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Foreword

It is with great pleasure and honour that the National Centre for Advanced Studies in Humanities and Social Sciences (NCAS) presents **Volume 14, Issue II** of the ***Sri Lanka Journal of Advanced Research Studies in Humanities and Social Sciences*** **(SLJARS**). This issue highlights scholarly work that advances knowledge and offers critical insights into societal wellbeing through the lenses of humanities and social sciences.

NCAS, as the only research institute in Sri Lanka governed by the *Universities Act No. 16 of 1978*, NCAS remains committed to promote and extend high-quality research that integrates academic rigor with societal relevance. It is the known fact that the rapid technological changes cannot overstate the undeniable values of human behaviour and needs, importance of human intellect, ethical and natural judgment, and cultural understanding. Research on human behaviour, society and cultural identities continue to play a pivotal role in addressing contemporary challenges and informing evidence-based decision-making.

The contributions featured in this volume reflect the interdisciplinary evolution of the humanities and social sciences, especially through the practices of arts and cultures, education and polity, demonstrating engagement with empirical data and methods, and policy-oriented analysis. Each article represents a meaningful scholarly contribution, whether through the exploration of historical processes, cultural interpretations, or critical examinations of present-day social issues.

SLJARS is a **peer-reviewed journal**, published biannually under a **double-blind review process**, and has been recognized by *Sri Lanka Journals Online (SLJOL)* since 2007. The journal continues to serve as a respected platform for scholarly dialogue and intellectual exchange at national and international levels.

I extend my sincere gratitude to the authors, reviewers, and the editorial team for their dedication and scholarly commitment. Their efforts ensure the continued academic integrity and relevance of the journal. I am confident that the research presented in this issue will inspire future scholarship and contribute constructively to the advancement of knowledge and society.

Professor (Mrs.) Prashanthi Narangoda
Director/NCAS

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Content

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Unveiling the Connection: How Perceived Corporate Social Responsibility Influences Employee Commitment with Idealism as a Moderator

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Abstract

Due to the undeniable importance and empirical dearth, the present study aims to examine the relationships between employee perception of Corporate Social Responsibility (CSR) and employee commitment, with the moderating impact of idealism. Both Social Identity Theory (SIT) and Social Exchange Theory (SET) have been used to theoretically support the examined relationships. The sample comprised of four hundred banking employees representing both executive and non-executive levels covering thirteen local commercial banks of Sri Lanka. A structured questionnaire was used to secure data from respondents. The suggested relationships were examined by employing Structural Equation Modelling (SEM). The results showed a strong positive impact between employee commitment and positive perception of CSR. Also, idealism is found to strengthen (moderate) the relationship between CSR perception and employee commitment. The results of this research are expected to contribute empirically, practically and methodologically.

Keywords: Corporate Social Responsibility, Employee Commitment, Idealism, Licensed Commercial Banks, Sri Lanka

Introduction

Over the years, corporate social responsibility (CSR) has emerged as a critical topic within the business community, with growing consensus that CSR practices contribute positively to business success across global contexts (Ng et al., 2024; Chapagain et al., 2024). While substantial research has examined CSR from an organizational level perspective focusing on financial performance, shareholder value, and brand reputation the literature remains relatively sparse on how CSR influences internal stakeholders, particularly employees (Aguinis & Glavas, 2019; Zambrano et al., 2022). Employees, often regarded as the most valuable assets of an organization, play a pivotal role in sustaining competitive advantage (Ali et al., 2021; Rodrigues et al., 2024). In today's dynamic business environment, securing sustained employee commitment has become a pressing challenge for organizations. Despite various engagement strategies, many firms continue to struggle with retaining a loyal and motivated workforce (Chapagain et al., 2024). Emerging research suggests that employees' perceptions of CSR initiatives can enhance organizational commitment. However, the underlying mechanisms and boundary conditions of this relationship remain underexplored, leaving room for further empirical investigation.

The banking sector, in particular, allocates significant financial resources to CSR initiatives. Yet, research examining the impact of CSR within banking especially from the perspective of employees is still limited (Subba & Kumar, 2018; Ha et al., 2024). This gap is even more pronounced in developing countries, where employee perceptions of CSR and their influence on work related attitudes and behaviors are poorly understood (Miller et al., 2020; Bartholomeusz & Edirisooriya, 2021).

Among the situational factors that influence employees' ethical decision making is the perceived ethicality of their organization. Organizations committed to CSR are often perceived as ethically grounded. Ethical ideology particularly idealism has been shown to shape how individuals interpret and react to CSR activities (Ham et al., 2019; Filosof, 2022). Idealistic individuals, who emphasize moral principles and believe in positive outcomes for all stakeholders, are likely to respond more favourably to CSR initiatives. Nevertheless, the moderating role of idealism in the CSR employee commitment relationship remains largely unexplored.

In light of the theoretical and practical gaps identified, this study has two primary objectives: (1) to examine the influence of employees' perceptions of corporate social responsibility on their organizational commitment, and (2) to explore the moderating effect of idealism on this relationship.

The remainder of this paper is structured as follows. Section 2 presents a comprehensive review of the relevant literature, focusing on the theoretical foundations and empirical evidence linking CSR perception, employee commitment, and idealism. Section 3 outlines the research methodology, including the sampling design, measurement instruments, and analytical approach. Section 4 presents the results of the structural equation modelling analysis. Section 5 discusses the key findings in relation to prior literature and theoretical implications. Finally, Section 6 concludes the study by summarizing the contributions, outlining practical implications for managers and policymakers, and proposing directions for future research.

Literature Review

Perceived Corporate Social Responsibility and Employee Commitment

Corporate Social Responsibility (CSR) refers to organizational practices that extend beyond profit motives to address the expectations of various stakeholders, including employees, communities, and the environment (Turker, 2009). Scholars have long investigated the business case for CSR, with initial studies emphasizing external outcomes such as financial performance and shareholder value. However, more recent attention has turned toward micro level CSR particularly its effects on employee related outcomes, including organizational commitment (Aguinis & Glavas, 2012; Zambrano et al., 2022).

Employee commitment is defined as an individual’s psychological attachment to the organization, characterized by a strong belief in organizational values, a willingness to exert effort, and a desire to remain with the organization (Hunt & Morgan, 1994). Numerous studies have shown that employees' perceptions of CSR both internal (e.g., fair treatment, employee wellbeing) and external (e.g., community engagement, environmental practices) can foster greater organizational commitment (ALshbiel & Al Awawdeh, 2011; Mory et al., 2016; Ramayah et al., 2022).

Turker (2009) was one of the earliest to empirically demonstrate that CSR directed toward non-social stakeholders, employees, and customers positively influenced organizational commitment. Likewise, Chapagain et al. (2024) found that internal CSR practices in the banking sector had a strong positive association with affective, continuance, and normative commitment. Ahsan and Khalid (2024) also identified that job satisfaction partially mediates the relationship between CSR and employee commitment, with both internal and external CSR dimensions playing important roles.

Theoretical Foundations: SIT and SET

Two major theories help explain how perceived CSR shapes employee commitment: Social Identity Theory (SIT) and Social Exchange Theory (SET).

SIT posits that individuals derive part of their identity from their membership in social groups, including organizations (Tajfel & Turner, 1986; Ashforth & Mael, 1989). When employees perceive their organization as socially responsible, they are more likely to feel pride and a sense of belonging, thereby reinforcing organizational identification and commitment (Sorour et al., 2021). A socially responsible organization enhances its prestige, which encourages employees to associate their self-concept with the firm's values and identity (Ng et al., 2024).

In contrast, SET (Blau, 1964) provides a reciprocal lens. When organizations are perceived as benevolent and socially responsible, employees feel an obligation to reciprocate through loyalty and commitment. CSR acts as a signal of organizational care, fostering mutual trust and emotional investment (Rupp & Mallory, 2015). This reciprocal exchange builds a psychological contract that can sustain long term commitment.

Both SIT and SET highlight different but complementary mechanisms identification and reciprocity through which perceived CSR influences employee commitment. Based on the above theoretical and empirical arguments, following hypothesis is developed and tested in this study:

H1: There is a positive relationship between employees' perception of CSR engagement and their organizational commitment.

Ethical Ideology and the Role of Idealism

Ethical ideology influences how individuals interpret CSR initiatives. Idealism, as a dimension of ethical ideology, is characterized by a belief that ethical actions should avoid harming others and promote well-being (Forsyth, 1980). Idealists tend to support socially responsible practices and align more strongly with organizations perceived to operate ethically (Ham et al., 2019; Filosof, 2022).

Idealistic employees are more likely to perceive CSR activities as authentic and meaningful, which may further strengthen their commitment to the organization (Li et al., 2018; Onaga, 2024). Conversely, individuals with relativistic ethical orientations who reject universal moral principles may be less influenced by CSR efforts in shaping commitment (Yousefi et al., 2022; Syahdan et al., 2024).

Although previous research has established a general association between ethical ideology and organizational attitudes, the moderating role of idealism in the CSR employee commitment link remains underexplored. Studies suggest that idealists demonstrate stronger affective commitment, and their ethical orientation may enhance the impact of perceived CSR on attitudinal outcomes (Güven & Şahen, 2024). Accordingly, following hypothesis is proposed and tested in this study:

H2: Idealism moderates the relationship between perception of CSR engagement and employee commitment. Figure 1 below depicts the conceptualisation of the hypothesised relationships.

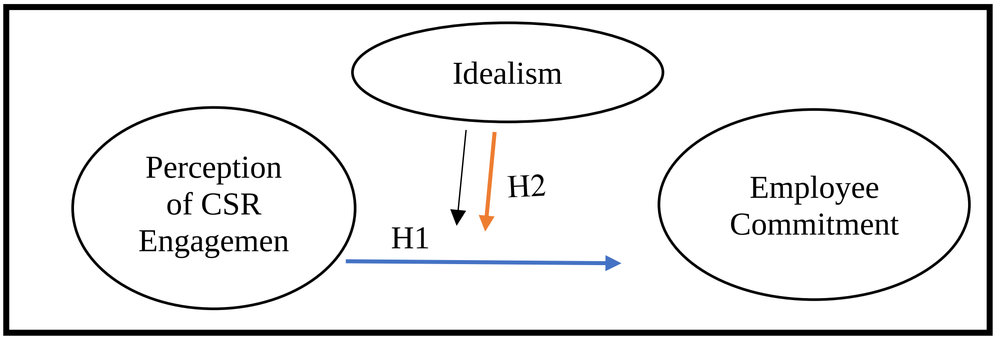

Fig. 1. Conceptual framework

Methodology

Research Approach and Design

This study adopts a quantitative research design within the positivist paradigm, aiming to examine the relationships between perceived corporate social responsibility (CSR), employee commitment, and idealism. A deductive approach was employed to test hypotheses derived from Social Identity Theory (SIT) and Social Exchange Theory (SET), supported by relevant literature.

Population, Sample, and Sampling Technique

The target population consisted of employees of licensed commercial banks in Sri Lanka, selected due to the sector's high engagement in CSR activities and the strategic importance of employee commitment. A total of 400 employees both executive and non-executive staff were selected using a stratified random sampling method. The strata ensured proportional representation across thirteen domestic commercial banks, and across key demographic variables such as age, gender, job level, and years of experience.

Measurement Instruments

To ensure construct validity, all measurement items were adopted from established and widely used scales:

- **Perception of CSR engagement** was measured using items from Turker's (2009) CSR scale and the stakeholder focused CSR instrument developed by Fatma et al. (2014).
- **Employee commitment** was assessed using the nine item short version of the **Organizational Commitment Questionnaire (OCQ)** developed by Mowday et al. (1979).
- **Idealism** was measured using a modified version of the **Ethics Position Questionnaire (EPQ)** developed by Forsyth (1980) and adapted by Cui et al. (2005) for workplace contexts.

All items were measured on a five point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Questionnaire Design and Pre-Testing

A structured, self-administered questionnaire was used as the primary data collection tool. The instrument was first reviewed by academic experts to ensure content validity, followed by a pilot test with 30 banking employees to identify ambiguities and refine item wording. Feedback from the pilot was incorporated before full deployment.

Data Collection Procedure

Data were collected through both physical and electronic surveys to enhance accessibility and response rates. Ethical approval was obtained, and informed consent was ensured from all respondents. Confidentiality and anonymity were maintained throughout the data collection process.

Data Analysis Technique

The hypothesized relationships were tested using Partial Least Squares Structural Equation Modelling (PLS-SEM) via SmartPLS software. This technique was selected due to its suitability for:

- predictive analysis,
- modelling of latent constructs with complex relationships,
- and its robustness in handling non normal data distributions.

Before hypothesis testing, the measurement model was assessed for reliability and validity, including checks for convergent validity (using AVE and Composite Reliability), and discriminant validity (using the Fornell Larcker criterion).

Results and Discussion

Measurement Model Evaluation

Prior to structural model estimation, the measurement model was assessed for reliability and validity. As summarized in Table I, all constructs demonstrated high internal consistency, with Cronbach's Alpha and Composite Reliability values exceeding the recommended threshold of 0.70. Additionally, the Average Variance Extracted (AVE) for all constructs surpassed the 0.50 cutoff, confirming convergent validity and indicating that a substantial portion of the variance in each construct is explained by its indicators.

To establish discriminant validity, the Fornell Larcker criterion was applied. As shown in Table II, the square root of the AVE for each construct was greater than its correlation with other constructs. These results affirm that the constructs are empirically distinct and suitable for structural model evaluation.

Construct/ Sub dimension	**Average Variance Extracted**	**Composite Reliability**	**Cronbach's Alpha**
CSR-CSR Engagement	0.669	0.909	0.875
EC-Employee Commitment	0.593	0.928	0.912
ID- Idealism	0.619	0.907	0.877

Table I. Convergent validity summary

	CSR Engagement	**Employee Commitment**	**Idealism**
CSR Engagement	**0.818**		

Employee Commitment	0.624	**0.870**	
Idealism	0.370	0.458	**0.787**

Table II. Inter construct correlation

Variable denotations are as follows,
CSR**:** Perception of CSR Engagement;
EC: Employee Commitment;
ID: Idealism

Structural Model Evaluation and Hypothesis Testing

The Partial Least Squares Structural Equation Modelling (PLS-SEM) technique was employed to test the hypothesized relationships. This approach was chosen due to its robustness in handling non normal data, its ability to estimate complex models, and its suitability for exploratory and confirmatory research with latent constructs.

H1: Perceived CSR → Employee Commitment

Path	Path coefficient	t-statistic	p-value
CSR→EC (Perception of CSR engagement →Employee commitment)	0.6231	16.1154	0.0000

Table III. Impact of perception of CSR engagement on employee commitment

The results provide strong empirical support for Hypothesis 1, which proposed a positive relationship between employees' perception of CSR engagement and their organizational commitment. The path coefficient was significant ($\beta = 0.623$, $t = 16.115$, $p < 0.001$), indicating that employees who perceive their organization as socially responsible are more likely to develop a stronger emotional and psychological bond with their employer.

This finding aligns with prior studies (e.g., Turker, 2009; Kucharska, 2020; Ahsan & Khalid, 2024) and reinforces the theoretical foundation laid by Social Identity Theory (SIT). According to SIT, employees derive part of their self-concept from their affiliation with prestigious or ethically guided organizations (Ashforth & Mael, 1989). A socially responsible organization fosters pride and a sense of shared purpose, resulting in higher commitment levels. Simultaneously, the findings are also consistent with Social Exchange Theory (SET), which views CSR as a form of non-monetary benefit extended by the organization. Employees interpret CSR activities as signals of care and ethical orientation, leading to reciprocal behaviors such as increased commitment and loyalty (Rupp & Mallory, 2015; Glavas & Kelly, 2014). Importantly, in the Sri Lankan commercial banking sector, where employee retention and engagement are persistent challenges, these results offer a compelling case for embedding CSR practices not merely as a compliance activity but as a core component of human resource strategy.

H2: Moderating Role of Idealism

The second hypothesis posited that idealism moderates the relationship between perceived CSR and employee commitment. As per table IV, this hypothesis was also supported ($\beta = 0.106$, $t = 2.002$, $p = 0.045$), indicating a statistically significant interaction effect. Specifically, the strength of the positive CSR commitment relationship is greater among employees who hold higher levels of idealistic ethical ideology.

This insight contributes to a more nuanced understanding of CSR’s psychological impact. Idealism defined as a belief in moral absolutes and a commitment to minimizing harm (Forsyth, 1980) amplifies how employees internalize and respond to organizational CSR efforts. For idealists, CSR signals organizational integrity and shared ethical values, deepening their organizational attachment (Güven & Şahen, 2024; Li et al., 2018). In contrast, for employees with lower idealism or a relativistic ethical orientation, CSR may be seen as superficial or transactional, thus eliciting weaker commitment. This result underscores the importance of ethical fit between employees and organizational values. While CSR can foster commitment across the board, its effectiveness is significantly enhanced when employees’ personal ethics align with the organization's moral stance.

This moderation effect is particularly relevant in developing countries, where CSR may be viewed with greater skepticism unless it is perceived as authentic. In the Sri Lankan context, where cultural values often emphasize collectivism and moral duty, idealistic employees may feel a stronger resonance with CSR initiatives that promote social welfare and ethical business conduct.

Path	Path coefficient	t-statistic	p-value
CSR→EC	0.623	16.115	0.000
ID→EC	0.238	4.147	0.000
ID * CSR →EC	0.106	2.002	0.045

Table IV. Moderating impact of Idealism

Variable denotations are as follows,
CSR**:** Perception of CSR Engagement;
EC: Employee Commitment;
ID: Idealism;
ID * CSR: Interaction variable between Idealism on Employee Commitment

Theoretical and Practical Contributions

These findings extend the boundaries of micro-CSR research by integrating individual level ethical ideology into the traditional CSR commitment framework. While existing literature has focused on mediators such as job satisfaction and psychological safety, the inclusion of idealism as a moderator provides a fresh perspective grounded in ethical psychology and value congruence theory.

