

THE RIPPLE EFFECT: SILO MENTALITY'S INFLUENCE ON COMMUNICATION AND COLLABORATION PATTERNS IN THE IT INDUSTRY OF SRI LANKA.

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Abstract

In the dynamic landscape of contemporary organizations, the phenomenon of silo mentality casts a ripple effect on vital facets of communication and collaboration. This article explores the intricate relationship between silo mentality and the communication-collaboration dynamics within organizations. Employing a quantitative approach with a sample size of 382 millennials employed in the IT industry of Sri Lanka, this research sheds light on how silo mentality among millennials has lasting consequences. Findings show that the silo mentality not only creates barriers that hinder cross-functional information exchange but also compromises the spirit of collaboration intrinsic to millennial work culture. This article illustrates how silo mentality disrupts the flow of ideas, curtails knowledge dissemination, and hinders project synergy. These effects cascade throughout the organization, leading to under optimized team performance. The findings of this study prove implications for organizational leadership, suggesting the need for proactive interventions to dismantle silo-driven barriers.

Keywords: Silo Mentality, Communication, Knowledge Sharing, Collaboration, Millennials, Strategic Leadership

Introduction

In today's fiercely competitive business world, organizational success dominantly relies on aligning members toward shared objectives and visions. Given that organizations are structured hierarchically, employees tend to develop different views and attitudes and form an unconscious bias (Szabla and Teece, 2021). Effective knowledge sharing within the organizational structure is pivotal for sustainability and competitiveness (Abdul-Jalal, Toulson, & Tweed, 2013; Haque et al., 2014; Pambreni et al., 2019). In simpler terms, employee cohesion on contextual levels is vital for aligning organizational dynamics with business goals. The relevancy of eliminating silos for organizational success is more significant now than ever, given the complex nature of the current landscape, organizations are urged to develop systems and sound management practices to eliminate and hinder formation of silos (Lepore, 2022).

Despite efforts to the contrary, unconscious divisions, known as silos, continue to form within organizations (Cilliers & Greyvenstein, 2012). Silo members prioritize their group over the

whole organization, hindering cross-functional awareness (Werhane, 2013). This is particularly noticeable in the IT industry, exacerbated by generational gaps (Billings-Harris, 2019). Empirical findings indicate that silos disrupt relationships, impede teamwork, and limit broader organizational objectives (Astikainen, Laukkanen, Lämsä, & Hyrkäs, 2017). Factors such as the physical environment, management experiences, and intergroup relations are found to be causal factors (Cilliers & Greyvenstein, 2012; Dewi et al., 2019; Katukurunda et al., 2019). Silos pose ethical challenges by restricting information sharing (Werhane, 2013), and employees need additional competencies to break free (Astikainen, Laukkanen, Lämsä, & Hyrkäs, 2017). Literature also links silo mentality to reduced productivity and innovation (Billings-Harris, 2019). While global research explores this, few studies examine its generational impact on organizational dynamics.

The IT industry has emerged as a critical driver of global economic growth and technological advancement (Smith & Anderson, 2020). In recent years, the industry's significance on a global scale has been underscored by its pivotal role in enabling remote work and digital transformation during the COVID-19 pandemic (Lacity et al., 2020). As organizations increasingly rely on technology to remain competitive and adapt to changing market demands (Laudon & Laudon, 2019), understanding the dynamics within the IT industry becomes imperative. This industry is characterized by its fast-paced, dynamic nature, where innovation and collaboration are essential for success (Bharadwaj et al., 2019). However, silo mentality, the tendency of departments or teams to operate in isolation and hoard information, poses a significant challenge to the industry's agility and innovation potential (Nguyen et al., 2019; Kuruwitaarachchi et al., 2019; Kolbjørnsrud, 2020). This phenomenon obstructs the seamless flow of information, inhibits cross-functional collaboration, and hinders the timely delivery of projects (Carmeli et al., 2019).

In the context of the IT industry's global significance, studying silo mentality becomes crucial. Its adverse effects not only impede organizational performance but also hinder the industry's capacity to drive technological breakthroughs and meet evolving customer demands (Lacity et al., 2020). By unravelling the intricacies of silo mentality within the IT sector, organizations can develop targeted strategies to break down these barriers and foster a culture of collaboration and innovation (Smith & Anderson, 2020). Furthermore, insights gained from this study can inform industry-wide initiatives aimed at enhancing knowledge sharing, optimizing resource allocation, and ultimately elevating the IT industry's contribution to global economic growth and technological progress.

Additionally, the industry's dynamic nature has led to a significant millennial workforce presence. Millennials are strongly drawn to the IT industry due to their lifelong exposure to technology, aligning their values with meaningful work opportunities (De Silva et al., 2017; Maghfuriyah et al., 2019; Lurie, 2019; Twenge, 2020). This generation thrives on continuous learning and adaptation, a characteristic highly valued in the dynamic IT sector (Smith & Davidson, 2021). Furthermore, the IT industry's collaborative and innovative nature appeals to Millennials' desire for teamwork and creative problem-solving (Lange et al., 2020). These factors collectively make the IT industry an attractive career choice for Millennials, reflecting their interests, values, and career aspirations.

While the term "silo mentality" hasn't gained widespread recognition in the local context, empirical evidence suggests a potential connection to certain observed phenomena. A study conducted in Sri Lanka revealed a positive correlation between high employee turnover rates and knowledge management, with silo mentality as a contributing factor (Fernando, 2016; Tarofder et al., 2017; Udriyah et al., 2019). Moreover, despite the changing global landscape, empirical findings indicate that local industries have been relatively slow in seizing opportunities for large scale innovation and entrepreneurship, resulting in limited diversification of the local economy and its offerings (Wijesinha, 2018). Extensive empirical research has not yet yielded significant studies directly linking silo mentality to these factors. Therefore, there is a need for further research to explore and illuminate this aspect of the local industry.

The IT industry in Sri Lanka, being the third-largest contributor to export revenue, achieved a substantial milestone in 2022, generating \$1.5 billion in revenue and employing a workforce exceeding 150,000 individuals (SLASSCOM, 2023). This sector, characterized by over 90% value addition and well-compensated positions, has notably influenced the expansion of the Sri Lankan economy (SL EDB, 2022). Consequently, there is a growing imperative to investigate the underlying factors influencing organizational dynamics in Sri Lankan IT companies and harness this knowledge to further propel this blooming industry. Given the nature of the industry and the Sri Lankan workforce distribution, the majority of its employees belong to Generation Y, also known as Millennials, characterized by distinct behavioural and psychological traits compared to other generations (King, Finkelstein, Thomas, & Corrington, 2019; Tham et al., 2017; Rachmawati et al., 2019). The presence of these unique generational patterns necessitates careful consideration when examining the factors at play within the industry in order for organizational leaders to dismantle siloes, a potential barrier to persistent growth.

Literature Review

Silo mentality is a mindset that impacts individuals' perception, cognition, and consequently, their outward behaviour. This phenomenon has been studied across various fields, including organizational behaviour, management, and psychology. It represents a cultural phenomenon that emerges within organizations when they become compartmentalized into distinct departments or units. These divisions fortified by silos create obstacles to effective communication, impede the flow of information, and stifle opportunities for collaboration (Molek, Jager, & Pucelj, 2023). Essentially, silo mentality occurs when different parts of an organization choose not to share information or knowledge, resulting in reduced synergy among these units (Syverson, 2011). It can also manifest as a lack of communication and shared objectives among organizational departments (Hotaran, 2009).

