

**AN EXPLORATORY STUDY OF PRIVATE COMPANIES IN MALAYSIA:
CRITICAL SUCCESS FACTORS FOR ENTERPRISE IT RISK MANAGEMENT**

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INTRODUCTION

Malaysia's dynamic economy is characterized by a thriving private sector that heavily relies on information technology (IT) systems and infrastructure to drive operational efficiency, customer engagement, and market competitiveness. However, this reliance exposes organizations to various IT-related risks, including data breaches, system vulnerabilities, and regulatory non-compliance. Consequently, Enterprise IT Risk Management (EITRM) has garnered heightened attention as a proactive strategy to identify, assess, and mitigate potential IT risks that could undermine organizational objectives. Despite the recognition of the critical role of EITRM, a notable gap exists in understanding the specific factors that contribute to its successful implementation within private companies in Malaysia (Said et al., 2020). While several global studies have explored critical success factors (CSFs) in risk management practices (Zhu et al., 2023; Jæger et al., 2020), there remains a gap in understanding the specific factors that contribute to successful EITRM implementation within the context of private companies in Malaysia. The scarcity of research focused on this specific context underscores the need for an exploratory study that endeavors to unearth the intricacies of CSFs for EITRM within Malaysian private companies (Omer et al., 2019). This paper aims to address this gap by exploring the pivotal factors driving the successful adoption and execution of EITRM strategies within the Malaysian private sector. This endeavor prompts a critical question: (1) What are the factors that contribute to the successful adoption and execution of EITRM strategies within private companies in Malaysia, (2) How can they be categorized, and (3) What is the comparative significance of each factor in relation to the others. The primary objective of this study is to conduct an in-depth exploration of the CSFs for EIRM within private companies in Malaysia. Specifically, this paper seeks to identify and categorize the CSFs that are considered pivotal for successful EITRM implementation and assess their relative importance using the Analytical Hierarchy Process (AHP).

MATERIALS AND METHODS

This paper employs a mixed-methods research design that integrates deductive and inductive approaches (see Figure 1). For the deductive approach, the research begins with a pre-established theoretical framework derived from existing literature on Enterprise IT Risk Management (EITRM) and critical success factors (CSFs). Simultaneously, for the inductive approach, this paper aims to allow emerging themes and insights from the interviews to identify the CSFs for EITRM. According to Creswell and Clark (2017), the deductive approach functions as a top-down strategy, moving from theory to data, while the inductive approach operates as a bottom-up methodology, where theory is derived from identifying connections among themes that surface from participants' perspectives.

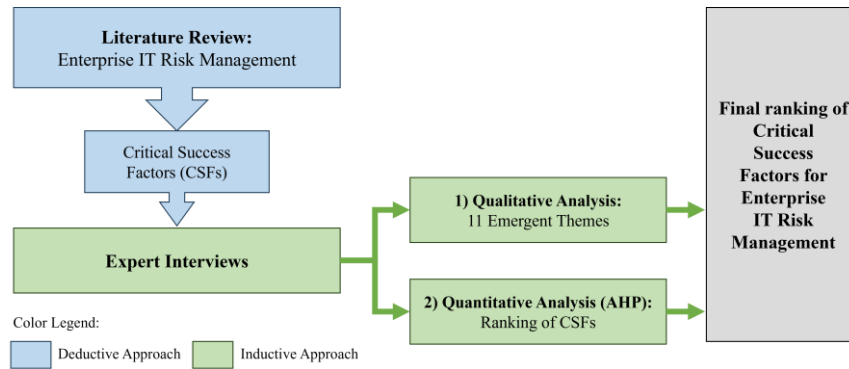


Figure 1: Research Methodology

This paper engages Synder’s (2019) suggested deductive approach, which involves the initial application of the pre-established CSFs within the EITRM domain derived from existing literature onto the expert interview data. Purposeful sampling is utilized for this expert interview to select six private companies in Malaysia, representing a diverse range of industries, sizes, and IT maturity levels. Semi-structured interviews with open-ended questions are conducted with the key stakeholders within each company, including IT managers, risk managers, and senior executives. Each interview is recorded and transcribed for thorough analysis. A qualitative analysis of the open coding process is used where interview data is analyzed, and data related to each predefined CSF are iteratively grouped into themes and subthemes, capturing novel insights and providing a richer understanding of EITRM practices within Malaysian private companies. In the quantitative analysis, the Analytic Hierarchy Process (AHP) is utilized to compare each CSF with others and establish their relative significance. This method was chosen because most of the research related to risk management (Nguyen & Tran, 2023; Eskander, 2018) and CSF (Teguh Raharjo, 2023; Merhi, 2023) are conducted and used AHP methodology in their research. This method also determines the ranking of CSFs for EITRM. The findings from deductive and inductive analyses are compared to identify points of convergence and divergence. The final phase involves integrating the results of both approaches to develop a list of ranked CSFs for EITRM within private companies in Malaysia.

RESULTS AND DISCUSSION

Based on the review of the literature, this paper has identified a total of eleven CSFs for EITRM. These CSFs are: (1) organizational structure, roles, and responsibilities, (2) organizational culture and cultural imperative, (3) communication, (4) trust, (5) information technology (IT) and IT infrastructure, (6) training, (7) clear objectives, goals, procedures, planning and strategies, (8) change management, (9) top-level management support and commitment, (10) sponsor/champion/leadership, and (11) user involvement.

Emergent Themes Related to CSFs for EITRM

From the qualitative data analysis, this paper identified four prevailing themes and eleven subthemes (refer to Figure 2) related to CSFs for EITRM.