From a practical standpoint, organizations particularly banks should consider not only implementing CSR initiatives but also communicating them in ways that resonate with employees' personal values. Training programs and internal communications could highlight the ethical rationale and social impact of CSR efforts, thus strengthening perceived authenticity. Moreover, during recruitment and on boarding, HR managers might benefit from assessing value alignment and ethical orientations to foster better long term organizational fit. Employees with higher idealistic tendencies are more likely to become ambassadors of CSR and sustain a culture of commitment and integrity.

Conclusion and Implications

This study set out to investigate the relationship between employees' perceptions of corporate social responsibility (CSR) and their organizational commitment, while also examining the moderating role of idealism within this relationship. Drawing on the theoretical underpinnings of Social Identity Theory (SIT) and Social Exchange Theory (SET), the findings reveal that perceived CSR engagement exerts a significant positive influence on employee commitment. Additionally, idealism significantly moderates this relationship, strengthening the association among employees who hold stronger moral convictions and idealistic values.

These findings offer important theoretical implications by extending the CSR–commitment nexus into the realm of ethical ideology. While prior literature has primarily focused on psychological or attitudinal mediators, this study positions idealism as a critical boundary condition, highlighting that employees' ethical predispositions shape how CSR is interpreted and acted upon. This marks a meaningful contribution to the micro-CSR literature, particularly in developing economies where research remains sparse.

From a practical perspective, the study offers actionable insights for organizational leaders and human resource practitioners. In a competitive and talent driven sector like banking, CSR should be viewed not only as a tool for external reputation management but also as a strategic lever for internal engagement and employee retention. Managers should ensure that CSR initiatives are both genuinely implemented and authentically communicated, as perceived sincerity is key to building trust and fostering commitment. Furthermore, aligning recruitment, training, and communication strategies with the ethical values of employees particularly those with idealistic orientations can enhance the effectiveness of CSR driven engagement strategies.

In terms of contextual contributions, this study addresses a notable gap in the CSR literature by focusing on licensed commercial banks in Sri Lanka, offering context specific insights that enrich the understanding of CSR dynamics in South Asian economies. By adopting a PLS-SEM approach, the study also adds methodological value by demonstrating the utility of advanced structural modelling techniques in examining complex, latent relationships.

Limitations and Future Research

While this study offers valuable contributions, certain limitations should be acknowledged. First, the cross-sectional design limits causal inference; future studies could adopt longitudinal designs to assess the evolution of perceptions and commitment over time. Second, the study focused solely on the banking sector in Sri Lanka, which may limit generalizability. Future research could explore similar relationships in other industries such as manufacturing, services, or the public sector, or conduct cross cultural comparisons to examine how national values and institutional contexts influence CSR perceptions.

Moreover, future studies could explore additional individual level moderators such as locus of control, moral identity, or cultural dimensions (e.g., collectivism) to further refine the understanding of when and for whom CSR has the strongest impact. Including qualitative or mixed methods approaches may also help to uncover deeper insights into how employees interpret CSR narratives and ethical alignment.

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Leadership, Culture, and Change: A Strategic Triangle in Sri Lankan Banking

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Abstract

The present study discusses the mediating role of organizational culture in the relationship between transformational leadership and change management within Sri Lanka's state banking sector. The study was empirically tested through a survey of 170 branch managers from a major state commercial bank. The results of this study revealed that the significant direct relationships between transformational leadership with organizational culture and change management has a major impact on growth and benefits of organizations and society. More importantly, there is no mediating effect of organizational culture on the relationship between transformational leadership and change management. These findings can be considered important, as they contribute to both theory and practice by extending our understanding of transformational leadership's role in driving organizational change within emerging markets, highlighting the complex dynamics between leadership styles and organizational culture in the banking sector. This will shed light on the banking sector in the South Asian context from a different perspective. The results have important implications for the banking sector, including employees and policymakers, particularly in the training and development of leadership programs and implementing change management initiatives in financial institutions.

***Keywords**:* Transformational Leadership, Culture, Change Management, State Banks, Sri Lanka.

Introduction

The global commercial banking sector is experiencing significant transformation due to the rapid adoption of digital technologies. At present, customers increasingly embrace the convenience of digital services. As a result, banks need to adjust their operating models to remain competitive.

Recognizing these imperatives, banks are integrating innovative technologies into banking operations to create an efficient customer experience, streamline processes and tap into large markets. Digital transformation encompasses not more than just adopting new technologies. It involves comprehensive refurbish of business processes, people management in the organization and a positive cultural change (Westerman et al., 2014). Hence, to take the advantage of the power of technology, banks need focus on organizational changes and specially, to support the individuals to change their mindset (Iljins et al., 2015). The missing link is effective change management. Requirement for change has become important and relevant for organizations. However, change management is considered a challenge by many organizations as it often results in organizational resistance (Imran et al., 2023).

For Sri Lankan banking sector, the transition to digital platforms has introduced significant challenges for organizations. Lack of leadership, an inflexible organizational culture and lack of employee employment along with resistance to change have been identified as major roadblocks (Madanayake & Yapa ,2023). Sri Lankan banks need to understand these challenges and should have better strategies. In this context, it is important to align technological developments with organizational readiness to ensure that services remain secure and proactive in an increasingly digitized environment (Jayasundara & Wickramarachchi,2024). In recent years organizations have faced challenges such as technological changes, privatization, competition and changes in the business environment which emphasise the need for effective leaders (Akbari et al., 2017). The ability to manage such changes requires a leadership approach commonly referred to as transformational leadership (Burns, 1978). Furthermore, literature stresses the importance of being aware of the organizational culture to ensure the change process is successful (Baird et al.,2011; Hemmelgarn et al., 2006). Thus, leadership and culture are considered as critical mechanisms for a sustainable change process (Busari et al., 2020; Kargas & Varoutas, 2015).

Organizations are frequently required to adapt to dynamic business environments; however, public sector organizations, unlike their private sector counterparts, often encounter greater challenges during change implementation (Al-Ali et al., 2017; Bintaher et al., 2015).Particulaly, the phase of how Sri Lankan state banks have been adopting to change strategies in relevant to process and structures is seems to somewhat backward than that of the private commercial banks (Dissanayake & Wanninayake, 2012). The major drawbacks of state owned banks are culture rigidity, lack of leadership, doubts and dilemmas crop up in employees mind and the powerful unions would be hindered the change initiatives. This is quite evident in Sri Lanka (Madanayake & Yapa,2023). Furthermore, it was discovered that there is a theoretical constrain in terms of internal factors affecting to digital transformation done from a Banking Industry, which made it necessary to conduct this study from the lenses of Sri Lankan context. Consequently, change management issues within the Sri Lankan context especially in the state banking sector remain insufficiently explored.

Successful change implementation requires effective leadership behaviour; in this regard, transformational leadership is widely recognized as a key leadership approach capable of driving significant organizational change. However, empirical evidence on the influence of transformational leadership on change management in the Sri Lankan context remains limited. The literature also underlines that ignoring the effects of organisational culture is the biggest obstacle to implementing new change initiatives (Cameron & Quinn, 1999; Farkas, 2013; Ulrich & Brockbank, 2005). However, few studies have empirically examined the mediating role of organizational culture in the relationship between transformational leadership and change management. Thus, this needs to be better studied on a broader scope, especially in relation to public sector organizations. Further, change is an inevitable process in any dynamic, well managed and a “futuristic” organization in the contemporary world and world has witnessed the failures in managing change due to cultural incompatibility and loopholes of the leadership. Accordingly, the present study examines the role of transformational leadership in effective change management and investigates whether organizational culture mediates the relationship between transformational leadership and change management, thereby addressing a timely and relevant research gap.

Based on the above rationale, this study focuses on one of Sri Lanka’s leading state-owned banks that has implemented a new automation system aimed at replacing traditional over the counter transactions with machine based services. Branch managers have been delegated the responsibility, and also been empowered to make decisions relating to issues that could be encountered at the branch level in line with the structural changes. Within this context, the study aims to investigate the influence of transformational leadership on successful change management and to examine the mediating role of organizational culture in the relationship between transformational leadership and change management.

Review of Empirical Literature

Over the past decades, transformational leadership has emerged as one of the most influential concepts in reshaping how businesses operate (Abeysekara & Wickramasinghe,2012). Transformational leaders are considered as key contributors to achieving high organizational performance due to their dedication and their followers also becoming committed to reaching set goals. Such leadership behaviour could drive the organization toward more creativity and innovation resulting in competitive advantage (Alowais, 2018). Transformational leaders are considered ideal when they demonstrate behaviours aligned with the four core dimensions of transformational leadership. These leaders exhibit strong ethical and moral standards, reflecting idealized influence, while inspiring and motivating followers toward appropriate and goal oriented behaviours, consistent with inspirational motivation Furthermore, transformational leaders stimulate innovation and creativity by encouraging followers to rethink existing problems in new ways (intellectual stimulation), while also providing individualized attention through coaching and mentoring to address the unique needs of each follower (individualized consideration) (Maria et al., 2022; Passakonjaras & Kothandaraman, 2020).

Organizational culture plays a vital role in enhancing firm performance by guiding employee behaviours through shared values, beliefs, and work systems that support competitive sustainability (Azeem et al., 2021; Calciolari et al., 2018). Organizational culture is extremely broad in nature, Quinn and Rohrbaugh's (1983) competing value framework (CVF) supports to integrate many of the dimensions proposed by different authors. Quinn and Rohrbaugh (1983) introduced two orientations, flexibility–control and internal–external focus, which created four main clusters: adhocracy, clan, hierarchy, and market. *Adhocracy culture* is characterised by an advanced level of creativity, risk taking and employees are motivated to be innovative and experimentation. This type of organizational culture is highly responsive to change and allows for flexible forms of employee control that foster creativity and accelerate change processes (Zeb et al., 2021). Whereas *clan culture* emphasizes teamwork, employee involvement, cohesion, participation, and corporate and individual development. Clan culture is usually internally oriented and flexible in nature. Particulaly, promotes innovation thereby giving opportunities for change (Zeb et al.,2021). Organisations in which *hierarchy culture* exists have a formalized and structured working environment. In hierarchical cultures, control is exercised through rigid chains of command and formalized rules and procedures, which have been found to contribute to heightened resistance to change and limited adaptability (Janka et al., 2020). Whereas *market culture* focusses on productivity, profitability, market share, and penetration (Cameron, 2004; Cameron and Quinn, 2006; Gupta and Cannon, 2020; Piwowar-Sulej, 2021; Tseng, 2010). By emphasizing external competitiveness, market culture stimulates innovative thinking, thereby requiring ongoing organizational change and adaptation.

The Competing Value Framework also outlines different leadership styles that is associated with four cultures specified by Cameron and Quinn (O'Neill et al.,2021). Cultures that emphasize facilitator and mentor roles, characteristic of clan culture, seek to develop a motivated workforce grounded in commitment and involvement, closely aligning with the core attributes of transformational leadership. Innovative and creative roles, which rely on creativity and communication skills to drive change, underscore the central role of transformational leadership (Belasen, 2012).

Literature emphasizes that transformational leadership will be more effective under flexibility-oriented cultures (Schimmoeller, 2010; Yildiz and Gul, 2016;). Organizations with adhocracy culture and clan culture emphasize on flexibility (Haffar et al., 2014; Kariyapperuma, 2015; Schimmoeller, 2010). Therefore, the present study has focused only on clan and adhocracy type cultures in examining the mediating effect of organizational culture.

Organizational change refers to variations over time in an organization's form, quality, or state, including changes in structure, management, employees, and operational processes (Armstrong, 2009; Van de Ven & Poole, 1995). Advocates of change management have identified categories of changes in terms of rate of occurrence, how it comes about, and scale. But, change literature is dominated by planned and emergent change, i.e., how change comes about (Bamford and Forrester, 2003). Planned change refers to the deliberate process of transitioning from one relatively stable state to another through a series of predefined steps and is therefore often regarded as a structured and effective approach to change. In contrast, emergent change encompasses changes that are largely unpredictable and evolve over time. Accordingly, change is not viewed as a smooth, linear sequence of events occurring within a fixed time frame (Burnes, 1996, 2004; Dawson, 1994).

It is agreed that change is important for organizations and can bring about significant benefits. Arnold (2015) argued that effective change management improves organizational performance and helps develop key competencies, enabling firms to outperform competitors through new ways of working. Therefore, change management is crucial for achieving sustainable competitiveness. The factors such as monitoring, learning and interpreting signals of environmental changes are essential for sustainability-oriented knowledge. Leadership acknowledges the significance of change in organizations. Despite its complexity, leaders embrace change because they believe it benefits to the organization and improves performance. More importantly, these kinds of changes are only can be cope up with transformational leaders as they encourage and motivate their employees to take risks and encourage subordinates to find alternative ways of executing their work which are essential for in emergent change situations (Musaigwa,2023).

Relationship between Transformational Leadership and Change Management

The association between transformational leadership and change management has been widely discussed in change management literature. Transformational leaders are capable of changing the status quo of organizations by displaying appropriate behaviours during the transformation process (Hernandez et al.,1999). According to Akbari et al. (2017), transformational leaders are experts in encouraging employees to find new solutions for various problems and challenges; moreover, this leadership style seeks to empower employees to generate positive outcomes for the organization which are essential factors for effective change implementation.

With regard to the relationship between transformational leadership and change management, prior studies consistently report a positive association. The study by Al-Qura’an (2015) demonstrated a significant association between transformational leadership and change management among branch managers. The findings of Alqatawenh (2018) indicate that transformational leadership positively affects change management. Bradley

(2020) examined the role of transformational leadership in facilitating change management within the context of digital transformation in the United States. He concluded that transformational leadership is vital in implementing IT, encouraging adaptability to changes in the contemporary business. Furthermore, Islam et al. (2020) suggested that organizations should practice a transformational leadership approach and develop followers' attitudes to manage change in the organization. Busari et al. (2020) concluded that managers have a responsibility to adopt a transformational leadership style to promote change and to create opportunities for employee participation in change programmes, thereby ensuring successful change implementation. Accordingly, the evidence suggests that transformational leadership exerts a positive influence on change management.

However, transformational leadership does not work perfectly in managing change. As shown in the study of Wang et al. (2011) conducted on a Bosnian company, transformational leadership behaviour is not equally relevant and effective in organizational changes in all contexts. Tris may be perhaps due to the contextual factors such as nature of the change, magnitude of the support getting from the top decision makers and nature of the organization. Follower dependency is a major side effect of high transformational leadership A dependent person is getting the direction and guidance for which they are not competent and thereby limiting the innovative skills of followers. Thus, it requires further investigations to measure the significance of transformational leadership with various outcomes related to organizations.

Therefore, the following hypothesis is proposed in the conceptual model of this study:

H1: *Transformational leadership has a significant impact on change management.*

Relationship between Transformational Leadership and Organizational Culture

Leadership and organizational culture are strongly bound. It is argued that effective leaders tend to show greater transformational leadership qualities, and that these qualities enable them to change elements of the organizational culture in a manner that improves organizational performance (Busari et al., 2020; Bamford & Forrester, 2003). Bass (1997) claimed that transformational leadership is universally successful across cultures as it can provide vision and empowerment to the workforce. This has been further confirmed by House et al. (2004) in their book, "Culture, Leadership and Organizations: The GLOBE Study of 62 Societies", where they have examined organizational culture and attributes of effective leadership in 62 different cultures. They claimed that transformational leadership in particular is universally valid across cultures. Leaders with transformational leadership attributes are capable of creating and fostering a culture of safety, and realizing maximum improvements. Therefore, transformational leadership does not display a negative relationship with organizational culture (Tipu et al.,2012; Lasrado and Kassem, 2021,). Furthermore, Ledimo (2014), Aydogdu and Asikgil (2011) and Mohammed and Al-Abrrow (2022) claimed transformational leadership has a direct effect on organizational culture.

Therefore, the following hypothesis is proposed in the conceptual model of the study:

***H2**: Transformational leadership has a significant impact on organizational culture.*

Relationship between Organizational Culture and Change Management

Organizational culture largely affects change implementation (Bagga et al. 2023; Baird et al. 2011; Jones et al.2005). Carlström and Ekman (2012) emphasized that organizational culture consists of a rich set of values, assumptions, beliefs and behaviours. They claimed that the above components in culture collectively influence change. Onyango (2014) also observed organizational beliefs, values and employee attitudes, as parts of organizational culture, affect change management. Sinclair (1991) emphasized that cultures can influence organizations in various ways, and that cultural variables can be used for the development of the organization and to create new behaviours. Organizational cultures, therefore, are strategically important during changes (Pfeffer, 1981). Furthermore, in organizational cultures characterized by flexibility, employees are more likely to be positive towards the organizational culture, and mentally and emotionally better prepared for organizational change. Whereas in organizational cultures characterized by stability, change may be perceived as a disturbance in the work setting (Olafsen et al., 2021).

Therefore, the following hypothesis is proposed in the conceptual framework of the study:

H3: *Organizational culture has a significant impact on change management.*

The Mediating Effect of Organizational Culture

Change management literature demonstrates that organisational culture is a significant factor for successful implementation of change. Herold et al. (2007) emphasised that leadership behaviour and organisational culture should be assessed when organisational changes are to be introduced. It is evident that both transformational leadership and organizational culture are key indicators of the success or failure of any change activity and change management. Thus, the role of leadership is to motivate people to accept change; leaders should utilize organizational culture to ensure change is brought about successfully (Bendor-Samuel, 2004). Furthermore, as per Chua and Ayoko (2021) the employees who perceived transformational leadership reported higher levels of intrinsic motivation. Pradhan et al. (2008) examined the mediating role of organizational culture in the relationship between transformational leadership and psychological empowerment within the Indian retail industry and found that organizational culture partially mediated this relationship. Moreover, Ogbonna and Harris (2000) confirmed the mediating role of organizational culture in the relationship between transformational leadership and organizational performance. The study suggested that the relationship between leadership style and performance is mediated by the type of organizational culture present. Para-González et al. (2018) examined the mediating roles of human resource management practices, organizational learning, and innovation in the relationship between transformational leadership and organizational performance. Findings from 200 Spanish industrial firms indicate that transformational leadership contributes to higher performance through the development of human resource management practices, learning mechanisms, and innovation systems.