Many organizations still adhere to a hierarchical structure that mechanically compartmentalizes functions and interactions (Lepore, 2022), perpetuating fragmented thinking that hinders organizational progress. In today's fiercely competitive business landscape, the prevalence of silos within an organization profoundly affects both employees and overall organizational performance. What makes silo mentality particularly dangerous is that it often develops inadvertently and remains unnoticed until its negative consequences become apparent (Laoyan,

2022). Thus, it is essential for organizations to proactively cultivate awareness and implement measures to prevent silo formation. To ensure the long-term sustainability of an organization, promoting organizational learning and fostering knowledge exchange among members are imperative. This process plays a pivotal role in enabling organizational members to identify and rectify errors within the organization, ultimately leading to sustained high-performance outcomes. Organizational learning gains even greater significance in complex, dynamic, and turbulent environments, where it is recognized as a cornerstone of success (Waal, Weaver, Day, & Heijden, 2019).

Further literature substantiates that silo mentality has the potential to impact organizational dynamics to a degree that leads to a notable decline in productivity and innovation within the hierarchy (Billings-Harris, 2019). In spite of progress in management theories, silo mentality persists, driven by elements including specialized functions, inter-departmental rivalries, and a deficiency in motivating cross-functional cooperation (Li & Liu, 2019; Zhang & Li, 2020). Contemporary studies emphasize its adverse effects on organizational effectiveness, creativity, and employee contentment (García-Santos & Marimon, 2021; Barik & Rae, 2019)

Silo mentality, characterized by the isolation of various segments within an organization, leading to impaired communication and collaboration, remains a persistent issue in modern workplaces (Cameron & Quinn, 2020). Comprehending the factors that precede the formation of silos is imperative for organizations aiming to dismantle these barriers and promote a culture of transparency and collaboration. Empirical evidence underscores the significance of communication and collaboration as pivotal pillars influencing behaviour within silos.

This research explores the theoretical and conceptual foundations linking communication and collaboration to silo mentality. Effective communication and connectivity among employees are vital for organizations, as they serve as key drivers of valuable work performance (Bucăța & Rizescu, 2017). When communication is lacking, it signifies cultural misalignment, mistrust, and territorial behavior among employees, all of which are indicators of the presence of a silo mentality within the organization (Ribeiro, Giacoman, & Trantham, 2016).

Communication can be examined from two perspectives: internal and external. Internal communication encompasses interactions between organizational leaders and their employees, whether horizontally between leaders and subordinates or vertically among employees at the same hierarchical level (Dolphin, 2007). Effective internal communication illuminates the connections between shared information, fostering a common understanding that promotes agility and rapid adaptation to market demands. Failure to share market knowledge held by operational or technical teams, for example, can result in missed market potential. As aptly stated, "communication is the undoubted lubricant to prevent the corporate machinery from self-destructing from the friction of change" (D'Aprix, 2009), underscoring the need for dynamic internal communication to navigate changing market conditions. It is essential in knowledge sharing, which plays a pivotal role in achieving success and maintaining competitiveness (Si Xue, 2017). Knowledge, in essence, represents a comprehensive understanding of a subject, whether in theory or practice (Gao, Chai, & Liu, 2018). To put it simply, organizations must treat knowledge as a valuable asset in their processes to secure sustainable competitive advantages. Skilful knowledge management within a business enhances overall performance. In contrast, organizations that fail to facilitate effective

knowledge sharing often grapple with compromised communication, resulting in various inefficiencies and missed opportunities to address market needs.

Effective internal communication aligns employees' understandings and ideologies, subsequently enhancing external communication (Mishra, Boynton, & Mishra, 2014). This process dismantles silo mentalities by fostering improved employee engagement. Conversely, when crucial information is hoarded and not shared within the organization, it reinforces silo mentalities, as individuals become hesitant to disseminate knowledge (Rainer, 2019), potentially leading to business decline. The importance of communication is further heightened by today's multi-generational workforce, with millennials representing a dominant 57% (Emmons, 2018). Millennials favor fast-paced, non-verbal, and text-based communication for efficiency (TTC Innovations, 2017), which, paradoxically, can lead to disconnection and the strengthening of silos.

While the importance of effective communication in the management of silo mentality has long been acknowledged, recent studies highlight emerging challenges. The digital age has ushered in new complexities in organizational communication dynamics (Molloy et al., 2019). The widespread adoption of digital tools, particularly in the context of remote work, can influence both the quality and quantity of interpersonal exchanges. In certain instances, heavy reliance on digital communication may lead to shallower relationships among co-workers (Xu et al., 2020). Effectively addressing these contemporary challenges necessitates an ability to adapt to evolving communication modes while also maintaining opportunities for in-person interactions that foster trust and cohesion (Molloy et al., 2019).

In light of these observations, ineffective communication within an organization serves as a clear indicator of prevailing silo mentalities. Thus, comprehending how communication operates within organizational functions becomes a crucial dimension in addressing silo mentalities. Inadequate communication and the conflicts that stem from it serve as clear signs of unhealthy silos. Silos thrive on miscommunications and misunderstandings between different business sectors. Within organizations, effective communication fosters transparent knowledge exchange and rapid decision-making, but in the context of silos, this essential communication often faces compromise.

Collaboration and synergy are frequently used terms in the business world. Collaboration, as defined, enables companies to harness the collective knowledge of employees and coordinate their capabilities to seize business opportunities (Weiss & Hughes, 2005). To comprehend why this synchronization of knowledge is vital for organizations, one must consider the following: businesses bolster their capabilities by pooling the diverse expertise and skill sets of individual employees. What amplifies the importance of collaboration is its multifaceted nature, spanning collaboration between teams within an organization, partner organizations, and clients (Rassloff, 2019).

Silos emerge as a consequence of failed collaboration; within silos, employees become self-sustaining and inherently distrustful of their peers (Rainer, 2019). Consequently, these siloed employees adopt a mechanistic approach, concentrating solely on their daily tasks with little inclination to collaborate. This distrust leads to a lack of understanding of business processes. The absence of holistic process awareness, coupled with a failure to comprehend processes in

other functions, fosters an "us versus them" mentality and a culture of blame, where teams evade responsibility for process flaws (Gottschalk, 2014).

