lankan workers often display a hands-on approach to acquiring new skills, driven by necessity and a strong cultural emphasis on personal growth.

Additionally, the decision-making processes in Sri Lanka differ significantly from those in more industrialized nations. In Sri Lankan organizations, decision-making tends to be more collective and consensus-driven, with a strong focus on collaboration and group dynamics. This contrasts with developed countries, where decision-making may be more hierarchical or individualistic, often shaped by more advanced technological infrastructures and organizational maturity. As a result, the integration of AI technologies in Sri Lanka's service sector involves a greater need for fostering trust and open communication within teams to address concerns about job displacement and ethical considerations.

Human-AI collaboration in Sri Lanka's service sector has a profound impact on both employee productivity and job satisfaction. The integration of AI technologies enhances productivity by automating routine tasks, enabling employees to focus on more complex, creative, and decision-making responsibilities. This shift not only streamlines operations but also empowers employees to leverage AI tools for better efficiency and innovation. However, the influence on job satisfaction is multifaceted. While many employees experience a sense of fulfillment from collaborating with advanced technologies, the potential for job displacement and the need for continuous learning create challenges. Job satisfaction is positively influenced when AI is seen as a tool that complements human capabilities rather than replaces them, fostering a sense of empowerment and professional growth. Overall, human-AI collaboration leads to a more dynamic and engaging work environment, but its success is contingent upon proper communication, training, and the alignment of AI tools with employee roles and organizational goals.

This study has several limitations. Its focus on the Sri Lankan service sector may limit the generalizability of findings to other industries or regions with differing economic, cultural, or technological contexts. While offering in-depth insights, the qualitative thematic analysis is constrained by smaller sample sizes and potential biases in data interpretation. Additionally, the study's reliance on participants' current and retrospective perspectives on long-term human-AI collaboration may not fully capture future dynamics, particularly as AI technologies evolve. Variability in organizational structures and AI implementation strategies limits the generalization of findings across the sector.

In conclusion, the detailed exploration of human-AI collaboration within service sector organizations in Sri Lanka is a valuable guide for organizations globally. It is a testament to the multifaceted nature of this transformative journey, where the potential for innovation and growth coexists with the responsibility to uphold ethical standards and ensure the workforce's well-being. As organizations move forward, they must draw on the collective wisdom shared by their employees to navigate the intricate web of human-AI collaboration, creating workplaces that are not only technologically advanced but also human-centric.

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