Therefore, the following hypothesis is proposed in the conceptual framework of the study:

H4: *Organizational culture mediates the relationship between transformational leadership and change management.*

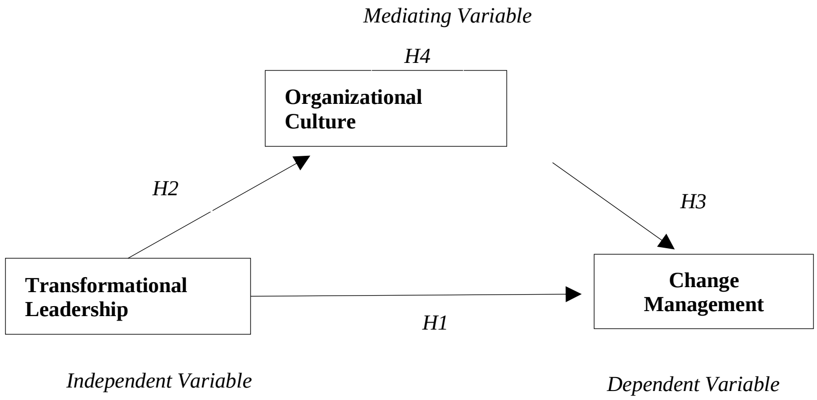

Fig.1: Conceptual framework of the study

Figure 1 illustrates the potential linkages among organizational culture, transformational leadership, and change management, as identified in the literature review

Methodology

The sample includes branch managers of a state owned bank responsible for self-banking units. The bank currently operates 245 such units nationwide. As the entire population was included in the study, it is therefore classified as a census study. The online survey method was used for the purpose of data collection. The background information of the respondents was collected in the first section of the questionnaire. The second section of the questionnaire comprised twenty (20) questions extracted from the Multifactor Leadership Questionnaire (MLQ-5X) to assess the transformational leadership behaviour of branch managers (Bass and Avolio,1995). The third section consisted of thirteen (13) questions to measure the organizational culture construct based on the competing value framework by Cameron and Quinn (1999). The last section of the questionnaire consisted of ten (10) questions extracted from the scale developed by Farrell (2010) to measure the change management construct. 170 usable questionnaires were collected during the months of October 2024 to December 2024 reflecting a response rate of 69.39%.

SPSS version 21 has been employed for data analysis. The statistical techniques of mean and standard deviation assessment have been adopted to describe the sample profile. Internal consistency and convergent validity were assessed using Cronbach's alpha, composite reliability, and average variance extracted (AVE). The hypotheses of the study were tested using structural model analysis from Smart Partial Least Squares (PLS) as it does not require data to be normal as in covariance based SEM (Johansson and Yip, 1994; Midgley and Devinney, 2005; Venaik et al.,2005), and is the most appropriate when sample sizes are small (Mahmood et al.,2004; Venaik et al.,2005). More importantly, PLS has been widely adopted in relation to transformational leadership, organisational culture (for e.g., Para-González et al., 2018; Kariyapperuma, 2015) and change management (for e.g., Al-Mulla et al., 2019; Novitasari et al., 2020).

Results

The sample consisted of 45.1% male and 54.9% female respondents, of whom 93.8% were married and 6.1% were unmarried. The majority of respondents fell within the 36–55 age category and had 2–5 years of experience in managerial positions. This profile reflects the context of the study, which was conducted in a leading state-owned bank in Sri Lanka, where employees are required to progress through several career stages before assuming managerial roles. Regarding educational qualifications, 76 respondents (46.9%) held master's degrees, 33 (20.4%) were graduates, and 24 (14.8%) were professionally qualified, indicating a strong educational background among bank managers. The measurement model was evaluated using SmartPLS to assess reliability and validity, followed by structural model analysis to test the hypotheses.

	Cronbach's Alpha	**Composite Reliability**	**Average Variance Extracted (AVE)**
Change Management	0.780	0.900	0.818
Organizational Culture	0.868	0.938	0.884
Transformational Leadership	0.863	0.908	0.713

Table 1: Reliability and Convergent Validity

Source: *Survey data (2024)*

As shown in Table 1, Cronbach's alpha and composite reliability values for all constructs exceed the recommended threshold of 0.7 (Bagozzi & Yi, 1988; Fornell & Larcker, 1981), indicating satisfactory internal consistency. In addition, the average variance extracted (AVE) values meet the minimum criterion of 0.5 (Bagozzi & Yi, 1988), thereby confirming adequate convergent validity of the measurement model.

	CM	OC	TL
Change Management	**0.905**		
Organizational Culture	0.388	**0.940**	
Transformational Leadership	0.415	0.834	**0.844**

Table 2: Discriminant Validity

Source: *Survey data (2024)*

Discriminant validity was assessed using the Fornell and Larcker (1981) criterion. As presented in Table 2, the square roots of the AVE values (diagonal elements) exceed the corresponding inter construct correlations (off diagonal elements), and the majority of AVE estimates are greater than the squared multiple correlations (SMC), thereby indicating acceptable discriminant validity. Hypotheses were tested by examining path coefficients and their statistical significance. The path coefficients and p-values were estimated using the bootstrapping procedure in SmartPLS.

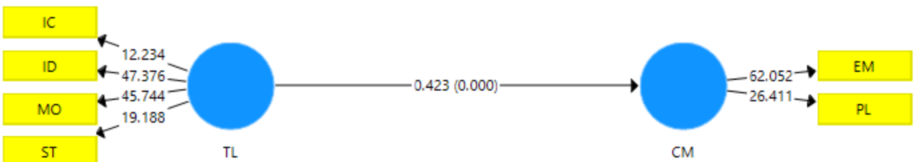

Fig. 2: Hypothesis one (H1)

Source: Smart PLS Bootstrapping result

As shown in Figure 2, the p-value ($p < 0.001$) is statistically significant at the 5% level, indicating that the model is statistically significant. The path coefficient ($\beta = 0.423$) demonstrates a significant positive effect of transformational leadership on change management. Accordingly, these results support **H1**, which posits that transformational leadership has a significant impact on change management.

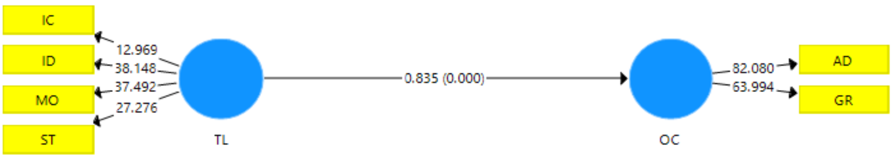

Fig. 3: Hypothesis two (H2)

Source: Smart PLS Bootstrapping result

The second hypothesis proposes that transformational leadership has a significant impact on organizational culture. As illustrated in Figure 3, the p-value ($p < 0.001$) is statistically significant at the 5% level. The path coefficient ($\beta = 0.835$) indicates a strong positive relationship between transformational leadership and organizational culture. Accordingly, these findings support **H2**, confirming that transformational leadership exerts a significant positive influence on organizational culture.

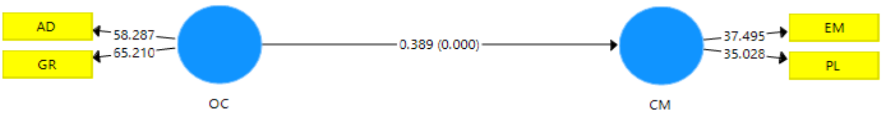

Fig.4: Hypothesis three (H3)

Source: Smart PLS Bootstrapping result

The third hypothesis propositioned that organizational culture has a significant impact on change management. As per figure 4, the respective p-value (0.000) is statistically significant at the 5% confidence interval. The path coefficient is 0.389, indicating that there is a significant positive impact of organizational culture on change management.

The fourth and final hypothesis posits that organizational culture mediates the relationship between transformational leadership and change management. This mediating effect was examined using the procedure proposed by Baron and Kenny (1986). According to this approach, mediation is established through four sequential steps, implemented using three regression equations, to determine whether the mediator transmits the effect of the independent variable to the dependent variable.

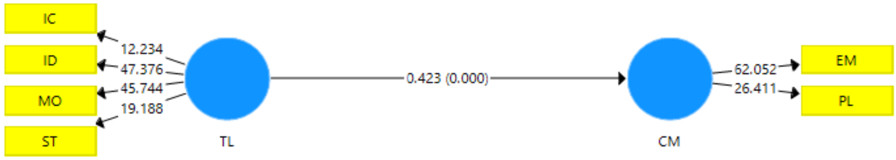

Fig. 5: Hypothesis testing for independent and dependent variable

Source: Smart PLS Bootstrapping result

As per figure 5, transformational leadership (independent variable) has a significant influence on change management (dependent variable).

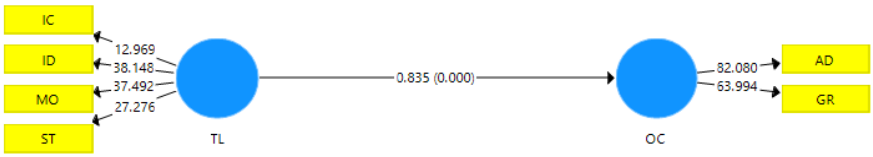

Fig. 6: Hypothesis testing for independent variable and mediator

Source: Smart PLS Bootstrapping result

As per figure 6, transformational leadership (independent variable) has a significant influence on organizational culture (mediator).

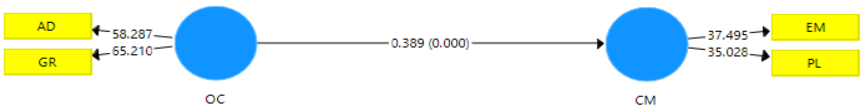

Fig. 7: Hypothesis testing for mediator and dependent variable

Source: Smart PLS Bootstrapping result

Figure 7 depicts that there is no significant relationship between organizational culture (mediator) and change management (dependent variable).

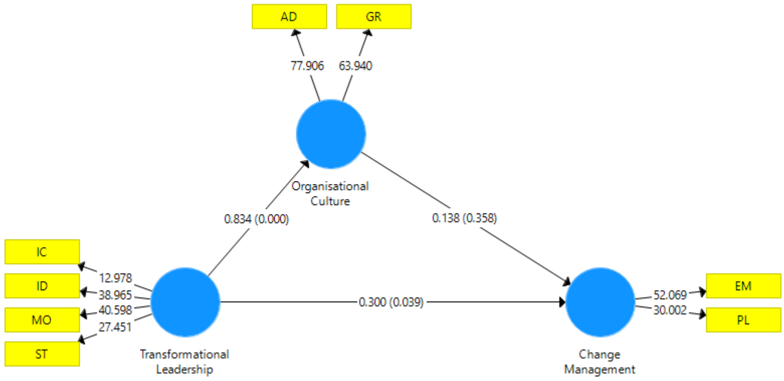

Fig.8: Hypothesis testing for independent variable and dependent variable with mediator effect

Source: Smart PLS Bootstrapping result

As illustrated in Figure 8, transformational leadership (the independent variable) exerts a significant influence on both change management (the dependent variable) and organizational culture (the mediator). However, the relationship between organizational culture and change management is not statistically significant. Accordingly, the results do not satisfy all the conditions proposed by Baron and Kenny (1986) for establishing mediation, as the effect of the independent variable on the dependent variable is not significantly reduced. Therefore, organizational culture does not mediate the relationship between transformational leadership and change management.

Discussion

The outcomes have confirmed a significant positive impact of transformational leadership on change management. Earlier studies had similarly highlighted a significant relationship between transformational leadership and change management, for instance, Al-Qura'an (2015) confirmed that transformational leadership significantly impacted change management. Cao and Le (2022) argued that transformational leadership significantly impacts organizational change and change management through its emphasis on clarity in communication, engagement in coaching, promotion of new skill development among followers, and continuous search for organizational development opportunities. This leadership style motivates and inspires employees to exceed expectations and reach their full potential, playing a crucial role in both the initiation and implementation of organizational change. Islam et al., (2020) observed that transformational leaders promote employees’ change supportive behaviour to enable effective change implementation in the organization. In the Sri Lankan context, an attempt has been made in relation to transformational leadership in the public sector to develop a scale in the Western Province of Sri Lanka (Nilwala et al.,2017).

However, the study is limited to the Western Province of Sri Lanka, with a sample of only 60 respondents and therefore, limited coverage using a justified sampling method. Research has consistently shown that transformational leadership affects both personal outcomes for followers, such as satisfaction and commitment to the organization, as well as organizational outcomes, including commitment to organizational change and improvement of organizational conditions (Givens,2008). Due to its comprehensive impact, transformational leadership is deemed essential in all types of organizations.

More importantly, Herold et al. (2008) and Herman et al., (2012) stated that transformational leadership shows commitment to change, and transformational leaders could influence change readiness. Accordingly, the present study links transformational leadership and change management within the framework of social bond theory, which suggests that unexpected employee behaviour can be managed by strengthening bonds between leaders and followers (Hirschi, 1969). According to social bond theory, strong leader–follower bonds reduce employees’ negative attitudes and provide a foundation for fostering positive attitudes toward organizational change (Herold et al., 2008). This perspective is consistent with Burns’ (1978) assertion that transformational leadership cultivates strong bonds between leaders and followers.

The results also revealed a significant positive impact of transformational leadership on organizational culture. The findings of the study were found to be consistent with previous research findings, signifying that transformational leader change the organizational culture by understanding and then adjusting the organization’s culture with novel vision and alteration of its shared assumptions, values, and norms (Bass et al., 1993). Lasrado and Kassem (2021) similarly suggested that transformational leadership influences organizational culture across diverse organizational settings.

The findings indicate that organizational culture has a significant positive effect on change management. This result is consistent with Haffar et al. (2014), who identified organizational culture as a critical success factor for effective change management, and Iljins et al. (2015), who confirmed its significant influence during periods of organizational change. In addition, Lee et al. (2019) discussed practical approaches through which managers can effectively shape and manage organizational culture.However, empirical evidence also highlights several challenges in achieving business excellence. Lasrado and Kassem (2021) identified employee resistance to cultural change as a major barrier. This suggests that transforming organizational culture is essential for organizations seeking business excellence through successful change implementation. Furthermore, Zeb et al. (2021) and Naranjo et al. (2010) emphasized that organizational culture plays a key role in fostering innovation. They noted that cultures characterized by flexibility and external orientation promote product innovation, while certain cultural attributes may hinder innovation, underscoring the contextual nature of organizational culture.

The final research objective of the study was to identify whether organizational culture mediates transformational leadership and change management. Previous studies had identified the mediating role of organizational culture in different contexts (Alkharabsheh et al., 2023; Al-Ali et al., 2017; Pradhan et al.,2008). However, the results of this study found no mediating impact of organizational culture on successful change management. Arachchi (2013) revealed that organizational culture negatively influenced organization goals in public sector organizations in Sri Lanka, while Jayarathne (2016) claimed that government banks do not exhibit a positive organizational culture with positive attitudes and employee commitment. These findings indicate that the present organizational culture in public sector banks lack orientation toward change, adaptability and innovation due to the lack of flexibility oriented cultures in these organizations. This underlines the need for change in managerial behaviours, fostering transformational leadership attributes in the public sector, including state commercial banks, to survive and prosper in the dynamic business environment (Fernando and Lanka, 2016).

Benanav (2020) noted a rise in productivity with the implementation of high tech production methods in his book, “Automation and the Future of work”. However, several complications related to automation have been highlighted in the Sri Lankan context. Punchihewa (2004) noted unavailability and underutilization of resources as one of the problems in automation in the context of e-Governance in Sri Lanka. Furthermore, Thillaivasan and Wickramasinghe (2020) explained the implications of artificial intelligence and automation on the configuration of future organizations in Sri Lanka, while also highlighting the implications of two key subjective organizational performance measurement variables, leadership and human capital. This emphasizes the necessity to engage in research studies on how automation progresses in the Sri Lankan context, and to recognize how leadership and organizational culture may affect the process of automation.

Furthermore, the findings imply that transformational leadership overrides organizational culture, and directly influences successful change implementation of the bank. Hence, it is recommended to practice transformational leadership qualities among the branch managers, and for the bank to focus more on the traits of transformational leadership in choosing or promoting candidates to managerial roles. More importantly, this can be practiced as one of the core competencies factors of the firm. Banks should also provide formal training to managers to develop skills and attributes of transformational leaders. This study will be of importance in preparing training manuals and training guidance for effective training purposes. Also, it is recommended that managers adopt transformational leadership skills to foster a better organizational culture during organizational change.

The pace at which private banks have been adapting to change strategies related to process and structure is better than that of state commercial banks (Dissanayake and Wanninayake, 2012). Managerial challenges in meeting market requirements are still found in state commercial banks, even though strategic decisions are made in implementing change strategies within the processes, systems, and practises of personnel. The behavioural changes of employees need to be especially addressed in the application of process changes in the form of digitalization. Therefore, the findings of the study would provide valuable insights for top level management of state commercial banks.

The study also contributes several inferences to theory. Although prior studies have highlighted the role of leadership in facilitating organizational change, the specific leadership qualities required and the mechanisms through which transformational leadership influences change implementation remain insufficiently understood. Accordingly, this study makes a novel contribution to the literature by advancing empirical understanding of the impact of transformational leadership on change management, while also examining the mediating role of organizational culture. There have been few empirical analyses of transformational leadership and organizational culture, which the present study investigates. The study, therefore, contributes to reduce the existing gaps in the literature. One of the key contributions of this study lies in its use of organizational culture as a mediating variable, through which the effects of transformational leadership on change management are empirically tested, thereby addressing an important research gap in the literature linking organizational culture and change management. Moreover, by examining the conceptual model within the Sri Lankan banking sector, this study opens a new avenue for research on organizational change in non Western contexts. For academics, the study offers a structured framework for analyzing the interrelationships among transformational leadership, organizational culture, and change management, and provides empirical evidence to support theory development and scholarly debate.