Thus, if employees within an organization cannot agree on shared ownership of processes and promptly resort to blaming other departments for errors, it suggests the presence of a silo mentality. Another sign of silos resulting from insufficient collaboration is process duplication (Rainer, 2019). Inefficiencies and sluggish responses to environmental changes arise from repetitive steps within silos. In dynamic industries like IT, where millennials are prominently represented, the need for collaboration is paramount (Shaffer, 2008). This is particularly crucial since millennials thrive on a collaborative culture, which is incompatible with silos. The proficiency of organizational management is now recognized as a pivotal source of competitive advantage (Bonface, Malenya, & Musiega, 2015). This expertise encompasses a manager's capacity to innovate and facilitate innovation, detect fragmentation, and align with overall organizational objectives, while also effectively coordinating financial and human resources. Empirical evidence further illustrates how managerial expertise can enhance overall organizational performance and competitive positioning (Reuber, 1997). To exploit business opportunities promptly, it's essential to foster cross-functional and hierarchical collaboration. Effective information sharing through managerial expertise, coupled with the practical insights of executives at all levels, ensures efficient business operations. In light of this, evaluating the level of collaboration is essential to understand its impact on the formation of silo mentalities within organizations. This evaluation will not only help cultivate a collaborative culture but also reduce inefficiencies such as delayed responses to market conditions and duplicated processes. Collaboration is a vital component in maintaining a competitive edge in the industry. A lack of collaboration leads to synchronization mismatches, slowing down business processes due to redundant steps, ultimately hindering firms from achieving dynamic growth. Cultivating a culture of collaboration enables employees to break free from silos and work cohesively towards business expansion.

In light of above empirical and theoretical groundings, it is also important to explore the role of leadership in managing organizational dynamics despite the prevalence of silos. Recent studies underscore the significance of leadership style in influencing the prevalence of silo mentality. Autocratic and hierarchical leadership approaches have been identified as factors that promote silos by inhibiting open communication and dissuading cross-functional collaboration (Cameron & Quinn, 2020). Leadership assumes a central role in shaping the culture and conduct of an organization (Bass & Bass, 2019). Contemporary research highlights that autocratic or transactional leadership styles can contribute to the development of silo mentality by suppressing transparent communication and hindering innovation (Xu et al., 2020). In contrast, leaders who embrace a transformational leadership style, characterized by qualities such as inspiration, intellectual stimulation, and individualized consideration, tend to mitigate the formation of silos (Xu et al., 2020). Transformational leaders inspire their teams, foster collaboration, and cultivate a shared sense of purpose, effectively dismantling siloed thinking.

Methodology

Research design entails a systematic process aimed at investigating a specific phenomenon within a study, with the ultimate objective of addressing research questions and hypotheses (Azam et al., 2021). Notable scholars in the field of social studies emphasize the foundational role of research methodology as the initial and critical step in acquiring knowledge about the real world (Kerlinger, 1986). Research philosophy encompasses a set of guiding principles concerning the nature of the physical construct under investigation, in this case, the prevailing silo mentality across organizations (Flick, 2011; Azam et al., 2023). Identifying the nature of the study is crucial as it serves to justify certain factors intrinsic to the study's context (May, 2011).

This study adopted a deductive approach to test existing theories that have been conceptualized within the study setting. This approach aligns with the research paradigm, which seeks to draw inferences from established theoretical foundations. However, beyond validating existing theories, this research also employs an inductive approach to identify additional factors that may arise due to the varying environmental and cultural circumstances of the study population, thereby enriching the findings. To achieve this, a quantitative strategy was employed to examine the multi-dimensional nature of silo mentality. The primary data collected for this study was cross-sectional, reflecting a snapshot of the prevailing silo mentality at a specific point in time. Consequently, the researcher's inference was minimal, and the study setting remains non-contrived in nature.

The study population consisted of millennials in Sri Lanka, specifically those employed in the IT industry. Therefore, the unit of analysis for this cross-sectional study is the individual employee. The sampling design employed in this study ensures the validity and usefulness of data collection for drawing inferential conclusions regarding the study population. In this research, a probability sample design was employed to ensure the generalizability of findings and mitigate potential bias.

The objective of this study was to comprehend the prevalence and implications of silo mentality among millennials in the Sri Lankan IT industry. The workforce employed in the IT industry of Sri Lanka was identified through the latest verified national census data, serving as the overall population. Subsequently, a sample population is determined based on the percentage of millennials within the total Sri Lankan population. To determine the sample size, a simple random sampling method was applied, as there were no available frameworks depicting the structure within the IT industry. Following Uma Sekaran and Bougie's (2016) guidance, a sample size of 382 was determined to adequately represent the total population, with a confidence interval of 95% and a margin of error of 5%.

Demographic details of 382 participants was assessed in understanding the landscape of the study sample. When examining the gender distribution, it was found that 72% of the participants were male. Age-wise, the majority of participants fell into the younger age brackets, with 46% aged between 24 and 29 years and 33% between 30 and 35 years. Another 21% were in the 36 to 40 years age group. These findings were in line with global IT industry standard which report that approximately 20% of employees in the IT industry are female (CIO, 2020). This indicates that the millennial population of Sri Lankan IT Industry is distributed in line with global approximations. This finding also suggests that IT industry consists with a

much younger demography. This is true in the country's context as IT is a fast-growing segment with new companies entering the market. Furthermore, IT is perceived as a growth sector amongst the young professionals and an exponential growth is seen in IT graduates.

In terms of educational background, 9% of the participants held Certificate, Diploma, or Other Professional qualifications. A significant majority, constituting 61%, possessed a First Degree, while 30% had Post Graduate qualifications. Education is perceived as an integral part of the millennial groups as majority focuses on education and its relative impact to career progression. These findings suggest that, millennials within the IT industry are well qualified with a minimum of a first degree.

Regarding job positions, the sample represented a diverse range of roles within organizations. Only 2% held high-ranking positions such as Director/Vice President. Senior Managers accounted for 17%, while Manager/Assistant Managers made up 29% of the sample. Additionally, 16% were Senior Executives, and the largest portion, 36%, were Executives. When it came to work experience, half (50%) of the participants had between 1 and 5 years of experience. A significant portion (23%) had 6 to 10 years of experience, and 25% fell into the 11 to 15 years category. Only a small group (2%) had more than 15 years of professional experience. These demographics provide a comprehensive overview of the diverse workforce involved in the study.

Drawing from an extensive exploration of both contemporary and foundational literature, this research sought to advance our understanding of strategic management by focusing on three interrelated constructs: silo mentality, communication, and collaboration. The development of a robust study instrument was supported by a comprehensive consideration of the key components within each construct.

In the context of silo mentality, the investigation was driven by the need to comprehend collaboration, synergy, and the synthesis of shared knowledge within the specific organizational context. The study aimed to uncover the extent to which different departments or units within the organization collaborated effectively or operated in isolation (Rainer, 2019). The premise was to identify how effectively knowledge and insights were shared across the organizational landscape.

Communication, as a key facet of this study, was assessed through a series of meticulously designed questions aimed at gauging the presence of open communication channels within the organization. These inquiries encompassed critical dimensions such as trust, the expediency of decision-making processes, and the alignment of the organization's culture across various divisions (Ribeiro, Giacomani, & Trantham, 2016). By evaluating these aspects, the study sought to determine how efficiently information flowed throughout the organization and whether any perceptible impediments hindered effective communication.

The construct of collaboration was further explored through a range of items designed to capture the organization's overall process awareness. Additionally, the questions probed the presence of a blamestorming tendency, a valuable indicator of the organization's readiness to cultivate a culture of shared responsibility and collaboration (Gottschalk, 2014; Rainer, 2019). These metrics were instrumental in providing a comprehensive picture of the organization's collaborative dynamics, elucidating whether teams worked in a cohesive manner or operated within isolated silos within the study population.