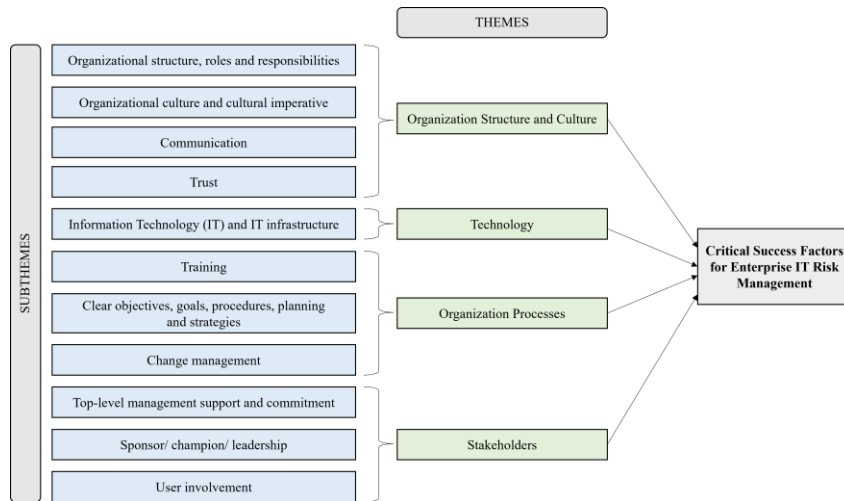


Figure 2: Emergent themes related to CSFs for EITRM

The first theme from the qualitative data analysis is centered around organizational structure and culture. This theme highlights the significance of a well-defined hierarchy, clear reporting relationships with clear roles and responsibilities, and a culture and cultural imperative that encourages open communication and trust when involved in risk management. The second theme centers on technology as a critical factor in EITRM. This theme underscores the importance of leveraging advanced tools, cybersecurity solutions, and innovative technologies to effectively identify, assess, and mitigate IT-related risks. The third theme that surfaced pertains to organization processes. This theme emphasizes developing and implementing streamlined workflows and standardized risk identification, assessment, and mitigation procedures. Effective organization processes, especially training and change management, contribute to consistent risk management practices and facilitate the coordination of efforts across departments. The fourth theme revolves around stakeholders’ engagement in EITRM. This theme underscores the significance of involving various stakeholders, including employees, management, customers, and partners, in the risk management process. Engaged stakeholders contribute diverse perspectives and expertise, leading to a comprehensive understanding of risks and informed decision-making. Hence, these themes collectively provide insights into the CSFs for effective EITRM, as revealed by the qualitative data analysis.

Quantitative Ranking of CSFs for EITRM

Utilizing the insights from the qualitative analysis that accentuate eleven CSFs for EITRM, these CSFs are sequentially labeled from CSF1 to CSF11 for implementation within the AHP. This process entails a systematic comparison and prioritization of each CSF. The result of the pairwise comparison matrix for the AHP analysis is shown in the table below (refer to Table 1).

Table 1: Critical Success Factors (CSFs) Pair Comparison Matrix with Ranking Result

	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	CSF7	CSF8	CSF9	CSF10	CSF11	Totals (Weight and add)	Overall Priorities (Normalize Totals)	Ranking
CSF1	1	3	2	6	2	2	2	2	1	3	3	27.00	0.15	1
CSF2	1/3	1	1/2	3	1/2	1/2	1/2	1/2	1/3	1	1	9.16	0.05	6
CSF3	1/2	2	1	4	2	2	2	2	1	2	2	20.50	0.12	2
CSF4	1/6	1/3	1/4	1	1/4	1/4	1/4	1/4	1/6	1/3	1/3	3.58	0.02	7
CSF5	1/2	2	1	4	1	2	1	2	1	2	2	18.50	0.11	3
CSF6	1/2	2	1	4	1	1	1	2	1	2	2	17.50	0.10	4
CSF7	1/2	2	1	4	1	1	1	2	1	2	2	17.50	0.10	4
CSF8	1/2	2	1	4	1	1	1	1	1	2	2	16.50	0.09	5
CSF9	1	3	2	6	2	2	2	2	1	3	3	27.00	0.15	1
CSF10	1/3	1	1/2	3	1/2	1/2	1/2	1/2	1/3	1	1	9.16	0.05	6
CSF11	1/3	1	1/2	3	1/2	1/2	1/2	1/2	1/3	1	1	9.16	0.05	6

In the table above, each cell contains the relative importance score of CSFs from CSF1 until CSF11, based on the number of implementations. The values are derived from the reciprocal of the ratio of implementations. For instance, the value in the cell (CSF2, CSF1) is 3, indicating that CSF1 is considered three times more important than CSF2. This matrix serves as the foundation for the AHP analysis, which calculates the weights and priorities of the CSFs based on their relative importance. The results of this calculation provide insights into the hierarchical significance of the CSFs within the context of EITRM.

CONCLUSION

This paper's comprehensive analysis using both qualitative and quantitative methods has yielded insightful outcomes that offer practitioners and decision-makers a refined identification and categorization of pivotal CSFs, which represent a crucial step towards tailoring EITRM strategies to address the distinct risk landscape of the Malaysian business environment.

These nuanced insights enhance the strategic toolkit for local private companies, strengthening their digital assets while fostering innovation. Thus, achieving this paper's objectives contributes significantly to the advancement of EITRM knowledge and practices in Malaysia's private sector. The tailored understanding of CSFs, their categorization, and the AHP-based ranking empowers organizations with strategies to navigate the digital landscape while safeguarding assets and competitiveness. However, it is important to note that this paper focuses on Malaysian private companies, thus limiting the generalizability to other geographical or organizational contexts. The exclusive sample could also restrict broader CSF applicability. Additionally, relying on AHP might overlook contextual factors impacting CSF's importance across diverse organizations and industries.

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