Finally, as this study focused on subjective constructs such as organizational culture and leadership, future research is encouraged to adopt qualitative approaches to address the limitations of quantitative methods. In addition, examining the full range of leadership styles using the Multifactor Leadership Questionnaire (MLQ-5X) would provide deeper insights into their respective effects on change management. Such investigations would contribute to theory development and expand existing knowledge in the field of change management. Moreover, future studies should explore the influence of demographic factors such as gender, age, work experience, and educational qualifications on the expression of transformational leadership styles..

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Impression of Dance and Music: expression on rock surface (Iconographic study based on Naranamula cave in Toppigala)

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Abstract

Sri Lanka has a rich tradition of rock art, and the first attempt to study on rock art was reported in the 19th century with the investigation made by H.C.P. Bell. According to Bandaranayake (2006), Sri Lanka has a long and rich tradition of rock and wall painting from the 2nd or 3rd century BC to the 20th century, extending possibly from prehistory. There is a few scholars who have contributed to analyzing rock art, but mere attention has been paid addressing the ethnographic and cultural context that represents. Deraniyagala's classification appears more vital, however, lacking with scientific dating of rock art by comparing with the socio-cultural context. Accordingly, the settlements at Naranmula cave appears to be of an earlier date than what has been identified and can trace some of the authentic cultural elements of Sri Lankan people. Thus, the present qualitative study attempted to analyze evidence found from Naranamula cave to establish that the *first Musical instruments are denoted on the rock surface of Naranamula cave,* expressing their feelings and emotions by way of engravings/ paintings. It is significant that there is a vacuum in the existing literature, on studying rock art by way of Sri Lanka's performing arts, especially the history of music and dance. According to the data analyzed, there is a significant amount of information to support that the use of musical instruments is not a new trend in Sri Lanka, but a derivation from the prolonged use of local/ indigenous cultural practices, which were later developed by incorporating new elements.

***Keywords*:** Music Instruments, Rock Art, Prehistory, Iconography

Introduction

The ancestors story imprinted on the rock surface was filled with lines, colors, and dots. 40,000 years ago. Homo sapiens painted cave walls. Each period of the rock art reflects the aesthetic and intellectual values of its age.

Therefore, studying rock paintings is an understanding of signs and symbols in the context of religions, myths, rituals, arts, and languages in a culture.

The archaeological records explore how humans would have originated and evolved as a culturally rich species from the evidence supported from the Neanderthals and other larger brained hominids. Further, it was evident that the ancestors slapped their bodies, clapped, and made rhythmic movements imprinted in cave walls (Bragard, Ferdinand & Hen, 1986.p.19). This explores that rhythmic expressions are integral to human social life. On the other hand, manifestation of rock paintings is a creative process, and Sri Lanka has a longstanding tradition of rock paintings. As a fact, the meaning or a detailed interpretation of Sri Lanka's rock paintings has not been conducted. Somadeva (2012), strived to analyse the characteristics of these paintings and engravings from the ground level, while signalling the availability if authentic characteristics Sri Lanka's dance and music for a time innumerable with regard to its existence.

Hence, the research gap has been created to investigate the fact that the rock paintings and engravings in Sri Lanka representing its authentic cultural identity through ages to date. It was further revealed that scholars have not paid much attention on such cultural elements as dance, music gestures, norms and customs and other elements, as there was no such approach carried out during the past decades, due to the reason that the dance and music scholars have not attempted to analyse the assumptions founded by archaeologist. However, the archaeological evidence in the subjective viewpoints of dance and music, helps establish that dance and music history in Sri Lanka derives a strong tradition which is native to Sri Lankan culture and society that was later developed with the socio-cultural amalgamation with migrated socio-cultural elements. The particular absence causes academics to depend on the *Mahavamsa as* the earliest reference in dance and music in Sri Lanka with the story related to the Vijaya's arrivals.

Hence, the present study focuses on analysing rock art created by preliterate people depicting various movements i.e. dance postures, drumming, playing instruments etc., where directed, to establish music history in Sri Lanka. Further from the of view of some historians, most of the rock art in Sri Lanka was done by the Veddah community because their social and cultural life lay in caves. The Seligmanns (1911) were among the first to explore the connections between prehistoric man in Sri Lanka and essentially

Stone Age lifestyle of the Veddahs. They also brought attention to the rock shelters that both prehistoric man and the Veddahs occupied rock shelters and for many a purposes, they engraved on rock surface, sometimes painted, to express the psycho cantered feelings and emotions to each other.

Literature Survey

The music related evidence provided all over the world in the cave art context. An artefact was found around 82,000-43,000 years ago, as the world's oldest flute was found in Slovenia in a Neanderthal habitation site (Prunk, Pikalo, Milosavljevič, 2007. P.12). The equipment was made from a cave bear bone, and this bone flute dates to approximately 9,000-7,000 years ago. During the 19th and 20th centuries, attention was focused on rock paintings and engravings (RPE) in Sri Lanka by a few scholars i.e. Bell, Bandaranayake and Jayasinghe, Manjusri, Somathilake, Paranavithana, Deraniyagala, and Nandadeva after two centuries of providing attention on RPE during in the 17th century in the global context. The first attempt of the context was made by H.C.P. Bell, 1904, observed quint outline drawings of men, animals, etc., of the most primitive people who executed their skills and experience in white ashes in Konnattegoda and Arangoda Galge in the Polonnaruwa district. The significant approach on RPE records was focused by Somadeva in 2012 on semiotics and ecology in cognitive approaches, as the previous research was absent of raising the meaningful expressions of preliterate society in the country. The investigation not only benefited archaeology but also analysed rock art design, syntax of images, stylistic correlation, social practices, and figurative representations validating the cultural context of the pre-literate man in the country. The argument was supported by Illangasingha (2017) on studying drawings which enabled him to identify the craftsmanship of the pre-literate man from the perspective of their cultural and cognitive expressions. With such involvement, the present study typically put more focus on music and its evolution in the country by paying attention on rock paintings and engravings in Sri Lanka in the context of the visual tradition of music.

It is the known fact that music is a sensitive context that enables human beings to touch universal attributes in the human mind, such as expressing emotions, expressions and even mindfulness practices. The practice has been evident throughout the history, where the visuals on rock surfaces of prehistoric and primitive cave dwellings have proved the sole cultural insight and behaviour through their practices and experiences drawn on the rock surface. Archaeologists have made great contributions to understand ancestors' livelihoods and cultural behaviours that directed communication through the generating of sounds. According to Piyadasa (1998), preliterate people interpreted the nature, and they expressed emotions by screaming, clapping, and tapping where some of these are of the tangible context: perhaps most of the expressions are intangible to date, and can be connected by properly analysing the available visible data. What is available to date is the what they have imprinted on cave walls with their experience, feelings, and culture. Hence, researchers focused on studying rock painting all over the world, where Sri Lankan scholars also attempted to establish a sound knowledge on preliterate creative society.

According to Deraniyagala, they have three main forms of rock art: incised depictions, polychrome paints, and monochromatic silhouettes . The 'artists' have used kaolin, ash, and white or colored clays, or they have just used a crude kind of engraving by bruising the rock's surface. Thick finger smears and line drawings, also referred to as "stick" figures, include stylized animal shapes, hunting figures wielding bows and arrows, men mounted on animals, and geometric or symbolic themes. Certain forms are incredibly creative or symbolic traditions where interpretation determines the topic matter. However, music is expressing and inducting emotions that preliterate man also wanted to symbolize by painting rocks. As per the researchers, they explored the generating sounds by using the mouth directed to the lexicon of words as well as music.

India

Pattak, and Cottes, (2021), focused on music denoted on rock surfaces in central India and mentioned that they were able to identify drums, harps, pipes, and cymbals. These researchers found the number of drummers symbolized on rock walls in Madhya Pradesh, and these paintings are considered Neolithic and historic.

Two types of drums are found among the rock paintings in the Chaturbujnath Nala cave in Madhya Pradesh **(Cave Art 1).** A big cylindrical drum hangs from the neck and is held in the middle of the body, and it is believed this drum can be used at both ends and may be played by using hands.

Cave Art 1 Source: Pattak, M., and Cottes, J, 2021

In the complex panel of Chaturbujnath Nala (Madhya Pradesh) depicted in **Cave Art 2**, at the top left, a line of people wearing elaborate headgear and wielding axes and shields are dancing to the sound of big drums.

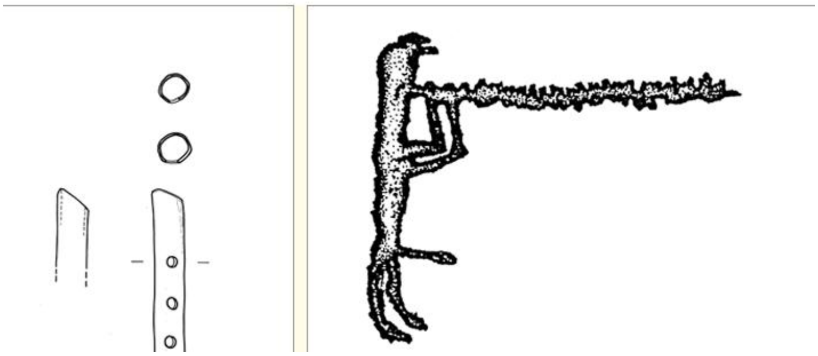
Cave Art 2 Source: Pattak,M.,andCottes,J, 2021

And researchers found pipe players from sixteen caves. They may have used hollow tubes such as horns, bamboo, or bones. In early times, pipes and drums were also used to announce conflicts and warn other groups. Further, the **Cave Art 3** demonstrates two long rows of dancers converging towards a harp player depicted at left. Below them are smaller people probably also dancing

Cave Art: 3 At Kharwai (Madhya Pradesh),
Source:Pattak,M.,and Cottes,J, 2021

Korea

The first attempt on prehistoric musical instruments in rock art by Cho Hyunjong, 2006, was a phenomenon in Korea. Cho, Hyunjong **(Cave Art 4)** found a naked man blowing a music instrument found in Eonyang-eup, Ulju-gun, Ulsan, and Bangudae rock engraving. This researcher quoted research data on the 1960-1964 excavation and identified nine cultural layers from Paleolithic to Neolithic to Bronze Age in Seopohang; the site is located in Seopohangdong.



Cave Art 4: Bone flute from Seopohang site (Cho Hyunjong, 2006)

The depiction of rock art not only reveals the socio-cultural engagement of the contemporary society, but also the music, dance and means of expressions i.e. its instruments are its narrative symbolic and communicative function of the prehistoric societies.

Sri Lanka

According to Kasun and Wickramasingha (2021), **(Pic.1)** research on a bone with a hole found in the Bellanbedi pelassa excavation is considered a musical approach. The prehistoric man may have made this hole pipe purposely with the objective of using as a musical instrument. Further, Bellanbedi Pelassa excavated time to time, and Deraniyagale excavated in 1961 and revealed this site belongs to the Homosapian Balangodensis before 6500 years old (Perera, 2021). This bone is named PH 32, is 30 cm long and it can be seen in the National Museum at Rathnapura. According to Madushanka et al. 2021 research, it was found that there is a hole with a diameter of 2 cm, and there are six cuts done by using a stone tool. The researchers tried to play this and were able to generate a fawn's sound and a rabbit's and monkey's sounds.

Pic: 1 PH 32 Bone, Found in Bellan Bedi Pelassa
(Kasun, M and Wickramasingha, S, (2021)

According to the Sri Lankan rock art studies, there is a vacuum of studies related to the music. Bell (1904), Deraniyaga (1983), Manju Sri (), Bandaranayaka (2006), Nandadeva (2004), Somadeva (2012), and Illangasinghe (2017) analyzed rock art sites scattered over Sri Lanka and identified social and cultural behavior of the pre literate people symbolized on rock surfaces. Somadeva (2012) mentioned that it is a creative process that expresses cognition of the human mind. while Illangasingha (2017) analyzed its visual art aspects as colors, lines, and drawing techniques. However, there is a research gap within the context of music and dance where no detailed examination has been evolved to date. Such non-attend/ed data create a vaccum in the history of art, especially the performing arts, which opens up wider array of notins to assume that Sri Lanka's performing arts is a subsidiary of migrant communities and cultures.

Research Problem and Methodology

It is apparent that most of the rock art belongs to the Veddah community, the decendents of the pre and proto history of Sri Lanka. They expressed their cognition on rough surfaces which to date represents a viable atmosphere to identify the authentic lifestyle and the socio cultural landscape through which we can trace the expression of music and dance and it is important to examine how they denoted the tradition of music in Sri Lanka. The research problem is significant as the first attempt at music related to rock art in Sri Lanka.

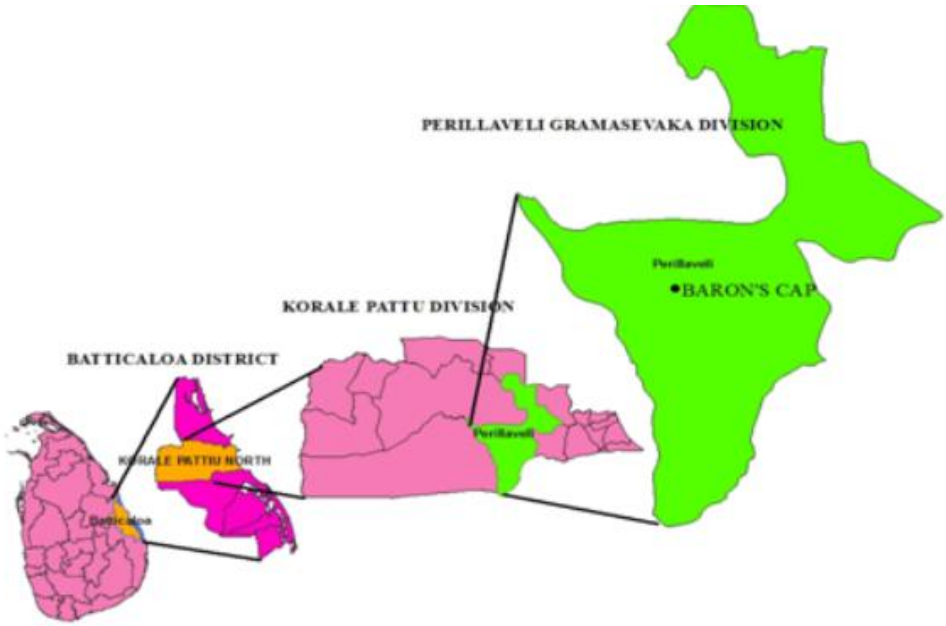
The study uses the primary and secondary data traced from the literary sources and from the field, especially by mapping the selected site as the nucleus. The study will apply a hermenutic approach as illustrated by Ries (1989, 1993) where "the symbol is a concrete and sensible signifier that suggests the meaning and reveals it transparently." The symbol has a visible basis, an identifiable aspect. The meaning is the invisible and unknown part, the content that man must discover. The function of a symbol is to reveal a total reality, inaccessible by other means of knowledge. Hence, this research selected the above two cave art pieces as samples of the research. As a qualitative content analysis, this research collected primary and secondary data.

Discussion

As the world oldest expression, rock art scatered all over the world and Sri Lankan rock shelters providing significant evidence in the context. Toppigala is located in Batticlo district in Estern province also known as Baran's Cap and Kudumbimalai. Kudumbimalai inTamil: translates to Hair knot rock and another Tamil name for the region is Thoppikkal, which translates to Hat rock **(Map 1)**, hence in Sinhala it is called Thoppigala (Wijerathne,W., 2015).

In 2021 Somadeva, obversed nine locations in this archeological sites and mentioned that all of them were ancient Buddhist monastries fallen in to period between 4th century BCE and 8th century CE which are partly or completely ruined state.

Among the sites Naranamula site hide in the forest and spread over the 18.34 hectares where exists a completely ruined religious area. This area of Buddhist monastry situated in Iruakkulam Grama Niladari Division of Eravurpattu divisional secrateriat. According to the Somadeva, this area would be a ritual space used by Buddhist monks. And there are significant rock paintings symbolizing a drummer with a musical instrument and other rock art representing ritualstic symbols one of which is the blower/whistler found from Naranamula cave site **(Cave Art 5 & 6).**



Map 01- Map of Toppigala per-history site

(Wijerathne,W., 2015)

Cave Art 5 A Drummer : Naraanamula cave

Source: Somadeva,2021

Cave Art 6 Ritual : Naranamula cave art

Source: Somadeva, 2021

According to the music history reported in *Wamsattappakasini* the classification of musical instruments was done using the method of playing i.e. wing, string, hand or hand with stick etc.,

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(Wp. Chap.XXIX. vs. 23-28 and the notes)

As per *Mahawamsa* Vijaya heard a musical sound and questioned about it in 6th BC and Kuwanna mentioned that it is a musical sound from a wedding ceremony in Sirisawattupura (Yakkha tribe). She broadly explained about the ceremony and its events.

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(Mv. Chap. VII. vs. 30-35)

There is a ritual among Veddah Community named *'Na Yakun Pidima.'* **(Pic.2 & 3)** Worshiping relatives is famous rite among them and that is inherited from yakkha tribe to Veddah community. In these rituals they dance, singing and they may generate sounds by using hands and instruments.