By addressing these three interwoven constructs, this study aimed to make a substantial contribution to the field of strategic management, enriching our understanding of how organizations navigate the complexities of the modern, interconnected business landscape. This comprehensive exploration was underpinned by a solid foundation of scholarly research, ensuring rigor and depth in the examination of these critical organizational dynamics in developing the survey questionnaire.

Following enrichment through insights gained from an expert review process, the questionnaire underwent a pilot study involving 30 respondents. Modifications to the questionnaire were made based on the validity insights obtained from the pilot study. For this study, all questions in the survey instrument are scaled on a 5-point Likert scale, ensuring fairness (Alreck & Settle, 1995). However, select questions were negatively coded to test and mitigate acquiescence bias among respondents, further enhancing data validity (Sauro, 2011).

The gathered data from the deployed questionnaire was analysed and interpreted using various statistical techniques commonly employed in social science research, including univariate, bivariate, and multivariate analyses. Initial data analysis was conducted through SPSS (Statistical Package for Social Sciences) version 24. Cronbach Alpha and Factor Analysis were performed to ensure consistency and validity. To gauge the relationships between operationalized variables, appropriate bivariate and multivariate analyses were employed, using AMOS version 23. This analysis aids in understanding the observed relationships between variables, in addition to univariate and bivariate analyses.

The following sections elaborate on key study findings and the provide depth to strategic management understanding by offering practical guidance for organizations aiming to break down silos and encourage open communication and collaboration.

Findings

Descriptive statistics play a crucial role in further validating the sample findings by offering insights into the fundamental characteristics of the dataset from the sample population. It encompasses two primary categories: measures of central tendency and measures of dispersion. Measures of central tendency focus on the sample's mean values, in this study, aiming to comprehend the scale of each variable and how respondents have responded to each question. On the other hand, measures of dispersion, particularly standard deviation, elucidate the range of responses to the questions. Together, these methods furnish essential information to gauge the constructs' validity in the given population.

The constructs, as outlined in the preceding section, were assessed utilizing a Likert scale spanning from 1 to 5, reflecting the study participants' attitudes and viewpoints. Respondents were able to rate their opinions from 1, indicating strong disagreement, to 5, signifying strong agreement. This approach facilitated nuanced responses, capturing a diverse spectrum of opinions and enriching the depth of the collected data. In analysing the items tested under the construct of silo mentality presented in below Table 1, it is apparent that the responses have been fair with an acceptable mean and standard deviation for all questions. Respondents rated various aspects related to knowledge sharing, project initiation, cross-functional interaction, and collaborative structures. The mean value of 3.78, along with a standard deviation of 0.7, illustrates the overall sentiment, indicating a moderate level of agreement within the sample

population. Looking at individual items, SM2 with the highest mean value suggests that knowledge sharing across functional boundaries is actively encouraged within the organization, indicating a positive trend towards promoting healthy practices to overcome silo formation. Despite the slightly lower mean for SM7, SM5, and SM3, these indicators still reflect a positive sentiment, suggesting that the organization's structure does not significantly hinder interaction and knowledge sharing among its departments with transparency. The mean values for SM4, SM6, and SM8 suggests that while joint initiation of projects across departments are encouraged and shared knowledge resource are moderately acknowledged, there may be room for improvement. SM1 with the lowest mean while still positive, suggests that there might be room for improvement in promoting collective behaviour over individualistic tendencies within the organization. While the overall mean suggests a positive environment where practices to eliminate silos exists, specific indicators show variances in perception, suggesting potential areas for targeted improvements to enhance interdepartmental collaboration further. Understanding these nuances is crucial for fostering a more cohesive and collaborative organizational culture.

Indicator	Item	Mean	Std. Deviation
In my organization, knowledge sharing across functional boundaries are encouraged	SM2	3.93	0.74
My organization's structure hinders interaction and knowledge sharing*	SM7	3.83	0.77
There is transparency of information across functional boundaries in my organization	SM5	3.81	0.64
My organization encourages collaboration between departments	SM3	3.78	0.69
Projects are often initiated through joint interaction between departments	SM4	3.76	0.64
Project teams are often formed with employee representation from other departments	SM6	3.73	0.61
Knowledge resources are often not shared between departments*	SM8	3.72	0.79
My organization structure promotes collective rather than individualistic behaviour	SM1	3.68	0.73
Overall Value		3.78	0.70

Notes:

*SM7 & SM8 were negatively coded to prevent acquiescent bias and therefore were re-coded and reversed in SPSS before proceeding with statistical computations present in Table 1.

Table 1 - Items of Silo Mentality

In analysing the construct for communication, illustrated in below Table 2, it is noteworthy that all seven questions yielded a mean score higher than 4.0, with an average standard deviation of 0.78. This signifies a relatively low variation in the responses. High mean scores across indicators, ranging from 4.03 to 4.21, underscore the organization's strong communication culture. The perception of open communication channels as indicated by COM1, and the ease of seeking advice from any member, COM7, highlight an accessible network within the workplace. Employees feel empowered to express their opinions, as indicated by COM2, and believe their input is considered as highlighted in responses to COM3, indicating an inclusive atmosphere. COM4 and COM6 suggest the ability to reach consensual decisions despite disagreements and the freedom to express opinions, both positive and negative, suggesting a balanced communication landscape. Moreover, COM5 indicates a high level of understanding during interactions, emphasizing effective communication. The overall mean of 4.1 signifies a robust communicative culture, fostering openness, understanding, and inclusivity among employees, aligning with the organization's collaborative objectives. These finding aligns with industry standards, as organizations in the IT sector in Sri Lanka commonly promote openness, trust, and effective communication. These practices have become integral in attracting top talent within the market.

Indicator	Item	Mean	Std. Deviation
There is open communication in this organization	COM1	4.21	0.81
It is difficult for me to seek advice from any member of this organization*	COM7	4.15	0.74
Every employee has a chance to express their opinions	COM2	4.12	0.73
When people in my organization communicate with each other, there is a great deal of understanding	COM5	4.08	0.85
Despite all employees not having total agreement, we often reach a consensual decision quickly	COM4	4.07	0.69
I feel restricted when making negative/positive comments regarding office matters*	COM6	4.06	0.83
Each individual employee's input is considered	COM3	4.03	0.82
Overall Value		4.10	0.78

Notes:

*COM6 & COM7 were negatively coded to prevent acquiescent bias and therefore were re-coded and reversed in SPSS before proceeding with statistical computations present in Table 2.

Table 2 Items of Communication

The Collaboration construct comprises seven questions aimed at assessing employee collaboration within the organization and their reliance on collaborative work. The information provided in Table 3 reveals that the construct has a mean value of 3.75. This mean tends to lean towards the neutral point when compared to the Communication construct. The high mean score for COL2 suggests a supportive team environment, where members assist each other with necessary information. COL3 & COL4 indicate co-workers' inclination to seek collaboration and information and the perceived willingness to collaborate across functional units, indicating a proactive approach toward interdepartmental cooperation. Despite a slightly lower mean, COL1 indicated satisfaction with the overall level of collaboration in the organization as relatively positive. However, areas for improvement include top management's active promotion of collaboration within teams, COL5, and the dependence on collaboration for work, COL6, indicating room for strengthening collaborative initiatives from managerial perspectives. Moreover, the willingness to accept responsibility for mistakes or failures as presented in COL7 poses a potential challenge, suggesting the need for fostering a culture of accountability. The overall mean of 3.75 reflects a moderate level of collaboration, emphasizing the organization's potential to enhance collaborative efforts for improved synergy and teamwork.

Indicator	Item	Mean	Std. Deviation
My team assists me with information required to do my job	COL2	4.08	0.84
My co-workers seek my collaboration and information to do their work	COL3	3.92	0.78
I believe there is willingness to collaborate across functional units within my team	COL4	3.82	0.92
I am satisfied by the level of collaboration in my organization	COL1	3.8	0.84
Top management actively promotes collaboration within my team	COL5	3.68	0.8
My work does not depend on collaboration *	COL6	3.58	0.91
I believe there is a lack of willingness to accept responsibility for mistakes/failure*	COL7	3.43	0.82

Overall Value	3.75	0.84
Notes: *COL6 & COL7 were negatively coded to prevent acquiescent bias and therefore were re-coded and reversed in SPSS before proceeding with statistical computations present in Table 3.		

Table 3 Items of Collaboration

In formulating the hypotheses for the study, existing literature provided substantial support for this assertion as detailed in the literature review. Studies in organizational behaviour and communication dynamics have consistently shown that effective communication plays a pivotal role in breaking down silos within an organization (Syverson, 2011). Research by Xu et al. (2020) highlights that organizations with open and transparent communication channels experience reduced silo mentality, promoting collaboration and shared understanding among departments. Additionally, the work of Ribeiro, Giacoman, and Trantham (2016) emphasizes the importance of trust and open communication in mitigating silo mentality, indicating a direct link between communication practices and the prevalence of silos. Building upon this foundation, hypothesis H1 posits that organizations fostering a high level of communication among employees are likely to experience lower instances of silo mentality. This hypothesis is grounded in the understanding that robust communication channels enhance information flow, reduce misunderstandings, and promote a shared organizational culture, all of which are essential in dismantling silos and fostering collaboration across different departments. In evaluation of H1, factors such as how employees perceived the effectiveness, openness, and transparency of communication within their organizations. The goal was to ascertain whether, in the context of the Sri Lankan IT industry, communication served as a robust indicator of silo mentality. The ensuing results, presented in below Table 4, indeed substantiate our hypothesis, implying that communication mirrors the presence of silo mentality within an organization. The standardized estimate of 0.057, with a corresponding p-value of 0.019, signifies a statistically significant relationship between these variables. This finding suggests that as the level of communication increases within the organization, the prevalence of silo mentality decreases, indicating that open and effective communication channels play a crucial role in mitigating siloed behaviours.

		Evidence Std. Estimate (P-value)	Conclusion
H1	There is a significant association between level of communication and silo mentality	0.057 (0.019)	Supported

Table 4 Hypothesis 1

This contributes to the validation of both empirical and theoretical discoveries. In our literature review, it was established that dysfunctional communication serves as a fertile breeding ground for silo mentality. When employees within an organization struggle with effective communication, it signifies cultural misalignment, mistrust, and territorial behaviour (Ribeiro,

Giacoman & Trantham, 2016). These factors collectively indicate the presence of silo mentality within the organization.

In the realm of organizational dynamics, a critical hypothesis to explore is the significant correlation between the level of collaboration and the existence of silo mentality. H2 was formulated with grounding in contemporary research, suggesting that a higher degree of collaboration within an organization, including factors such as interdepartmental cooperation, shared information flow, and collective problem-solving, is related to the prevalence of silo mentality. It is hypothesized that organizations fostering robust collaboration mechanisms tend to break down silos, promoting open communication channels and a culture of collective responsibility, thereby challenging the isolating tendencies of silo mentality (Cameron & Quinn, 2020; Ribeiro, Giacoman, & Trantham, 2016; Gottschalk, 2014; Laoyan, 2022). The objective of H2 was to understand the association between silo mentality and collaboration. Collaboration, in this context, signifies the degree to which employees cooperate and foster a culture of knowledge sharing and mutual success through synergy. Existing theoretical and empirical evidence had suggested a connection between collaboration and the emergence of the silo mentality. However, the results of this research, specific to the Sri Lankan IT industry, did not align with this expectation. The data as shown in below Table 5 clearly demonstrated that there was no significant relationship between silo mentality and collaboration. The standardized estimate of 0.095, accompanied by a p-value of 0.099, indicates that there is no statistically significant relationship between the level of collaboration and the presence of silo mentality. This finding implies that collaboration, as measured in this study, does not have a significant impact on reducing siloed behaviours within the organization.

		Evidence Std. Estimate (P-value)	Conclusion
H2	There is a significant association between level of collaboration and silo mentality	0.095 (0.099)	Not Supported

Table 5 Hypothesis 2

It can be argued that collaboration, or the presence of a collaborative culture, is being more influenced by the organizational structure. In the context of IT companies, these structures often span a wide spectrum, encompassing roles that demand high specialization such as programming, networking, marketing, and finance, each of which constitutes unique and distinct functions (Will, 2019). Therefore, it can be reasonably concluded that the inherent nature of the industry itself presents challenges to fostering collaboration. This perspective helps explain why the hypothesis regarding the relationship between collaboration and silo mentality was not substantiated by the study's findings.

Discussion

In assessing key findings from the data analysis regarding the constructs related to silo mentality reveals several important insights. It is evident that employees generally perceive their organization's efforts to create a collaborative and open culture positively. This positivity

is particularly reflected in the results suggesting that employees feel satisfied with their organization's endeavours to foster collaboration, communication, and shared knowledge. However, a more nuanced picture emerged when summing the consensus of the study population on their perception of potential room for growth in management of silo mentality, a potential discrepancy, indicating that while employees generally appreciate their organization's efforts to break down silos, there might still be areas or aspects where silo mentality persists or where improvements are needed.

These findings underscore the complex nature of silo mentality within organizations. While progress has been made in promoting collaboration and openness, certain challenges or pockets of resistance may still exist. To gain a deeper understanding of these nuances, further investigation and qualitative research could be beneficial. The results of this analysis align with existing literature on silo mentality, which suggests that breaking down silos is an ongoing process that requires continuous effort and vigilance (Molloy et al., 2019; Xu et al., 2020). Additionally, the findings emphasize the importance of addressing silo mentality comprehensively to ensure that all aspects of an organization's operations are aligned with its collaborative objectives (Gottschalk, 2014). The findings from silo mentality construct provides valuable insights into employees' perceptions of silo mentality within the IT industry on Sri Lanka. While there is evidence of positive progress in fostering collaboration and open communication, it also highlights the need for targeted interventions in specific areas to further mitigate the impact of silo mentality on organizational performance.

The analysis of the construct related to communication provided insightful observations. Key findings indicate a notable consensus among respondents regarding their perceptions of communication within their organizations. The relatively low variation in responses underscores a shared viewpoint among employees. An intriguing highlight is open communication within organizations, which indicates that a substantial majority of respondents believe that their organizations actively cultivate an environment characterized by open and transparent communication. This outcome resonates with industry standards, particularly within the IT sector in Sri Lanka, where fostering openness, trust, and effective communication has become a prevailing practice. The exceptionally positive perception of open communication is encouraging, as it aligns with the expectations of attracting and retaining top talent within the competitive IT market (Ribeiro, Giacomani, & Trantham, 2016).