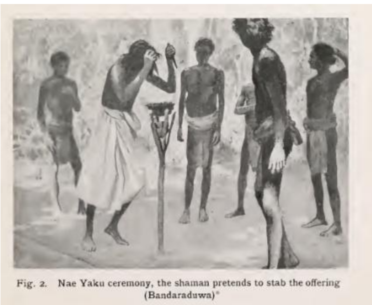

Fig. 2. Nae Yaku ceremony, the shaman pretends to stab the offering (Bandaraduwa)

Pic 2 &3 *Na Yakun Pidima by Veddah community*

Conclusion

The ancestors have been expressing their cognition of music from the human evolution by slapping their bodies, clapping and while dancing. The acts would have led towards ritual enactments to venerate a particular local deity, a natural phenomenon, or their happiness at times. Such expressions and experiences which have been engraved or illustrated by pre-historic man are the solid evidence to identify, examine and investigate the cultural interconnectedness of people over millennia and semiotic expressions of the usage, especially imprinting rhythmic movements in cave walls. As per literature, identified drums, harps, pipes and cymbals in other countries like India, Korea in South Asian and East Asian region belonging to Palaeolithic to Neolithic to Bronze age reveals macro and micro level elements music, dance, constructing its relationship to modern understanding. Similarly, the bone found from Bellanbedi Pelassa, belonging to Homosapian Balangodensis, 6500 years old (Perera,2021), identified as a wind instrument could also be considered a native flute in Sri Lanka.

As Somadeva mentioned Toppigala, Naranamula Buddhist monasteries fall in to period between 4th century BCE and 8th century CE, the **Cave Art: 5** express their usage of rhythmical instrument with singing, as the dot indicated before the figure of the man on the rock surface demonstrates that the player has a blowing instrument in his mouth producing some music. Accordingly, Cave Art: 5 and 6 can be assumed as a ritual event on behalf of the Buddha or any other religious deity in local vicinity. This assumption can lead to a conclusion that Sri Lanka has had its own tradition of music which attempted playing blowing instruments to produce a rhythmic sound. And the present research findings clearly explore that ancestors imitated nature, and that directed to generating musical instruments.

Hence, Naranamula cave art of Drummer can be considered as one of the pioneering evidences with regard to the history of music in Sri Lanka.

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Agro-Pastoral Foundations and Mercantile Networks: A Multi-Proxy Reconstruction of Rakhigarhi's Metropolitan Economy

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Abstract

The enigmatic resilience and sustained prosperity characterizing the Harappan Civilization (c. 2600–1900 BCE) have perennially captivated the academic imagination, with the specific subsistence mechanisms of its paramount metropolis, Rakhigarhi, constituting a particularly opaque domain within South Asian archaeology. This seminal study undertakes a grand synthesis of emergent archaeological, bioarchaeological, and archaeogenetic data to proffer a comprehensive reconstruction of the sophisticated, multi scalar economic system that constituted the foundational bedrock of Rakhigarhi's enduring urban sustainability. Site's extraordinary longevity was predicated upon a meticulously diversified agro pastoral regime, which strategically amalgamated winter cereals *Triticum aestivum* (bread wheat) and *Hordeum vulgare* (barley) with a suite of drought resilient summer millets, notably *Pennisetum glaucum* (pearl millet) and *Sorghum bicolor*. This robust agricultural core was synergistically integrated with a multi purpose pastoral economy, fundamentally centered upon the exploitation of *Bos indicus* (zebu cattle) for traction and dairy, and further augmented by a substantial, systematic reliance on the fluvial resources of the paleo Ghaggar Hakra riverine system. The recent revelations from ancient DNA analysis, which confirm the profoundly indigenous origins of the population, provide the ultimate corroboration, underscoring the autochthonous development of these sophisticated adaptive strategies. We contend, therefore, that the "Rakhigarhi Model" delineates a novel paradigm for comprehending Harappan urban sustainability, effectively reframing this civilization not as a monolithic, homogenous entity but as a vibrant, interconnected network of resilient, regionally-optimized economies. This investigation emphatically concludes that Indus prosperity was not a mere function of agricultural surplus but the emergent property of strategic economic diversification and profound, multi modal integration

Keywords: Rakhigarhi, Harappan Civilization, Subsistence Patterns, Archaeobotany, Zooarchaeology, Ancient DNA, Paleoclimate, Ghaggar-Hakra River, Trade Networks, Urban Resilience

Deconstructing the Enigma of Bronze Age Urban Perdurability

The efflorescence and subsequent transformation of the Harappan Civilization stands as one of the most profound and enduring conundrums in the annals of global antiquity a grand narrative of urban genesis that paralleled contemporaneous developments in Mesopotamia and the Nile Valley, yet pursued a trajectory of striking idiosyncrasy and profound, script induced silence. For generations, scholarly apprehension of this civilization’s internal dynamics was veiled in obscurity, constrained by the inscrutability of its epigraphic corpus and a material record composed not of decipherable texts, but of terracotta, burnt brick, and meticulously orthogonal cityscapes. At the very epicenter of this mystery resides Rakhigarhi, the sprawling, colossal metropolis now acknowledged as the most extensive Harappan settlement yet discovered, an urban leviathan whose sheer magnitude and chronological endurance pose a fundamental, almost axiomatic, challenge to orthodox models of early complex societies: by what alchemy of socio-economic organization did such a densely populated, administratively intricate, and presumptively resource intensive urban agglomeration not only emerge but perpetuate its existence for centuries within the capricious, semi-arid environs of the northwestern subcontinent? This treatise advances a revolutionary thesis, asserting that the arcane secret to Rakhigarhi’s phenomenal resilience resided not in the monumental grandeur of its citadels or the technical sophistication of its hydraulic infrastructure, but rather in the very substratum of its quotidian existence a brilliantly orchestrated, multi scalar subsistence economy that masterfully conjoined hyper local environmental adaptation with vast, inter regional economic symbiosis. We postulate that Rakhigarhi’s prosperity was the direct corollary of its strategic economic pluralism, a layered system of buffering mechanisms that effectively insulated its demographic core from the stochastic shocks of climatic variability and resource scarcity. This inquiry transcends decisively the simplistic, monochromatic models of a civilization singularly dependent upon wheat and barley, to deliver a vivid, evidence saturated reconstruction, revealing a society that functioned as the active architect of its own ecological niche a community of proto environmental engineers who transmuted their landscape through a calculated synthesis of agropastoralism, fluvial resource exploitation, and long distance commercial enterprise. Rakhigarhi, ergo, presents not merely a discrete case study in incipient urbanism, but a veritable masterclass in ancient sustainability, a dynamic dialectic of local ingenuity and global interconnectivity that engineered one of the ancient world's most resilient socio economic systems, a paradigm whose implications resonate with profound urgency amidst contemporary challenges of resource management and urban planning in an era of accelerating climate uncertainty (Possehl 45; Shinde, "Rakhigarhi and the Harappan" 42; Wright 112; Holling 17).

Conundrum of Scale: Situating Rakhigarhi within the Harappan Oikumene

Rakhigarhi was no fortuitous congregation of humanity; its geographical emplacement bespeaks a profound, strategic comprehension of the region's latent ecological and economic potential. Nestled upon the paleo channels of the now ephemeral Ghaggar Hakra river system, the city occupied a veritable terraqueous crossroads, a pivotal nexus conjoining the fecund alluvial plains to the resource laden foothills of the Aravalli Range and, by extension, to the pulsating arteries of pan Harappan and broader Middle Asian exchange routes. Yet, a merely propitious location constitutes an insufficient explanans for its staggering urban footprint, which eclipses even that of the more celebrated centers of Mohenjo daro and Harappa. The central paradox confronting the archaeological imagination is this: how could a densely nucleated, socially stratified, and administratively complex urban entity sustain its metabolic requirements in a region perpetually stalked by the fickle oscillations of the Indian Summer Monsoon? The resolution, as this dissertation will empirically demonstrate, resides not in a singular, monolithic subsistence strategy, but in the intricate, interwoven testimonies for a remarkably flexible and diversified economic base. This was not a society that hazarded its fortunes upon a single harvest or a solitary resource stream; instead, it cultivated a suite of complementary economic modalities that functioned as a sophisticated, multi layered bulwark against the inevitable caprices of nature, from seasonal aridity to riverine avulsion. This profound economic pluralism empowered Rakhigarhi to absorb perturbations that would have crippled less adaptable polities, enabling its apotheosis as a stable, thriving epicenter of cultural and commercial activity for over seven centuries (Giosan et al. E1690; Kenoyer 55; Law 78; Petrie, "Diversity, variability" 115).

Interrogating Subsistence: From Civilizational Generalizations to Urban Granularity

For an extended epoch, the Harappan dietary and economic regime has been depicted with an excessively broad, homogenizing brush, reductively caricatured as a simplistic trinity of wheat, barley, and zebu cattle. While these staples indubitably constituted a critical component of the nutritional base, this reductive, oversimplified tableau perilously obscures the brilliant regional heterogeneities that were, in verity, the very linchpin of the civilization's widespread success and adaptability. The Harappan world was not a monolithic cultural bloc but a scintillating mosaic of interacting regional domains, each adapting the overarching Harappan *oikumene* to its singular environmental context. The recent, technologically augmented excavations at Rakhigarhi, deploying a formidable battery of contemporary scientific techniques, now permit us to refine our focus from this civilizational wide perspective to achieve an unprecedented resolution of granular detail. We can now asseverate with empirical confidence that Rakhigarhi's agriculturalists were not passive recipients of their environmental milieu but were active, epistemologically rich environmental managers, employing a sagacious, risk mitigating multi cropping strategy that strategically conjoined traditional winter cereals like *Triticum* and *Hordeum* with a suite of robust, fast maturing, and profoundly drought resistant summer millets. This constituted ancient agricultural risk management operating at its most sophisticated apogee, a deliberate and calculated schema to ensure caloric security across multiple seasons and under fluctuating hydro climatic regimes (Fuller and Madella 1285; Bates 215; Weber 185; Fuller, "Finding plant domestication" S355).

Theoretical Superstructure: Conceptualizing Resilience and Human Agency in Antiquity

To decipher the underlying logic and operational genius of Rakhigarhi's economic system, we must transcend mere empirical description and deploy powerful conceptual frameworks that facilitate the interpretation of ancient socio ecological dynamics. This inquiry is conceptually anchored in two complementary theoretical paradigms that have profoundly transfigured archaeological hermeneutics: Resilience Theory, derived from systems ecology, and the theory of Niche Construction, emanating from evolutionary biology. These frameworks collectively transmute our analysis from a static catalog of consumptive practices into a dynamic exploration of systemic engineering, elucidating the mechanisms through which Rakhigarhi's inhabitants forged a world capable of sustaining metropolitan grandeur. Resilience Theory furnishes the essential lexicon for comprehending the system's inherent stability and its capacity for shock absorption, while Niche Construction theory restores agential potency to the populace of Rakhigarhi, framing them not as passive subjects of environmental determinism, but as active, conscious sculptors of their own ecological and economic destiny. In concert, they proffer a sophisticated analytical toolkit for apprehending why Rakhigarhi persisted with such tenacity and how its denizens proactively constructed a socio ecological niche capable of nurturing a great metropolis within a challenging landscape (Holling 1; Odling Smee, Laland, and Feldman 15; Hodder 88).

Resilience Theory: The Dynamics of Stability, Adaptation, and Transformation

At its axiomatic core, Resilience Theory, as formulated by C.S. Holling and subsequently adapted for archaeological application by scholars including Charles Redman and Ann Kinzig, instructs us that the robustness and longevity of a complex system are derived not from rigid, static efficiency, but from inherent flexibility, functional diversity, and adaptive capacity. A resilient system is one endowed with the ability to withstand external perturbations a prolonged drought, the disruption of a critical trade route, a catastrophic flood without undergoing a catastrophic, irreversible phase shift into an alternative state. When viewed through this theoretical lens, Rakhigarhi's economy demands analysis not as a mere inventory of resources, but as an intricately interconnected web manifesting critical resilient property. The paramount property is *diversity*: by cultivating a wide spectrum of crops and exploiting a broad portfolio of protein sources, the city engineered a robust buffer mechanism. The failure of one staple, for instance wheat due to a delayed monsoon, could be compensated by the success of another, such as a xerophytic millet. This represents the ecological principle of the portfolio effect applied to an urban economic system with exquisite precision. The second property is *modularity*: while seamlessly integrated into larger, inter regional exchange networks, Rakhigarhi's local production system maintained a significant degree of operational self-sufficiency. An interruption in the supply of Aravalli copper would not instantaneously paralyze agricultural production, as the local agropastoral foundation could persist autonomously. This structural characteristic prevents a single point of failure from cascading catastrophically through the entire socio economic organism. Finally, the system relied upon tight *feedback loops*: the agriculturalists and pastoralists, through generations of accrued, place-based knowledge, possessed a deep, localized understanding that enabled them to rapidly detect alterations in precipitation, riverine discharge, or pedological fertility and respond adaptively, perhaps by modulating the planting ratio of millets to wheat. Rakhigarhi's seven century tenure was, consequently, not a historical serendipity; it was an emergent property of its brilliantly conceived, resilient economic architecture (Holling 14; Walker and Salt 32; Redman and Kinzig 16).

The Archaeobotanical Testimony: A Diversified Cereal Regime

The narrative inscribed within the carbonized plant remains exhumed from Rakhigarhi's soils is one of brilliant agricultural strategy and profound environmental acumen. This was not a society precariously reliant upon a single, monolithic growing season, a hazardous wager in a region of monsoonal unpredictability. Contrarily, the archaeobotanical assemblage reveals a sophisticated, dual cropping system that strategically exploited discrete seasonal windows and ecological niches. The winter cycle was anchored by the classic Western Asian cereals: bread wheat and barley, sown following the monsoon's recession and harvested in the vernal season. These cultivars furnished the bulk of the caloric staple and were deeply embedded within the wider Harappan agricultural tradition. The authentic genius, however, is manifest in the strategic supplementation of this winter package with a suite of transformative summer crops, predominantly drought tolerant millets like *Sorghum bicolor* and *Pennisetum glaucum*, which were sown with the advent of the summer rains and harvested in the autumnal months (Fuller, "Finding plant domestication" S355; Bates 218). The incorporation of these indigenous millets constituted a deliberate risk diffusion strategy of monumental significance. In years of ample or temporally precise monsoon precipitation, both winter and summer crops would flourish, generating a substantial surplus. Crucially, in years of a deferred or failed monsoon, which would devastate the more hydraulically demanding wheat and barley, the hardy millets evolutionarily adapted to prosper in precisely such conditions could still yield a reliable harvest, thereby ensuring a baseline of food security and obviating total famine. This was, in essence, a form of ancient agricultural insurance. Furthermore, the presence of pulses such as *Lens culinaris* (lentil) and *Pisum sativum* (pea), alongside oil yielding *Sesamum indicum* (sesame), betokens a sophisticated comprehension of crop rotation and pedological nutrient management, as legumes perform biological nitrogen fixation, thereby replenishing soils depleted by intensive cereal cultivation (Fuller and Madella 1292; Weber 188; Murthy, Das, and Patil 45). This diverse, multi seasonal, and ecologically complementary agricultural system constituted the primary pillar of Rakhigarhi's resilience, a quintessential exemplar of how niche construction via deliberate crop selection directly engineered a buffer against environmental stochasticity.

The Zooarchaeological and Mercantile Dimensions: Protein Economics and Trans Regional Symbiosis

The zooarchaeological record from Rakhigarhi unveils an animal economy of stunning operational efficiency and strategic complexity, advancing far beyond the simplistic paradigm of herds maintained solely for carnivorous consumption. The osteological assemblages delineate a society that perceived its domesticates as multipurpose, renewable resources, integral to both production and consumption matrices. The dominant taxon was the zebu cattle (*Bos indicus*), yet their paramount significance was not primarily gastronomic. Scrupulous mortality profile analysis interrogating the age at death of slaughtered specimens reveals a pattern wherein a substantial proportion of cattle were sustained into adulthood. This constitutes a definitive zooarchaeological signature of a herd management strategy concentrated upon secondary products: traction and dairy. Cattle functioned as the animate engines of the agricultural system, furnishing the motive power for plowing the alluvial soils, thereby enabling the territorial expansion and intensification of crop production that undergirded the urban surplus (Joglekar and Goyal 245; Fuller and Qin 95).

Moreover, they were ambulant dairy production units, providing a continuous, renewable fount of essential protein and lipids in the form of milk, yogurt, and ghee a nutritional buffer vastly more sustainable than the ephemeral caloric yield from slaughter. This represents a sophisticated manifestation of niche construction, wherein human selection and zootechnical practices actively molded the bovine population to optimize non meat outputs. Concurrently, the remains of *Ovis aries* (sheep) and *Capra aegagrus hircus* (goat) indicate a more conventional meat centric exploitation, with culling patterns biased towards younger animals, supplying a reliable protein source and yielding keratinous fibers for the burgeoning textile industry (Kenoyer 156).

Simultaneously, the riverine environment proffered a massive, low cost, and highly dependable protein subsidy that fundamentally de risked the city's subsistence foundation. The copious retrieval of ichthyofaunal remains, alongside those of freshwater Testudines (turtles) and mollusks, from domestic contexts at Rakhigarhi is not merely incidental; it signifies a critical and systematic reliance on aquatic resources (Joglekar and Goyal 248). This fluvial larder operated as an indispensable nutritional safety net. Unlike managed domestic herds, which necessitate pasturage, hydraulic resources, and remain vulnerable to epizootic disease, the river's bounty was, to a considerable extent, a "common pool" resource, requiring only the requisite technological knowledge and social organization for its exploitation. The systematic harvesting of these resources would have alleviated pressure upon the pastoral cohorts, permitting bovine populations to be conserved for their vital traction and lacteal roles rather than being routinely culled for meat during periods of stress. This creation of a multi resource protein portfolio bovines for labor and dairy, small stock for meat and fiber, and riverine biomass for abundant, low risk protein fabricated a robust, laminated buffer against scarcity. The failure of one source, such as an epizootic afflicting the ovicaprid flock, could be compensated by intensified piscatorial activity or an increased reliance on dairy derivatives, exemplifying the resilient, diversified economic portfolio at the core of the Rakhigarhi Model (Possehl 75; Wright 145).

The Sinews of Commerce: Long Distance Exchange and its Subsistence Imperatives

Rakhigarhi’s formidable apparatus of local production was not an autarkic phenomenon; it was synergistically amplified and stabilized by its profound integration into pan Harappan and inter regional exchange networks. These mercantile conduits were not merely the frivolous pursuit of sumptuary luxuries for an incipient elite; they functioned as the vital circulatory system of the metropolis, conveying the essential instruments and materials that enabled and intensified the very subsistence activities that sustained its populace. The city’s economic resilience was, ergo, a function of both internal diversification and external connectivity.