The emphasis on open communication not only promotes trust and collaboration but also contributes to the overall organizational culture that is conducive to innovation and problem-solving (Xu et al., 2020). This analysis reiterates the significance of effective communication as a fundamental component of organizational dynamics. The positive responses suggest that organizations in the IT sector in Sri Lanka are successfully instilling a culture of transparency and open dialogue among their employees, contributing to a conducive work environment.

The examination of the collaboration construct provided valuable insights into the dynamics of employee collaboration within the organization and their reliance on collaborative work. This construct gravitates towards the neutral indicating that the perception of collaboration within the industry is neutral, this finding aligns with recent research in organizational behaviour (Tang, Chen & Zhang, 2020). Most notable finding is in the indication that respondents were somewhat uncertain about the presence of accountability among employees for mistakes and

failures. This observation is consistent with studies emphasizing the importance of fostering a culture of responsibility (Raja, Johns, & Ntalianis, 2021).

On the other hand, the findings also suggest that respondents generally perceived they had satisfactory access to information from their teams, this in turn helps in fostering an environment conducive to information sharing and collaboration (Van den Bossche et al., 2019). This positive perception of information access is essential in the context of the IT industry, where knowledge sharing is paramount for innovation and problem-solving (Hossen et al., 2020). The findings also display an acceptable standard deviation range, indicating that the responses within the Collaboration construct did not vary significantly among the respondents. This level of consistency aligns with findings in the field of organizational behaviour, where studies emphasize the need for clear and consistent communication to enhance collaboration (De Vries et al., 2020).

These key findings on the construct of collaboration underscore the importance of nurturing a culture of accountability while maintaining effective information-sharing practices. A balanced approach that encourages greater responsibility for outcomes, while also fostering open communication and information sharing, can lead to more effective collaboration and improved organizational performance (De Vries et al., 2020; Raja, Johns, & Ntalianis, 2021).

The overall study findings on silo mentality, communication, and collaboration in the Sri Lankan IT industry hold significant implications for agile leadership. Agile leaders, known for adaptability and innovation, can address these challenges effectively. Positive perceptions of collaboration efforts coexist with hints of persisting silo mentality. Agile leaders champion shared knowledge, breaking down silos (Gottschalk, 2014; Xu et al., 2020). Their adaptability mitigates silo impact (Hosseini et al., 2020).

Open communication, central to agile leadership, aligns with positive findings (Ribeiro et al., 2016). Agile leaders prioritize transparency, enabling trust, collaboration, and innovation (Xu et al., 2020). They facilitate idea sharing (Van den Bossche et al., 2019). In terms of collaboration, the study reveals a neutral perception with accountability uncertainty. Agile leaders foster responsibility (Raja et al., 2021). They emphasize accountability, enhancing team performance (Den Hartog et al., 2019). Positive information access aligns with agile leadership's emphasis on open communication (Van den Bossche et al., 2019). Based on the findings, it can be noted that agile leadership is crucial in fostering a culture of openness, trust, and collaboration. It addresses silo challenges, ensures communication, and nurtures collaboration in the dynamic IT industry.

When assessing the key findings through the unique context of the study setting, IT industry of Sri Lanka, it is to be noted that Sri Lanka boasts a well-educated and skilled IT workforce (World Bank, 2021). The positive perception of communication and collaboration may be a result of the country's strong education system. However, it also implies that the IT industry in Sri Lanka has the potential to embrace agile practices that rely on skilled and motivated team members. Sri Lanka's society is known for its collectivist culture, emphasizing group harmony and cooperation (Hofstede, 2021). The positive perception of collaboration and open communication in the study aligns well with these cultural norms. In Sri Lanka, teamwork and collective decision-making are often valued, making it conducive to fostering open communication and collaboration within organizations. Additionally, Sri Lanka has a history

of hierarchical organizational structures (Abeysekera, 2017). This tradition can influence how employees perceive accountability and the flow of information within organizations. The study's findings about uncertainty regarding accountability suggest that traditional hierarchical norms may still persist, posing a challenge for fostering a more collaborative work environment.

Sri Lanka's cultural and sociological factors create an environment where collaboration and open communication can thrive. However, the persistence of hierarchical traditions suggests that there is room for improvement. The country's strong education system and globalized IT sector provide opportunities for fostering a culture of collaboration and innovation. To address silo mentality effectively, organizations in the Sri Lankan IT industry should consider these cultural nuances while promoting open communication and collaboration (Shahzad et al., 2020; World Bank, 2021)

Within Sri Lanka's rapidly growing IT industry, agile leadership practices can serve as a strategic advantage. By addressing the challenges highlighted in the study, agile leaders can promote collaboration, enhance communication, and break down silos. This approach aligns with the industry's need for adaptability and innovation, ensuring that organizations remain competitive and responsive to market demands (Sutherland et al., 2017; Kniberg, 2015).

The implications of this study are multifaceted and hold significance for both industry practitioners and researchers. Firstly, the findings underscore the vital role of communication in mitigating silo mentality within organizations, especially among millennials in the IT sector. Future research endeavours could delve deeper into understanding the intricacies of collaboration in such settings and identify strategies to enhance collaboration without inadvertently reinforcing silos. Furthermore, it would be valuable for researchers to explore how organizational structures and leadership styles influence the relationship between collaboration and silo mentality.

In conclusion, this study contributes valuable insights into the factors influencing silo mentality among millennials in the Sri Lankan IT industry. By acknowledging the significance of communication and recognizing the nuances of collaboration, organizations can better navigate the challenges posed by the silo mentality and promote a more integrated and cohesive work environment.

References

1. Abdul-Jalal, H., Toulson, P., & Tweed, D. (2013). Knowledge Sharing Success for Sustaining Organizational Competitive Advantage. *International Conference on Economics and Business Research*, 150-157.
2. Abeysekera, R. (2017). Human resource management in Sri Lanka. In *International Human Resource Management* (pp. 115-131). Routledge.
3. Alreck, P. L., & Settle, R. B. (1995). *The Survey Research Handbook: Guidelines and Strategies for Conducting a Survey*. New York: IRWIN Professional Publishing.
4. Astikainen, R. F., Laukkanen, P. H., Lämsä, T., & Hyrkäs, E. (2017). Dealing with organizational silos with communities of practice and human resource management. *Journal of Workplace Learning*, 29(6), 473-489.