The most direct nexus between trade and subsistence was the influx of raw materials for tool fabrication. Copper, procured principally from the Khetri copper belt of the Aravalli Hills, was not exclusively allocated for ornamentation or armaments; it was metallurgically transformed into robust, socketed axes, adzes, and chisels (Law 89). These implements were revolutionary for land clearance, facilitating the efficient deforestation and scrub removal requisite for expanding the agricultural frontier into new territories, thereby directly augmenting the city's productive capacity. The commerce for tin, potentially sourced from distant loci in Afghanistan or Central Asia, was alloyed with copper to fabricate bronze, a superior, more durable metallic compound that yielded enhanced plowshares and sickles (Kenoyer 98). This was trade directly subsidizing and intensifying the caloric supply. Each traded metallic ingot constituted, in effect, a capital investment in the city's agricultural infrastructure. Analogously, the procurement of high quality, standardized chert blades from specialized quarries such as the Rohri Hills ensured that agriculturalists throughout the Harappan interaction sphere, including those in Rakhigarhi's hinterland, possessed access to efficient, replaceable sickle elements for harvesting their crops, thereby maximizing yield and minimizing post-harvest losses (Biagi and Starnini 5). The circulation of these non-local, utilitarian raw materials was a cornerstone of the integrated economy, demonstrating that Rakhigarhi's subsistence security was inextricably intertwined with its capacity to maintain these extended supply chains.

The role of exotic, non-utilitarian trade commodities such as exquisitely etched carnelian beads from Gujarat, profound lapis lazuli from the mines of Badakhshan, and conch shells (*Turbinella pyrum*) from the distant littoral zones of Gujarat and Sindh served a more subtle, yet equally critical, purpose in sustaining the social cohesion that undergirded the entire economic edifice (Kenoyer 120; Law 155). These artifacts functioned as prestige goods, material semiotics of status and authority that contributed to the reinforcement of emergent social hierarchies and political power structures.

Within a civilization lacking explicit iconography of monarchs or emperors, control over the production and distribution of such exotica may have constituted a primary modality of elite power. This social stratification, while potentially generative of inequality, also furnished the organizational superstructure requisite for the large scale, collective action imperative for managing a complex society. The elites who presumably regulated the trade networks were likely the self-same personages or institutions capable of mobilizing corvée labor for public works excavating and maintaining reservoirs, coordinating harvests, organizing communal defense, and dispatching mercantile caravans.

Furthermore, the shared consumption of these symbolically charged objects, and participation in a pan Harappan "international style," would have fostered a potent sense of shared identity and social solidarity among the heterogeneous inhabitants of the metropolis. This cohesion was the intangible social adhesive that bound the complex society together, enabling the cooperation and coordination mandatory for managing communal resources, upholding standardized metrological systems, and thereby ensuring the seamless functioning of the entire economic engine. The luxury trade, therefore, was not a superfluous adjunct; it was an essential mechanism for maintaining the social stability upon which the entire, intricate system of subsistence resilience ultimately depended (Possehl 175; Wright 188).

The Human Testimony: Archaeogenetic and Biogeochemical Revelations

For the inaugural time, scientific advancement permits us to transcend material culture and gaze directly into the biological and biographical essences of Rakhigarhi's inhabitants. The groundbreaking analysis of ancient DNA and stable isotopes extracted from human skeletal remains furnishes the most intimate and direct evidence hitherto available, corroborating the models constructed from seeds, bones, and artifacts while imbuing the narrative with a profound human dimension. This biochemical testimony transfigures our comprehension from a theoretical reconstruction of economic systems to a demonstrated reality of lived experience, proffering a fenestration into the very corporeal entities that constituted the metropolis's social fabric.

The convergence of genetic and isotopic data forges an irrefutable case for the indigenous ontogeny of sophisticated subsistence strategies, effectively silencing decadal speculations regarding external catalysts for Harappan urbanism. This evidence does not merely supplement the archaeological record; it fundamentally validates the core tenets of the Rakhigarhi Model by demonstrating that the diversified economic strategy was not merely a system operating around people, but one that was physically incorporated into them, shaping their biological identity and nutritional status across generational time (Shinde et al. 729; Narasimhan et al. eaat7487).

Genomic Ancestry and the Indigenous Ontogeny of Harappan Urbanism

The publication of the first successfully sequenced ancient genome from a Rakhigarhi individual, chronometrically anchored to the mature Harappan period (c. 2500-2000 BCE), delivered a finding of monumental import with seismic implications for South Asian historiography. The genetic data disclosed that this individual exhibited a deep ancestral lineage deriving predominantly from an admixture of ancient Iranian hunter gatherers and a distinctive component from ancient South Asian hunter gatherers (frequently designated "AASI" Ancient Ancestral South Indians), conspicuously lacking any detectable genetic ancestry from Steppe pastoralists, whose ingress into the subcontinent occurred subsequently, postdating the urban epoch (Shinde et al. 730). This singular genome effectively demolishes antiquated, persistent colonial era and nationalist narratives that attributed the ascent of the Indus Civilization to external stimuli or migrating "master races" from Mesopotamia or Central Asia. It provides irrefutable molecular testimony that the sophisticated socio-economic system of Rakhigarhi its brilliant, diversified subsistence pattern, its orthogonal urban planning, its extensive trade networks was a fundamentally autochthonous achievement.

The genetic continuity evidenced at Rakhigarhi indicates a population with profound, indigenous roots in the region, a people intimately conversant with the vagaries of the monsoon, the pedology of the floodplain, and the resources of the encompassing hills through millennia of cumulatively accrued ecological knowledge (Narasimhan et al. eaat7487). This genetic indigeneity compels a dramatic re-evaluation of the Harappan phenomenon, framing it not as a derivative culture but as a primary, endogenous process of urbanization, whose innovations in subsistence and social organization emerged from within the *longue durée* of South Asia's own prehistoric continuum.

Dietary Reconstruction through Stable Isotope Analysis: The Biochemical Signature of a Mixed Economy

The chemical narrative imprisoned within the osseous and dental remains of the Rakhigarhi individual provides the ultimate, direct validation of the subsistence model reconstructed from archaeological proxies. Stable carbon and nitrogen isotope analysis of bone collagen proffers a long term, averaged chronicle of an individual's diet, effectively inscribing a chemical biography of alimentary consumption over the ultimate decade of life. The results from Rakhigarhi are unequivocal and remarkably congruent with the material evidence: the isotopic signature indicates a mixed diet predicated upon both C3 plants (such as wheat and barley) and C4 plants (the millets), precisely as the archaeobotanical seed evidence had prognosticated (Shinde et al. 732).

This is not an inferential leap but a direct chemical measurement of this individual's lifetime consumption, furnishing definitive proof that the dual cropping strategy manifest in the archaeological record was operationalized and internalized. Furthermore, the elevated nitrogen isotope values intimate a substantial and consistent intake of animal protein, aligning impeccably with the zooarchaeological evidence for the consumption of flesh from cattle, sheep, goat, and the abundant fluvial piscine resources (Evershed 905). The isotopic testimony is particularly compelling because it captures actual consumption patterns rather than mere production evidence, effectively bridging the epistemic chasm between what was cultivated and raised versus what was genuinely ingested. This biochemical evidence operates as the conclusive corroboration that authenticates the entire, complex economic edifice proposed in the Rakhigarhi Model.

It demonstrates that the diversified, resilient economy we have reconstructed from material traces was not merely an abstract system operating at the communal level; it was literally embodied by the people of Rakhigarhi. Their alimentary security, erected upon the pillars of multi cropping, multi purpose pastoralism, and fluvial exploitation, was their biological reality. It was this very diet, rich and variegated, that supplied the nutritional substratum for the health, labor, and ingenuity that erected and sustained the great metropolis for centuries, proffering a powerful testament to how subsistence strategies directly configured human biological outcomes in the ancient world (Fuller and Madella 1295).

The Rakhigarhi Model: An Integrated Paradigm for Harappan Subsistence Resilience

Synthesizing the convergent evidentiary streams from the environment, the fields, the herds, the rivers, the mercantile networks, and the human participants themselves, we can now formally propound and elaborate the "Rakhigarhi Model" a dynamic, multi scalar system wherein hyper local production and global exchange synergized to forge an urban entity of remarkable endurance. This model constitutes a paradigmatic shift in apprehending Harappan urban sustainability, transcending simplistic paradigms of agricultural surplus or hydraulic despotism to reveal a complex, adaptive system characterized by embedded redundancies and reinforcing feedback loops that empowered it to withstand multifarious environmental and economic stresses.

The Rakhigarhi Model does not merely describe what was consumed at the site but explicates how disparate components of the economy interacted to generate stability, how risks were distributed across discrete subsistence activities, and how the inhabitants actively engineered their niche to maximize systemic resilience.

At its theoretical core, the model conceptualizes urban sustainability not as a static achievement but as a dynamic process of continuous adaptation and rebalancing across multiple resource domains, with diversification serving as the fundamental principle governing economic organization. This framework possesses profound implications not only for comprehending the Harappan Civilization but for analyzing ancient urban sustainability universally, proffering a template for how complex societies could flourish in challenging environments through strategic economic integration rather than mere technological supremacy (Holling 16; Petrie, "Diversity, variability" 120; Walker and Salt 78).

Conclusion

The comprehensive, multi proxy analysis of Rakhigarhi's subsistence economy fundamentally recalibrates our apprehension of the Harappan Civilization, moving decisively beyond traditional models that emphasized civilizational uniformity, external influences, and catastrophic collapse. The evidence marshaled herein reveals a sophisticated, resilient system characterized by strategic diversification across multiple domains agricultural, pastoral, fluvial, and commercial that collectively potentiated the emergence and perpetuation of one of the ancient world's most expansive urban centers. The "Rakhigarhi Model" demonstrates that Harappan urbanism was not predicated upon a monolithic agricultural surplus but on a meticulously engineered economic buffer system that distributed risk across disparate ecological niches and temporal cycles. This system embodied a profound comprehension of environmental constraints and opportunities, showcasing a society that proactively constructed its niche through deliberate crop selection, animal management, hydraulic adaptation strategies, and far-flung commercial interconnections (Shinde, "Rakhigarhi and the Harappan" 58; Wright 241).

The most revolutionary insights emanate from the biochemical testimony the ancient DNA and stable isotopes that directly conjoin the economic system to the human agents who created and perpetuated it. The genetic data affirming the indigenous origins of Rakhigarhi's population definitively resolves protracted debates regarding Harappan ontogeny, establishing that this urban phenomenon emerged from South Asia's own Neolithic foundations rather than through external stimulation or demic diffusion (Shinde et al. 734; Narasimhan et al. eaat7487). The isotopic evidence provides equally compelling confirmation that the diversified subsistence strategy manifest in the archaeological record was actually consumed and embodied by the populace, creating an indissoluble linkage between economic organization and biological outcomes. This biochemical witness transfigures our understanding from theoretical reconstruction to demonstrated reality, illustrating that the resilience of the Rakhigarhi system was not an abstract attribute but a lived experience that sustained urban life for centuries (Evershed 905).

The ramifications of this research extend far beyond the specific context of Rakhigarhi, proposing a novel paradigm for conceptualizing ancient urban sustainability broadly. The city's triumph demonstrates that resilience in premodern urban centers derived not from maximizing production of a singular resource but from strategically diversifying across multiple resource bases and establishing synergistic feedback loops that connected local production with regional and inter regional exchange systems. This model possesses particular salience for understanding how ancient societies thrived in marginal or variable environments, providing a blueprint for sustainable urbanism that does not depend upon ideal environmental conditions but upon sagacious adaptation to extant constraints (Holling 18; Redman and Kinzig 22). The eventual transformation of Rakhigarhi and the wider Harappan civilization appears not as a sudden, apocalyptic collapse but as a gradual reconfiguration in the face of macro climatic stresses that eventually surpassed even this robust system's buffering capacity a more nuanced understanding that finds disturbing parallels with contemporary global challenges of climate adaptation and sustainable development. As archaeological methodologies continue their inexorable advancement, particularly in the realms of biochemical analysis, digital reconstruction, and interdisciplinary synthesis, our comprehension of Rakhigarhi will undoubtedly deepen and evolve. Its ultimate legacy may reside not merely in what it reveals about the Harappan past, but in what it instructs us about constructing sustainable futures that true resilience emerges not from rigidity and optimization, but from diversity, adaptability, and the strategic integration of local and global resources (Walker and Salt 145; Petrie, "Diversity, variability" 128).

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Bridging the Gap: Financial Literacy, Business Experience, and Performance of Small and Medium Enterprises in Sri Lanka

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Abstract

This study investigates the impact of financial literacy and business experience on the performance of Small and Medium Enterprises (SMEs). Globalization and interconnectedness create a more complex financial landscape. Financial literacy becomes even more crucial for navigating this complexity and making informed decisions about a wider range of financial products and services. Financial literacy is hypothesized to directly influence firm performance, with business experience acting as a mediator in this relationship. To capture the diversity of SMEs in Sri Lanka, this study employed a stratified random sample of 677 businesses across all nine provinces and 25 districts in Sri Lanka. The survey instrument was designed to measure financial literacy, business experience, and firm performance. The study utilizes SmartPLS software to analyze data collected from SMEs. Partial Least Squares (PLS) is a structural equation modeling (SEM) technique well-suited for analyzing complex relationships of this nature. Findings reveal a significant positive influence of financial literacy on both firm performance and business experience. Furthermore, business experience was found to partially mediate the relationship between financial literacy and firm performance. These findings highlight the critical role of financial literacy for SMEs, especially in the cosmopolitan era, where a complex financial landscape and globalized markets demand strong financial decision-making capabilities. The importance of fostering business experience is further emphasized, as it allows SMEs to leverage their financial literacy for enhanced performance in this dynamic environment.

Keywords: Financial Literacy, Firm Performance, Business Experience, SMEs, Sri Lanka

Introduction

The rise of the cosmopolitan era, characterized by increasing globalization and economic interconnectedness, presents both challenges and opportunities for Small and Medium Enterprises (SMEs). In this dynamic environment, financial literacy emerges as a crucial factor for SME success (Adomako & Danso, 2014; Barte, 2012; Fatoki, 2014; Huston, 2010; Lusardi, & Mitchell, 2014). SMEs have the potential to bring socio-economic development and quality of life (Erdin & Ozkaya, 2020). Financial literacy equips entrepreneurs with the knowledge and skills necessary to make informed financial decisions, manage resources effectively, and navigate the complexities of modern business (Eniola & Entebang, 2015; Okello et al. 2017; Kulathunga et al., 2019). Menike (2018) potentially related to Sri Lanka, likely supports the notion that SMEs with higher financial literacy are more likely to make informed financial decisions. This, in turn, contributes to improved firm performance and sustainability of business (Adomako & Danso, 2014). SMEs are key to making globalization and economic growth more inclusive (Pucci, Nosi & Zanni, 2017). By giving them better access to international markets and information networks, we can unlock their full potential and contribution. However, the Organization of Economic Cooperation and Development stated that trade barriers and limitations on investment make it harder for SMEs to compete globally (OECD, 2017). OECD International Network on Financial Education (INFE) has identified key areas where SMEs worldwide face fundamental barriers to deviating from their core growth and development. One such barrier is the poor financial literacy level of the owners (OECD/INFE, 2018).

More than 97% of Sri Lanka's businesses are classified as small and medium-sized enterprises (SMEs) making them a crucial segment of the country's economy. This industry is responsible for 45% of all jobs in the nation. Micro, Small, and Medium-Sized Enterprises (MSMEs) are part of the SME sector, which has about a million businesses and employs 2.25 million people nationwide (MIC,2016). Small businesses have a significant economic and social impact in both developed and developing nations (Halabi, Barrett, & Dyt, 2010). The Government of Sri Lanka has designated the SME sector as a key strategic sector in its overall policy objectives (GOSL). It is a change agent for equitable economic development, local growth, job creation, and poverty eradication. The SME sector is expected to turn struggling regions into emerging, prosperous regions (MIC,2015).

SMEs have inherent diverse problems which prevent or curtail their rapid growth and development. The main underlying issue that curtails the growth and development of SMEs is the inappropriate financial management decisions taken by the owners (Abeysuriya, 2019; Barte, 2012; Kulathunga et al., 2019; Menike, 2018; Heenkenda, 2014; Cole & Fernando, 2008; Lusardi & Mitchel, 2014). The problems start with the fundamental design errors of the business model at the initial stage. Subsequently, the problem will further extend to the operational and strategic level leading to the business's bankruptcy at the early stage of the lifecycle. Business decisions are broadly categorized into financial and non-financial. However, all the decisions taken by SME owners have financial implications. Therefore, even business-related decisions like recruitment of potential new employees, access to modern technology, access to relevant information, reach to business development services, developing business relationships, hiring or getting infrastructure, adopting the legal and regulatory framework, industrial relations, entrepreneurial and management skills developments, feasibility studies and environmental issues, etc. are directly and indirectly brings financial consequences. That means their outcomes can be numerically measured through rupees or dollars. Where favorable decisions get profits or cash inflows into the business, adverse decisions bring losses or negative cash outflows the knowledge and skills of how financial know-how is recognized as the financial literacy level of SME owners. Financial literacy is a fundamental prerequisite for SME owners since it deals with how cash inflows and outflows exist within the business due to owners' decisions. It is vital to identify that an SME owner is an economic agent. His level of financial literacy drives the company and navigates its direction. This research explores the relationship between financial literacy and firm performance in SMEs, with a specific focus on the mediating role of business experience. Building on prior research, it is proposed that financial literacy directly impacts firm performance and that business experience strengthens this relationship.