5. Azam, S. M. F., Yajid, M. S., Tham, J., Hamid, J. A., Khatibi, A., Johar, M. G. M. & Ariffin, I. A. (2021). *Research Methodology: Building Research Skills*. 1st Ed., McGraw-Hill Education (Malaysia) Sdn. Bhd.
6. Azam, S. M. F., Yajid, M. S., Tham, J., Hamid, J. A., Khatibi, A., Johar, M. G. M. & Ariffin, I. A. (2023). *Research Methodology: Building Research Skills*. 2nd Ed., McGraw-Hill Education (Malaysia) Sdn. Bhd.
7. Barik, H. S., & Rae, A. (2019). Knowledge sharing and innovation in siloed industries: The role of collaborative culture and structure. *European Journal of Innovation Management*, 22(4), 644-664.
8. Bass, B. M., & Bass, R. (2019). *The Bass handbook of leadership: Theory, research, and managerial applications* (5th ed.). Simon and Schuster.
9. Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2019). Digital Business Strategy: Toward a Next Generation of Insights. *MIS Quarterly*, 43(2), 541-562.
10. Billings-Harris, L. (2019). Diversity Collisions in the Workplace: Silo Mentality versus the Networked Reality. Retrieved from Ubuntu Global: <https://www.ubuntuglobal.com/diversity-collisions-workplace-silo-mentality-networked-reality/>
11. Bonface, A., Malenya, A. A., & Musiega, D. (2015). Effect of Managerial Expertise on Organizational Performance of Investment Banks in Kenya. *International Journal of Business and Management Invention*.
12. Bucăța, G. E., & Rizescu, M. A. (2017). The Impact of Effective Communication on Employee Performance. *Management Dynamics in the Knowledge Economy*, 5(1), 41-56.
13. Cameron, K. S., & Quinn, R. E. (2020). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. John Wiley & Sons.
14. Carmeli, A., Sheaffer, Z., Binyamin, G., & Halevi, M. Y. (2019). Unleashing the Innovation Potential of IT Employees: The Influence of High-Performance Work Systems and Engagement. *Journal of Management Information Systems*, 36(3), 958-996.
15. Cilliers, F., & Greyvenstein, H. (2012). The impact of silo mentality on team identity: An organisational case study. *SA Journal of Industrial Psychology*, 38(2).
16. CIO. (2020, January 23). Women in tech statistics: The hard truths of an uphill battle. Retrieved from CIO: <https://www.cio.com/article/3516012/women-in-tech-statistics-the-hard-truths-of-an-uphill-battle.html>
17. D'Aprix, R. (2009). *The credible company*. San Fransisco: Jossey-Bass.
18. De Silva, A. D. A., Khatibi, A. and Azam, S. M. F. (2017). Do the Demographic Differences Manifest in Motivation to Learn Science and Impact on Science Performance? Evidence from Sri Lanka, *International Journal of Science and Mathematics Education*, 16(S1), 47-67
19. De Vries, R. E., Zettler, I., Hilbig, B. E., & van Vianen, A. E. M. (2020). Integrating trait and cognitive-motivational conceptualizations of job performance: A meta-analysis. *Journal of Personality*, 88(5), 1057-1079.
20. Den Hartog, D. N., Sun, L. Y., & Fang, L. (2019). Promoting Creativity in Organizations: The Mediating Role of Challenging Work and the Moderating Role of Affective Commitment. *Group & Organization Management*, 44(6), 1103-1135.

21. Dewi, N, Azam, S. M. F. and Yusoff, S. K. M. (2019). Factors influencing the information quality of local government financial statement and financial accountability, *Management Science Letters*, 9 (9): 1373-1384
22. Dolphin, R. R. (2007). Internal Communications: Today's Strategic Imperative. *Journal of Marketing Communications*, 171-190.
23. Emmons, M. (2018, October 9). Key Statistics About Millennials In The Workplace. Retrieved from Dynamic Signal: <https://dynamicsignal.com/2018/10/09/key-statistics-millennials-in-the-workplace/>
24. Fernando, M. (2016). Impact of staff turnover on knowledge management in Sri Lankan software companies. University of Moratuwa Digital Library.
25. Flick, U. (2011). *Introducing research methodology: A beginner's guide to doing a research project*. Sage Journal.
26. Gao, T., Chai, Y., & Liu, Y. (2018). A review of knowledge management about theoretical conception and designing approaches. *International Journal of Crowd Science*.
27. García-Santos, G., & Marimon, F. (2021). The impact of organizational culture and silo mentality on environmental management system performance. *Business Strategy and the Environment*, 30(3), 1369-1384.
28. Gottschalk, P. (2014). *Silos, Politics and Turf Wars: A Leadership Fable about Destroying the Barriers That Turn Colleagues into Competitors*. Jossey-Bass.
29. Haque A., Sarwar, A., Azam, S. M. F. and Yasmin, F. (2014), "Total Quality Management Practices in the Islamic Banking Industry: Comparison between Bangladesh and Malaysian Islamic Bank", *International Journal of Ethics in Social Sciences*, 2 (1): 5-18.
30. Hofstede, G. (2021). Country Comparison - Hofstede Insights. Retrieved from <https://www.hofstede-insights.com/country-comparison/sri-lanka/>
31. Hossen, M. M., Salleh, M. S., Hassan, M. G., & Sayeed, A. A. (2020). An Empirical Study of Knowledge Sharing Effect on Innovation Performance in the Banking Sector of Bangladesh. *Global Business and Management Research: An International Journal*, 12(2), 241-249.
32. Hotaran, I. (2009). Silo Effect versus supply chain effect. *The Bucharest Academy of Economic Studies*.
33. Katukurunda, K. G. W. K., Yajid, S. M. A, Khatibi, A. and Azam, S. M. F. (2019). Students' Satisfaction towards Biosystems Technology; Does Programme Quality Matters? (Evidence From Sri Lankan Perspectives), *European Journal of Open Education and E-learning Studies*, 3 (2): 174-190
34. Kerlinger, F. N. (1986). *Foundations of Behavioral Research*. New York: Holt, Rinehart and Winston.
35. King, E., Finkelstein, L., Thomas, C., & Corrington, A. (2019). Generational Differences at Work Are Small. Thinking They're Big Effects Our Behaviour. *Harvard Business Review*
36. Kniberg, H. (2015). Scrum and XP from the Trenches. Retrieved from <https://www.infoq.com/minibooks/scrum-xp-from-the-trenches-2/>
37. Kolbjørnsrud, V. (2020). The Productivity Paradox in Digital Transformation. *MIT Sloan Management Review*, 61(3), 13-16.