The cosmopolitan era presents unique challenges for SMEs. Increased competition from international players demands greater efficiency and innovation. Complexities of global supply chains require debt management and risk mitigation strategies. Navigating fluctuating currency exchange rates and international regulations further complicates financial decision-making. However, this era also offers exciting opportunities for SMEs. Access to a wider customer base through online platforms fosters growth potential. The ability to source materials and services globally allows for cost optimization. Entrepreneurs with strong financial literacy are better positioned to seize these opportunities and navigate the challenges of the cosmopolitan era.

Recognizing the critical role of financial literacy for SME success, policymakers and educators can implement various initiatives. Developing curriculum and training programs specifically tailored to the needs of entrepreneurs equips them with the necessary financial knowledge and skills (Atkinson & Messy, 2012). Promoting financial literacy workshops and online resources empowers SMEs to make sound financial decisions, manage cash flow effectively, and access funding opportunities (Basu, 2005). By fostering a culture of financial literacy within the SME sector, policymakers and educators can contribute significantly to the growth and competitiveness of SMEs in the cosmopolitan era.

While research suggests a positive correlation between financial literacy and firm performance in SMEs (Atkinson & Messy, 2012; Basu, 2005), a gap exists in understanding the potential mediating role of business experience. Previous studies highlight the importance of both financial literacy (knowledge and skills) and business experience (applications) for SME success (Lusch & Laczniak, 1989; Chironga et al., 2011).

This research aims to address this gap by investigating how financial literacy directly influences firm performance and whether business experience plays a mediating role in this relationship.

Research Objectives

To understand the complex relationship between financial literacy and firm performance in SMEs, this study establishes two key research objectives. The first objective is to directly examine the impact of financial literacy on firm performance. This aligns with existing research suggesting a positive correlation. Second, it aims to investigate whether business experience acts as a mediator in this relationship. Since financial literacy provides knowledge and skills, exploring how business experience influences the utilization of that knowledge for improved performance becomes crucial. By addressing these objectives, this study seeks to provide a more comprehensive understanding of the factors influencing SME success.

The article's literature analysis continues with a part that examines financial literacy in the context of SMEs. It starts by going over pertinent research on the subject and explores how financial literacy and SME are related, as well as the relationship between financial literacy and business experience and the mediating role of business experience. The research techniques, sample, and population, as well as how data were gathered, are then described in the methodology part. The study's conclusions and their interpretation are then presented in the analysis and results section. The paper ends by outlining the main conclusions, pointing out its shortcomings, talking about its practical implications, and recommending more research topics.

Literature Review and Hypotheses Development

Financial Literacy and SMEs

Financial literacy plays a vital role in the success of SMEs. Entrepreneurs with strong financial literacy are better equipped to manage cash flow, secure funding, and make sound investment decisions (Atkinson & Messy, 2012). Studies have shown a positive correlation between financial literacy and various aspects of firm performance, including profitability, growth, and survival rates (Adomako & Danso, 2014; Barte, 2012; Basu, 2005). The positive impact of financial literacy extends beyond firm performance. Entrepreneurs with strong financial literacy are better positioned to manage personal finances effectively. This translates to benefits such as improved financial well-being, increased savings, and a stronger ability to weather unexpected financial hardships (Clark et al., 2022; Lusardi & Mitchell, 2014). Furthermore, financially literate entrepreneurs can make informed decisions regarding personal investments and retirement planning, leading to greater financial security over the long term. Empowering entrepreneurs through financial literacy initiatives fosters a robust business environment, ultimately propelling Sri Lanka's economic well-being.

Business Experience and Firm Performance

Business experience is another critical factor influencing firm performance. Experienced entrepreneurs possess valuable knowledge and skills that enable them to navigate market dynamics, build strong relationships with stakeholders, and make strategic decisions (Lusch & Laczniak, 1989). Research suggests that experience fosters better financial management practices and contributes to improved firm performance (Chironga et al., 2011).

Entrepreneurs gain business experience through various avenues. Formal education programs in business administration or entrepreneurship can equip individuals with the foundational knowledge and skills necessary for success. However, practical experience gained through working in established businesses or launching and managing their ventures plays a crucial role in developing essential competencies. Over time, entrepreneurs encounter various challenges and overcome obstacles, fostering problem-solving abilities, adaptability, and a deeper understanding of the intricacies of running a business (Cooper & Dunkelberg, 2014). These acquired skills contribute significantly to improved firm performance.

The benefits of business experience extend beyond the individual entrepreneur. Experienced teams, where multiple members possess diverse skills and knowledge gained from prior ventures, can significantly enhance a firm's performance (Hambrick & Mason, 1988). A team with a balance of experience in areas such as finance, marketing, and operations allows for a more comprehensive approach to decision-making, risk mitigation, and seizing new opportunities. By fostering a culture of continuous learning and knowledge sharing within the team, businesses can leverage the collective experience of their workforce to achieve superior performance.

The Mediating Role of Business Experience

We posit that business experience acts as a mediator in the relationship between financial literacy and firm performance. Financial literacy equips entrepreneurs with the foundational knowledge, but experience allows them to translate this knowledge into practical skills and effective decision-making, ultimately leading to improved performance.

Financial literacy provides entrepreneurs with a valuable foundation for the knowledge and understanding of financial concepts, tools, and strategies. However, translating this knowledge into effective action requires practical experience. Business experience allows entrepreneurs to improve their financial skills, apply their knowledge to real-world scenarios, and make sound financial decisions under pressure (Haynes & Hewstone, 2017). Experienced entrepreneurs can develop a more in-depth understanding of financial risks and opportunities, analyze complex financial data effectively, and implement strategies that optimize resource allocation, leading to improved firm performance. The specific type of business experience plays a crucial role in its effectiveness as a mediator. Entrepreneurs with experience in a similar industry or market are better equipped to leverage their knowledge and skills to navigate the specific challenges and opportunities within that domain. For example, an entrepreneur with prior experience running a retail store would possess valuable insights into customer behaviour, inventory management, and marketing strategies relevant to the success of another retail venture. Anwar et al. (2020) state that experience is worthy in achieving the SME's performance as experienced managers can make rational decisions. This context-specific experience strengthens the mediating effect, allowing entrepreneurs to translate their financial literacy into actions that demonstrably improve firm performance within their chosen industry.

The Conceptual Framework and Hypotheses

This study examines the relationship between financial literacy and firm performance, with business experience acting as a mediating factor. Financial literacy equips entrepreneurs with the knowledge to understand financial concepts and tools. However, translating this knowledge into effective action requires practical experience. Business experience allows entrepreneurs to enhance their financial skills, make sound decisions, and navigate industry-specific challenges. Ultimately, both financial literacy and business experience contribute to improved firm performance. Drawing on the key insights from the above discussion, this conceptual framework provides a structured approach to oversee the relationships and develop the hypotheses mentioned below.

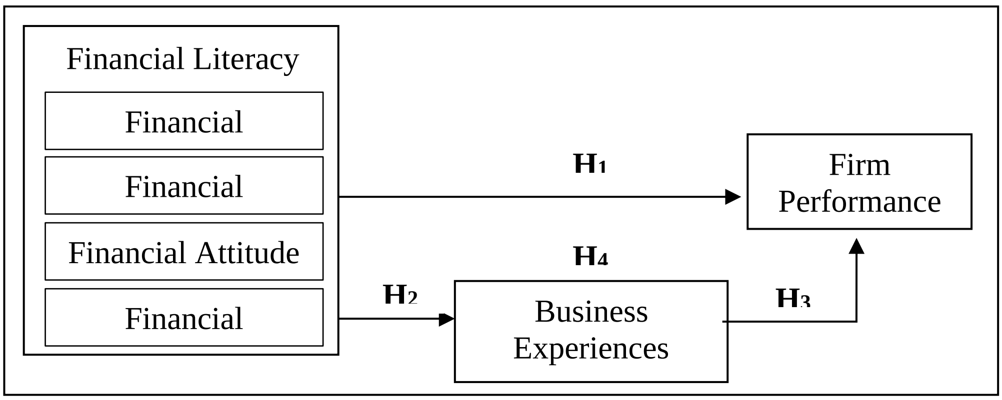

Fig. 1: Conceptual Framework

Financial Literacy and SMEs Firm Performance

This hypothesis suggests that entrepreneurs with a stronger understanding of financial concepts and tools will be better equipped to manage their businesses effectively. This can lead to improved financial outcomes such as increased profitability, better resource allocation, reduced risk and enhanced wealth of the business. Imagine an entrepreneur who can analyze financial statements and identify areas where costs can be cut. This financial literacy allows them to improve their profit margins by streamlining operations or negotiating better deals with suppliers. Additionally, they can utilize tools like budgeting and forecasting to allocate resources more efficiently. This might involve investing in marketing campaigns during peak seasons or strategically purchasing materials based on projected sales. Furthermore, a financially literate entrepreneur can recognize and mitigate risks. For example, understanding cash flow allows them to avoid situations where they can't pay their bills due to a temporary dip in sales. By proactively managing these risks, they can ensure the long-term sustainability of their business. Ultimately, these combined factors can lead to an enhanced wealth of the business, which can be reinvested for growth or distributed to the entrepreneur as increased personal wealth. Therefore, we hypothesized that;

Hypothesis 1: Financial literacy significantly influences SMEs firm performance.

Financial Literacy and Business Experience

While financial literacy is important, business experience also plays a significant role. Experience allows entrepreneurs to develop a deeper understanding of the market, their customers, and their competitors. When the owner is financially literate with the experiences he has, the owner will be stronger and his level of efficiency will be increased. Experience in the business indicates knowledge of the market, exports and imports, operations, and other topics (Ying, Hassan & Ahmad, 2019). Business experiences are developed with daily routines and some notable incidents over time. Experiences enhance decision-makers confidence, as they know the possible outcomes. Therefore, experienced SME owners dare to make related financial decisions without hesitation. Thus, our second hypothesis;

Hypothesis 2: Financial literacy significantly influences business experience.

Business Experience and SMEs Firm Performance

The next hypothesis is suggested that, even though financial literacy is important, it's not enough on its own. Business experience allows entrepreneurs to translate their financial knowledge into practical skills and make informed decisions. Therefore, the positive effect of financial literacy on firm performance is likely strengthened by the experience of the entrepreneur. In simpler terms, experience helps bridge the gap between financial knowledge and its practical application, ultimately leading to better firm performance. Therefore, the third hypothesis is suggested to empirically verify the following relationship.

Hypothesis 3: Business experience significantly influences firm performance.

The Links Between Financial Literacy, Business Experience, and SMEs Firm Performance

While financial literacy provides valuable knowledge, applying it effectively in the real world of business requires experience (Covin & Slevin, 1990). Business experience allows entrepreneurs to develop a deeper understanding of their industry, customer base, and competitive landscape. This experience can help them drive his business to increase the wealth of his business. Bandura (1979) stated the most reliable indicator of whether someone can succeed at something is their own experience of the action or concept. Further, Bandura (1979) pointed out that people can get experiential information from watching others, influencing their confidence in their talents. Bandura (1979) tested and said a person's ability to visualize future success may be improved by visualization or imaginary experiences, which might help them believe that success is achievable. Thus, the fourth hypothesis is developed as follows.

Hypothesis 4: Business experience mediates the relationship between financial literacy and firm performance.

Methodology

Sample Design and Data Collection

The population for this study comprised SMEs in Sri Lanka. After considering the number of definitions of SMEs we selected the sample based on the definition provided by the Ministry and Industries and Commerce (MIC) in Sri Lanka. According to (MIC,2016), there are two main criteria for SMEs. Those are annual turnover and the number of employees attached to the business. When annual turnover is less than Rs. 15 million and employees are less than 10, such an enterprise is recognized as a micro entity. Annual turnover between Rs. 16 to 250 million and employees in the range of 11 to 50 are the criteria of a small entity. A medium-sized entity is recognized when its annual turnover is between Rs. 251 to 750 million and the number of employees is between 51 to 300. However, this criterion slightly changed in the service sector, where the number of employees should be between 51 - 200. To capture the diversity of SMEs in Sri Lanka, this study employed a stratified random sample of 677 businesses across all nine provinces and covering 25 districts. This sample size exceeded the minimum of 384 recommended by Krejcie and Morgan (1970) and ensured a proportionate representation of SMEs according to the definition established by the Ministry of Industry and Commerce's National Policy Framework for Small Medium Enterprises. According to Hair et al. (2010), a sample size of 100 or more should be considered suitable for statistical analysis. A survey instrument was developed to measure financial literacy, business experience and firm performance. To ensure data quality, the structured questionnaire was pre-tested with a small sample of SMEs owners to identify and address any ambiguities or confusing questions. The questionnaire was based on questions used in previous studies conducted in different contexts. The survey link was then disseminated through various channels to the SMEs owners attached to the Small Enterprise Development Division (SEDD) and National Enterprise Development Authority (NEDA) in Sri Lanka.

The sample profile of the study is summarized in the following table.

	Criteria	Frequency	Percentage
Age	a) Years 20 - 30	117	17.3%
	b) Years 31 - 40	235	34.7%
	c) Years 41 - 50	287	42.4%
	d) Years 51 Over	38	5.6%
		677	100%

Gender	a) Male	279	41.2%
	b) Female	398	58.8%
		677	100%
Business Registration	a) Sole proprietorship	603	89.1%
	b) Partnership	18	2.7%
	c) Private Limited Liability	29	4.3%
	d) Other	27	4.0%
		677	100%
Annual Income Financial year	a) Between Rs.01-15 Mn	358	52.9%
	b) Between Rs. 16 -250 Mn	299	44.2%
	c) Between Rs.251-750 Mn	20	3.0%
	d) Between Rs.751-1000 Mn	0	0%
		677	100%
Number of Employees	a) No Employees [Owner only]	140	20.7%
	b) Between 01-10	457	67.5%
	c) Between 11-50	70	10.3%
	d) Between 51-200	10	1.5%
		677	100%

Table 1. Profile of the sample

The surveyed population's age distribution reveals a diverse range, with a significant portion falling between 31 to 50 years old, comprising about 77.1% of the total respondents. This indicates that the study encompasses a broad demographic, with a focus on individuals in their prime working years. However, there is also representation from younger and older age groups, 20 - 30, 17.3% and over 51 age group 5.6% respondents, suggesting a balanced sample across different age brackets. Gender representation in the survey shows a slight majority of female respondents, making up approximately 59% of the total, compared to around 41% of male respondents. This distribution highlights a relatively equitable participation of both genders in the study. The data on business registration types indicates that the majority of respondents (89.1%) are operating as sole proprietors, showcasing the prevalence of this form of business ownership within the surveyed population. Additionally, a small percentage of respondents are engaged in partnerships (2.7%) or private limited liability companies (4.3%), with a further 4% falling into other categories. This breakdown offers insights into the varying legal structures adopted by businesses represented in the study.

Analysis of respondents' annual incomes reveals a diverse distribution, with a majority (over 97%) falling within the range of Rs. 01 - 250 Mn. Specifically, around 53% of respondents report incomes between Rs. 01 - 15 Mn, while 44% fall in the range of Rs. 16 - 250 Mn. A smaller proportion of respondents (3%) report higher incomes, ranging from Rs. 251 Mn to 750 Mn, indicating the presence of larger enterprises within the surveyed population. Examination of the number of employees within surveyed businesses illustrates a varied landscape, with a substantial portion being owner-operated ventures (20.7%) with no additional staff. The majority of businesses (67.5%) employ between 1 to 10 individuals, indicating a prevalence of small-scale enterprises. However, there are also representations from businesses with larger workforces, with 10.3% employing between 11 to 50 employees, and a smaller fraction (1.5%) having staff sizes ranging from 51 to 200, underscoring the diversity in business sizes within the study sample.

Measurement of Variables

Due to the variables' abstract character, it is more challenging to measure more abstract and subjective aspects (Sekaran and Bougies, 2012). Abstract ideas like satisfaction or trust cannot be measured straightforwardly. However, we can quantify what we have come to refer to as contentment or confidence, for instance, in a name, a product, or a business. One method uses indicators that act as proxy variables to measure the images indirectly when measuring complex concepts (Hair, Hult, Ringle, and Sarstedt, 2014). All the indicators of the main concepts or constructs were measured through a Likert scale questionnaire in this study. When it is put on the Likert Scale following scale is used in the study. 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree and 5= Strongly Agree. The Likert-scale questionnaire is one form of instrument that may be used to obtain quantitative data that is representative and generalizable (Ledesma & Izquierdo, 2023). All the main variables are described via indicators in the table mentioned below.

Financial Literacy; Financial literacy encompasses a range of qualities essential for making informed financial decisions and securing personal financial well-being, as defined by the Organization for Economic Cooperation and Development (OECD) and its International Network on Financial Education (INFE) in (OECD INFE, 2020). These qualities include awareness, knowledge, skills, attitudes, and behaviours. To assess financial literacy, 32 indicators have been identified across four main dimensions: financial education (measured by 12 indicators), financial awareness (measured by 6 indicators), financial attitude (measured by 8 indicators), and financial behaviour (measured by 6 indicators).

Firm Performance; Firm performance is a multidimensional construct that plays a pivotal role in the evaluation and assessment of a company's overall success. It encompasses a range of financial and non-financial indicators, highlighting the firm's ability to generate value, achieve strategic objectives, and adapt to changing market dynamics. Financial metrics such as return on assets (ROA) and net profit margin are often utilized to gauge the financial health of a company (Dellis, 2018). Additionally, market-based measures like market share and brand reputation can provide insights into a firm's competitiveness and its ability to capture market opportunities (Smith & Johnson, 2019). These measures collectively contribute to the understanding of how well a firm is performing in terms of its financial stability and competitive positioning (Santos & Brito,2012).

Business Experience; Business experience is the amount of learning and familiarity with business management functions in running the business operation. Bandura (1983) states that one's behaviour is determined mainly by experience. Individuals get more experience engaging in many business activities (Kiyosaki, 2014). The general sense is that; experiences lead to effective decision-making. For the identification of new prospects and the performance of SMEs, it is essential to have both financial literacy and business/trade/operational experience. (Anwar, Shuangjie, and Ullah, 2020). Therefore, financial literacy and business experiences are antecedents of the firm performance of SMEs. The route between intellectual capital and resource acquisition is strengthened by business expertise, which significantly speeds up resource acquisition (Ying, Hassan & Ahmad, 2019). Kang et al. (2019) noted that experienced managers benefit from improved performance and market position. Therefore, this study's researcher is interested in empirically verifying the association between financial literacy and business experiences.