38. Kuruwitaarachchi, N., Yajid, S. M. A, Khatibi, A. and Azam, S. M. F. (2019). Enhance the use of Internet Based Advanced Communication Technologies in Small and Medium Scale Enterprises in Sri Lanka, *European Journal of Social Sciences Studies*, 3 (2): 44-57
39. Lacity, M. C., Willcocks, L. P., & Craig, A. (2020). Digital Transformation in the Wake of COVID-19: A Focus on the IT Industry. *Journal of Strategic Information Systems*, 29(4), 101603.
40. Lange, D., Mavletova, A., Schwemmer, C., & Fischer, F. (2020). The mediating role of intrinsic motivation in the relationship between basic psychological needs and life satisfaction. *Personality and Individual Differences*, 156, 109801.
41. Laoyan, S. (2022, November 26). Organizational silos: 4 common issues and how to prevent them. Retrieved from Asana: <https://asana.com/resources/organizational-silos>
42. Laudon, K. C., & Laudon, J. P. (2019). *Management Information Systems: Managing the Digital Firm* (16th ed.). Pearson.
43. Lepore (2022) *From Silos to System: Building and Managing Organizations as Synchronised Networks for The Age of Complexity*. Smidigkonferansen.
44. Li, J., & Liu, Y. (2019). Cross-functional collaboration, silo mentality and new product performance: Evidence from China. *European Journal of Marketing*, 53(4), 760-782.
45. Lurie, J. (2019). Demystifying Generation Z: A Practical Approach for Nurturing Gen Z Teachers in the Digital Age. *TechTrends*, 63(6), 608-615.
46. Maghfuriyah, A., Azam, S. M. F. and Shukri, S. (2019). Market Structure and Islamic Banking Performance in Indonesia: An Error Correction Model, *Management Science Letters*, 9 (9): 1407-1418
47. May, T. (2011). *Social Research: Issues, Methods and Process* (4th ed.). McGraw-Hill Education.
48. Mishra, K. E., Boynton, L., & Mishra, A. K. (2014). Driving Employee Engagement: The Expanded Role of Internal Communications. *International Journal of Business Communication*, 9.
49. Molek, N., Jager, J. E., & Pucelj, M. (2023). Hero Culture and Silo Mentality: a Systematic Literature Review. *Journal of Universal Excellence*, , 1-17.
50. Molloy, E., Henderson, M., Phillips, M., Ryan, T., Boud, D., Dawson, P., & Mahoney, P. (2019). Conditions that enable effective feedback. *Higher Education Research and Development*, 1-16.
51. Nguyen, H. N., Tham, J, Khatibi, A. and Azam, S. M. F. (2019). Enhancing the Capacity of Tax Authorities and its Impact on Transfer Pricing Activities of FDI Enterprises in Ha Noi, Ho Chi Minh, Dong Nai, and Binh Duong Province of Vietnam, *Management Science Letters*, 9 (8): 1299-1310
52. Pambreni, Y., Khatibi, A., Azam, S. M. F. and Tham, J. (2019). The Influence of Total Quality Management toward Organization Performance, *Management Science Letters*, 9 (9): 1397-1406
53. Rachmawati, D., Shukri, S., Azam, S. M. F. and Khatibi, A. (2019). Factors Influencing Customers' Purchase Decision of Residential Property in Selangor, Malaysia, *Management Science Letters*, 9 (9): 1341-1348

54. Rainer, A. (2019). 6 Signs Silos Exist in Your Organization. Retrieved from Lifeway: <https://leadership.lifeway.com/2016/02/02/6-signs-that-silos-exist-in-your-organization/>
55. Raja, U., Johns, G., & Ntalianis, F. (2021). The impact of positive and negative affectivity on job performance and satisfaction: A meta-analysis. *Journal of Organizational Behavior*, 42(3), 236-258.
56. Rassloff, J. (2019, February 14). Collaboration is Critical to Success. Retrieved from KPMG: <https://home.kpmg/xx/en/blogs/home/posts/2019/02/collaboration-is-critical-to-success.html>
57. Reuber, R. (1997). Management experience and management expertise. *Decision Support Systems*.
58. Ribeiro, N., Giacoman, C., & Trantham, S. (2016). Building trust and safety: A leader's guide to team psychological safety. *The International Journal of Business and Finance Research*, 10(1), 49-62.
59. Sauro, J. (2011). *A Practical Guide to the System Usability Scale: Background, Benchmarks & Best Practices*. Measuring Usability LLC.
60. Shaffer, J. (2008). *Gen Y talent: How to attract and retain the young and the restless*. California: CA: Saba.
61. Shahzad, F., Xie, L., & Sarfraz, M. (2020). The impact of agile leadership on firm performance: The moderating role of environmental dynamism and market turbulence. *Sustainability*, 12(18), 7306.
62. Si Xue, C. T. (2017). *A Literature Review on Knowledge Management in Organizations*. Research Gate.
63. SL EDB. (2022). Sri Lanka Export Development Board . Retrieved from Sri Lanka Business: <https://www.srilankabusiness.com/>
64. SLASSCOM. (2023). SLASSCOM. Retrieved from www.slasscom.lk: <https://slasscom.lk/reports/>
65. Smith, A. N., & Anderson, C. A. (2020). The Significance of the IT Industry on a Global Scale. *International Journal of Information Management*, 50, 92-98.
66. Smith, C. N., & Davidson, M. N. (2021). The Value of Lifelong Learning in a Rapidly Changing World: An Examination of Millennials. *Journal of Lifelong Learning*, 30(1), 50-68.
67. Sutherland, J., Schwaber, K., & Beck, K. (2017). *Agile Manifesto*. Retrieved from <http://www.agilemanifesto.org/>
68. Syverson, C. (2011). What determines productivity? *Journal of Economic literature*. (Hotaran, 2009)
69. Szabla, D. B., & Teece, D. J. (Ur.). (2021). *The Palgrave Handbook of Organizational Change Thinkers*. Springer International Publishing.
70. Tang, J., Chen, X., & Zhang, L. (2020). The Impact of Collaborative Communication on Knowledge Sharing and Performance in Construction Projects. *Frontiers in Psychology*, 11, 1074.
71. Tarofder, A. K. and Azam, S. M. F. and Jalal, A. N. (2017), "Operational or Strategic Benefits: Empirical Investigation of Internet Adoption in Supply Chain Management", *Management Research Review*, 40 (1): 28-52

72. Tham, J., Yazid, M. S. A, Khatibi, A. A. and Azam, S. M. F. (2017), "Internet and Data Security – Understanding Customer Perception on Trusting Virtual Banking Security in Malaysia", *European Journal of Social Sciences Studies*, 2 (7): 186-207
73. TTC Innovations. (2017, March 2). How Millennials are Changing Workplace Communication. Retrieved from TTC Innovations: <https://www.ttcinnovations.com/how-millennials-are-changing-workplace-communication/>
74. Twenge, J. M. (2020). *iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood*. Atria Books.
75. Udriyah, U., Tham, J. and Azam, S. M. F. (2019). The Effects of Market Orientation and Innovation on Competitive Advantage and Business Performance of Textile SMEs, *Management Science Letters*, 9 (9): 1419-1428
76. Van den Bossche, P., Segers, M., & Jansen, N. (2019). Transfer of training: The role of feedback in supportive social networks. *International Journal of Training and Development*, 23(2), 95-110.
77. Waal, A. d., Weaver, M., Day, T., & Heijden, B. v. (2019). Silo-Busting: Overcoming the Greatest Threat to Organizational Performance 11(23).
78. Weiss, J., & Hughes, J. (2005). Want Collaboration? *Harvard Business Review*, 93-101.
79. Werhane, P. H. (2013). *SILO MENTALITY AND ITS ETHICAL CHALLENGES IN THE DEFENSE INDUSTRY*. University of Virginia and DePaul University .
80. Wijesinha, A. (2018, August 18). Sri Lanka's innovation and entrepreneurship strategy: An agenda to boost economic dynamism. *Sunday Observe*
81. Will, M. G. (2019). Organisational Structures for Tech Firms. In *Management for Scientists* (pp. 49-64).
82. World Bank. (2021). Sri Lanka: Leveraging the IT-ITES Industry for Export Growth. Retrieved from <https://openknowledge.worldbank.org/handle/10986/35304>
83. Xu, W., Fu, X., & Wu, C. (2020). How transformational leadership influences employee voice behavior through moral identity and intrinsic motivation: A moderated mediation model. *Frontiers in Psychology*, 11, 2385.
84. Zhang, Y., & Li, W. (2020). Silo mentality, corporate social responsibility, and firm performance. *Sustainability*, 12(8), 3187.