Smart PLS software was employed to analyze the collected data. Partial Least Squares (PLS) is a structural equation modeling (SEM) technique well-suited for analyzing complex relationships with smaller sample sizes (Hair et al., 2017). The analysis focused on assessing the direct effect of financial literacy on firm performance and the mediating role of business experience.

Analysis and Results

Assessment of Validity and Reliability

Tables 1 and 2 provided below demonstrate efforts to ensure both validity and reliability in this research. Validity refers to whether the measures accurately capture the intended constructs. Here, the Fornell-Larcker Criterion examines the correlation between each construct and its corresponding measures. As the values in the diagonal line are greater than the squares of inter-constructed correlations, we concluded that the construct had satisfactory discriminant validity. AVE values in Table 2 are greater than the cut-off value of 0.5 evidence of convergent validity of the constructs (Hair et al., 2017).
Reliability reflects the consistency of the measures. Cronbach's Alpha, rho_A, and Composite Reliability coefficients are all above 0.7 for most constructs, exceeding the recommended threshold. This suggests the measures produce consistent results when applied repeatedly, demonstrating good internal consistency and reliability. Overall, the evidence presented suggests the measures used in this study are both valid and reliable, strengthening the confidence in the research findings.

	BE	FA	FA	FB	FE	FP
Business Experience	0.708					
Financial Attitude	0.600	0.768				
Financial Awareness	0.629	0.708	0.772			
Financial Behaviour	0.604	0.674	0.658	0.782		
Financial Education	0.597	0.673	0.756	0.630	0.775	
Firm Performance	0.545	0.546	0.489	0.491	0.522	0.716

Table 2: Validity Criterion (Fornell-Larcker Criterion)

	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Business Experience	0.799	0.801	0.857	0.501
Financial Attitude	0.768	0.768	0.852	0.589
Financial Awareness	0.831	0.831	0.881	0.597
Financial Behaviour	0.683	0.684	0.825	0.612

Financial Education	0.778	0.782	0.857	0.600
Firm Performance	0.841	0.846	0.880	0.513

Table 3: Reliability Criterion

Constructs	Items	Reflective Latent Measures	CFL
Financial Education	FE1	I am competent in using simple interest methods for the calculation	Dropped
	FE2	I am capable of doing multiple interest rate calculations correctly.	Dropped
	FE3	I have a sense of the current inflation rate in Sri Lanka and particularly feel at the time of purchases.	Dropped
	FE4	I have properly diversified the assets of my firm.	0.750
	FE5	I have the required skills to ascertain financial risk before spending.	0.768
	FE6	In my business, I have a well-established main operational income.	Dropped
	FE7	I have created a few passive income methods in my business.	Dropped
	FE8	I have a practice of getting three quotations before buying an asset.	Dropped
	FE9	My firm operates a savings account, and a specific amount is saved monthly.	Dropped
	FE10	I know the costs of borrowing a loan from the bank.	0.775
	FE11	I consciously assess the return on investment that appears in the financial statement of the business.	0.805
	FE12	I have safeguarded business assets from the insurance policies.	Dropped
Financial Awarenes s	FA1	I am reasonably aware value of products and services offered by sellers before purchasing.	Dropped
	FA2	I am capable of calculating the loan repayment schedule of my business loan.	0.773
	FA3	I can prepare and analyze bank reconciliation statements monthly.	0.795
	FA4	I try to get maximum cash inflows from existing assets of the business before buying new assets.	0.763

	FA5	I am aware that financial planning for unexpected expenses helps me to successfully cope with the shortage of funds.	0.765
	FA6	I can compute and compare the return on savings from investments under the given rate of interest in a period.	0.766
Financial Attitude	FAt1	I regularly maintain a formal budget for the successful financial management of my business.	0767
	FAt2	I plan diversified investment in assets which in return bring positive cash flows to my business.	0.766
	FAt3	I am careful to pay due bills on time without delay.	Dropped
	FAt4	I am prioritizing expenditures before setting them off.	Dropped
	FAt5	I regularly bargain on the price of almost everything purchased for the business.	Dropped
	FAt6	I regularly analyze the value of the net wealth of my business by reducing liabilities from assets.	0.789
	FAt7	I try to maintain the consistency of the quality of the products.	Dropped
	FAt8	I have a positive attitude toward updating the financial statements of the business.	0.748
Financial Behaviour	FB1	I maintain formal ledger accounts for revenue recognition and expenditure recording for my business.	0.757
	FB2	I am concerned about prices and utility before purchasing assets for my business.	0.790
	FB3	I always issue cheques for payment to suppliers and prepare monthly bank reconciliations.	Dropped
	FB4	I follow regular saving and investment strategies in my business	0.799
	FB5	I am free from overindulgence of liquor and gambling	Dropped
	FB6	I have taken formal insurance protection for my business and all its assets.	Dropped

Firm Performance	FP1	The gross profit margin of my business is greater than the expected return rate.	0.747
	FP2	The net profit of my business is greater than the cost of capital and increased the net wealth annually.	0.745
	FP3	The net sales value of my business has increased greater than last year's sales.	0.707
	FP4	My business’s cash flow statement shows a sufficient positive cash balance.	0.754
	FP5	I get maximum utilization of all my business assets.	Dropped
	FP6	The present market value of my business is a few times greater than the initial investment.	Dropped
	FP7	I feel that My firm's employees are delighted with organizational policies and strategic performances.	Dropped
	FP8	My firm's number of employees has gradually improved over the last few years.	Dropped
	FP9	My firm's customers are delighted with my firm's sales methods and after-sales policies.	Dropped
	FP10	My firm's customer number has gradually improved over the last few years.	Dropped
	FP11	I have trained and skilled employees in my business.	0.634
	FP12	I have established a formal management system in my business, and organizational hierarchy is in practice.	0.709
	FP13	I have established machine and process controllers in my firm.	0.710
	FP14	I have established cyber security technologies to safeguard my firm's Management Information System (MIS).	Dropped
Business Experience	BEx1	I have sufficient experience in main business operations and the functions of my business.	0.709
	BEx2	I have adequate experience in setting the price for each product and service	0.780

	BEx3	I have a sense of identification of domestic market demand for products and services of our business.	0.709
	BEx4	I have a fair knowledge of the export process of products and countries who buy our products.	0.675
	BEx5	I have a fair knowledge of the import process of products and countries that can supply us with products.	0.638
	BEx6	I have experience in online business operations.	Dropped
	BEx7	I try to update my ICT knowledge regularly	Dropped
	BEx8	I have experience in using marketing strategies to attract customers	0.727

Table 4: Confirmatory Factor Loading

In our confirmatory factor analysis (CFA), we evaluated the strength of the relationships between 54 observed variables and their underlying latent constructs. We refined the model by removing indicators with low factor loadings (below 0.7), resulting in a final set of 29 strong indicators for further analysis.

It is important to consider quality criteria before running bootstrapping to estimate the significant relationships mentioned in the conceptual model. Following are a few such quality criteria derived from the PLS algorithm.

Variables	R Square	R Square Adjusted
Firm Performance	0.378	0.376
Business Experience	0.486	0.482

	Saturated Model	Estimated Model
SRMR	0.091	0.091
d_ULS	8.524	8.571

Table 5: Quality Criteria

The analysis examined the factors influencing business experience and firm performance. The results indicate that nearly half (48.2%) of the variation in business experience can be explained by the factors included in the model.

For firm performance, the model explains a slightly lower proportion of the variance, at 37.8%. The SRMR value of 0.091 suggests a good fit for both the saturated and the estimated model. Values less than 0.1 generally indicate a good fit. The d_ULS values for both models are very high (greater than 8.5) which would normally indicate a poor model fit. However, d_ULS is not recommended for PLS path models, so we can ignore this value.

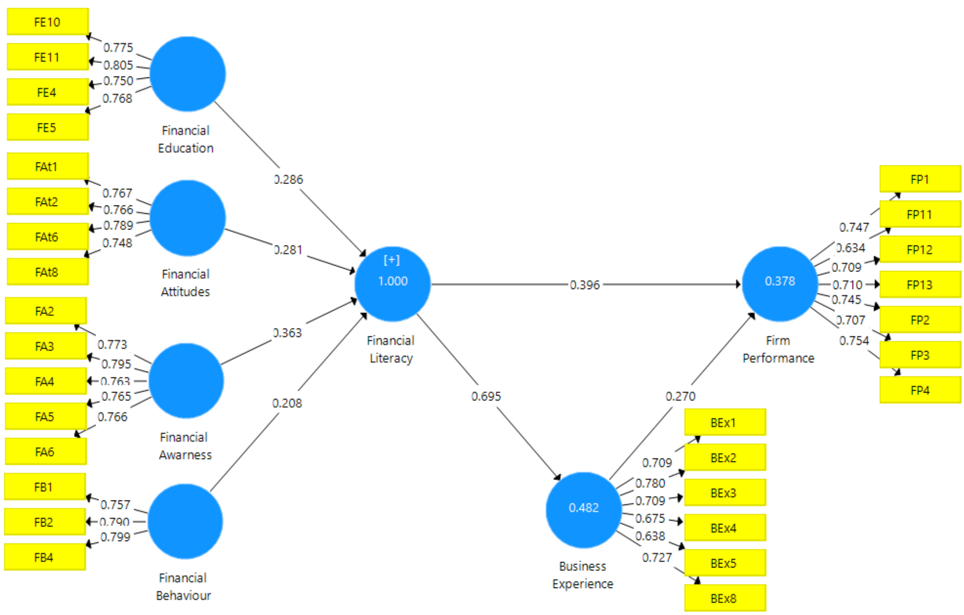

Fig.2: Smart PLS output

Variables	Estimate (P Values)	Decision Accept/ Reject
Business Experience -> Firm Performance	0.000	Accept
Financial Attitude -> Financial Literacy	0.000	Accept
Financial Awareness -> Financial Literacy	0.000	Accept
Financial Behaviour -> Financial Literacy	0.000	Accept
Financial Education -> Financial Literacy	0.000	Accept
Financial Literacy -> Business Experience	0.000	Accept
Financial Literacy -> Firm Performance	0.000	Accept
Financial Literacy -> Business Experience -> Firm Performance	0.000	Partially Accepted

Table 6: Path Coefficients and Bootstrapping results with direct/indirect effects

Direct Effect of Financial Literacy

The analysis confirmed a significant positive relationship between financial literacy and firm performance, financial literacy and business experience, and business experience with firm performance, aligning with our initial hypotheses. This implies that SMEs with stronger financial literacy tend to achieve better performance outcomes. The study further revealed a cascade effect by leveraging business experience with financial literacy. Financial literacy has a significant positive relationship with business experience, suggesting that financially literate entrepreneurs are more likely to gain valuable experience through informed decision-making and effective financial management. This experience, in turn, has a significant positive relationship with firm performance. This finding highlights the potential for financial literacy to empower entrepreneurs and contribute to improved business outcomes, not just directly, but also indirectly by fostering valuable business experience.

Mediating Effect of Business Experience

The analysis not only confirmed a positive relationship between financial literacy and firm performance but also revealed a significant mediating role played by business experience. This finding shed light on the underlying process through which financial literacy translates into better firm performance. Imagine financial literacy as the knowledge and tools needed to navigate the financial aspects of running a business. While this knowledge is undoubtedly valuable, it takes experience to effectively put it into action.

Summary and conclusion

The findings of this study contribute to the growing body of research on the importance of financial literacy for SMEs. The significant positive effect of financial literacy on firm performance underscores the need for initiatives that enhance financial literacy among entrepreneurs. The mediating role of business experience highlights the synergistic effect of knowledge and experience. While financial literacy provides the foundation, business experience allows entrepreneurs to leverage this knowledge for better decision-making and improved performance.

Financial literacy equips entrepreneurs with the knowledge to understand financial statements, make sound investment decisions, and manage resources effectively.

Business experience allows them to translate this knowledge into practical skills. Through real-world application, entrepreneurs enhance their financial acumen, learn to adapt to industry-specific challenges, and develop a deeper understanding of the financial implications of their decisions.
This experience then strengthens the positive influence of financial literacy on firm performance. With the ability to implement their financial knowledge effectively, entrepreneurs can make better financial decisions, optimize resource allocation, and ultimately achieve superior business outcomes.
Therefore, business experience acts as a bridge, taking entrepreneurs beyond just possessing financial knowledge and enabling them to leverage it for greater success. This highlights the importance of not only financial literacy training but also opportunities for entrepreneurs to gain practical experience to truly maximize the positive impact on their firms.

Implications, limitations, and Future Research Directions

This study investigated the impact of financial literacy on firm performance in SMEs, with a particular focus on the mediating role of business experience. The findings provide compelling evidence supporting the crucial role of both financial literacy and business experience for SME success in the cosmopolitan era.

The analysis confirmed a significant positive direct effect of financial literacy on firm performance. This aligns with our initial hypothesis, suggesting that SMEs with stronger financial literacy achieve better performance outcomes. More interestingly, the study revealed a significant mediating effect played by business experience. Financial literacy empowers entrepreneurs with the knowledge to make informed financial decisions, but it's business experience that allows them to translate this knowledge into practical skills and navigate the complexities of the financial landscape. This highlights the importance of a dual approach, fostering financial literacy among entrepreneurs while also providing opportunities for them to gain practical experience. By equipping entrepreneurs with both the knowledge and the ability to apply it effectively, policymakers and educators can significantly contribute to enhancing the performance and competitiveness of SMEs in the dynamic and challenging cosmopolitan era.

Theoretical Implications

This research study's conceptual framework draws upon various behavioural finance and economics theories. Several of these theories align with the core idea of financial literacy and the self-efficacy theory is connected to business experience. Self-efficacy theory is about how confident people feel when handling financial matters. This research study found that having more business experience makes SMEs owners better understand money matters. This confirms the theory. But here are some interesting things found. The self-efficacy theory is directly supported by the relationship between business experience and financial literacy because the findings explicitly state a significant relationship; further, business experience did mediate the relationship between financial literacy and firm performance. Accordingly, it can be confirmed that aligned with the theory, SME owners or managers with greater financial literacy may have higher self-efficacy beliefs in financial matters, potentially influencing their business decisions.

Managerial Implications

The findings highlight the value of having both business expertise and financial literacy. Entrepreneurs with business expertise can put their financial literacy into practice, while financially literate individuals are better equipped to make wise financial decisions. SMEs should give building both skill sets top priority. Therefore, the following implications would be recommended. Programmes for Education and Training; conduct seminars or training sessions to improve entrepreneurs' financial literacy. Financial Literacy enhancement initiatives; Give entrepreneurs access to tools and information that make financial concepts and decision-making easier. Mentorship Programmes; Assist young business owners by matching them with seasoned mentors who can offer helpful advice on handling complex financial situations. On-the-Job Training; This research underlines the value of "learning by doing" alongside continuous improvement achieved through dedicating a small portion of each day to micro-learning activities. This commitment to ongoing learning and development, even in small daily doses, fosters steady and sustainable growth in the long term.

Limitations

The study concentrated on all 25 districts in Sri Lanka as the geographic area, encompassing various industries and SMEs of varying sizes, thereby potentially introducing deviation in measuring financial literacy. This limits the generalizability of the findings to a broader population of SMEs. Future research could explore the impact of financial literacy and business experience across diverse SME contexts with a larger sample size. Measurement of Business Experience: The study likely relied on a specific method to measure business experience (e.g., not years in operation but Likert scale measurements). This method might not capture the sense of experience, such as the variety of financial situations encountered or the depth of financial knowledge gained through past challenges. Future research could explore alternative or multi-faceted ways to measure business experience.

Future Research Directions

Future research should focus on unveiling the complex connections within the realm of financial literacy and small and medium-sized enterprises (SMEs) by investigating the intersectionality of demographic factors, including gender, age, education level, and cultural background. This exploration aims to identify disparities and dynamics, laying the groundwork for targeted strategies to enhance financial literacy and improve overall SME firm performance across diverse demographic groups. Additionally, a comprehensive study of the impact of government policies on SME financial literacy and performance is reasonable. Such research should assess the effectiveness of governmental initiatives in fostering financial literacy, business experience, and resource diversification skills among SMEs. Understanding the direct and indirect consequences of these policies can provide valuable insights into areas where interventions can be optimized to create an environment conducive to sustained SME success. Furthermore, an examination of the transformative role of technology, particularly digital financial tools and platforms, is crucial in elevating SME owners' financial literacy. Research in this area should analyze how technological interventions contribute to enhanced financial literacy and, consequently, influence SME firm performance. By focusing on the evolving landscape of digital solutions, future research will pinpoint ways in which technology can empower and equip SMEs for success in an increasingly digitized business environment.

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Word Limit

- Article: Between 2,000 - 8,000 words (Maximum 30 pages including reference list, tables and figures).
- Keywords: Between 4 - 8 keywords.
- Title: Approximately in eight words.

Format

- Articles must be typed, double-spaced, single-sided, numbered using Cambria Font size 11 and formatted in to B5 paper size.
- Title of the article should be in Cambria font size 14.
- Names, titles, affiliations and correspondence e-mail of all authors must be mentioned beneath the Title of the Article.
- Tables and figures should be numbered in the order in which they are referred to in the text, e.g.: (Table 1), (Figure 1).
- All acronyms used repeatedly should be cited in its entirety along with abbreviation in parentheses on first reference. e.g.: National Centre for Advanced Studies (NCAS).
- All subsequent citations should use only by the abbreviation.

References

- The journal uses intext citations, therefore the authors are advised to follow the same.
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Ensure that the following are included with the article.

- Author details in full.
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- An abstract.
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- References in Harvard style.
- Tables : numbered using Roman numerals and mentioned in the text.
- Figures : numbered using Arabic numerals and mentioned in the text.

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