The Effects of Knowledge Sharing on IT Risk management Performance

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Abstract: The paper aims to develop a model for comprehensive implementation of IT risk management (ITRM) from risk-related knowledge of involved stakeholders. The literature review indicated a need to gain a greater understanding of the effectiveness ITRM process. This qualitative study adopts a subjectivist epistemology, complemented with an interpretive paradigm and inductive reasoning. The findings provide new insights in relation to ITRM implementation by considering knowledge sharing. The outcomes of this research are expected to benefit practitioners and researchers through exploring key factors that can facilitate stakeholders to share their knowledge from an IT project to another.

Keywords Knowledge Sharing, Risk Management, IS Implementation, Qualitative Research

1. Introduction

The effectiveness of ITRM is particularly important for organization (Ngwenyama et al. 2021). Organizations have increasingly adopted ITRM; however, there are many difficulties involved in implementing ITRM effectively (Azizi et al. 2019).

Ngwenyama et al. (2021) pointed out that the effectiveness of ITRM process implementation is commonly recognized as an organizational learning process, because organizations implementing ITRM not only need to acquire IT risk-related knowledge or experiences, but also require employees to internalize these lessons. During the learning process, one important knowledge issue refers to the gap between the acquisition of tacit IT risk-related knowledge and the use of the knowledge within an organization to mitigate IT risks.

According to Moser & Deichmann (2021), employees may repeat mistakes and perform rework in implementing processes because of their inability to apply and tailor the obtained knowledge. Despite the significance of the ITRM knowledge gap, however, few studies have investigated the measures that organizations can adopt to resolve it (Pearce 2019). In the context of the effectiveness of ITRM process implementation, KS helps organizations target and absorb tacit IT risk-related knowledge, and deploy this knowledge in their processes, routines, and operations (Pearce 2019).

This study will propose a conceptual framework that attempts to link KS, the effectiveness of ITRM implementation. This perspective regards humans as active agents and their behaviour as generally indeterminate. A series of four case studies will be designed around 20 semi-structured in-depth interviews to investigate how and why IT managers and their IT teams implemented ITRM. The theory generated from the empirical findings will suggest that the intentions and actions of IT department's members, the processes they enact, as well as the organisational context into which they are implemented, critically influence ITRM implementation.

2. Literature Review

2.1 IT Risk Management (ITRM)

The ITRM process consists from is a structured, systematic and reoccurring process which can facilitate organisations for handling information on uncertainties in results of technological, cognitive and sociological aspects of information technology and thereby informs decision-making (Jean-Jules & Vicente 2021; Ngwenyama et al. 2021). Jean-Jules & Vicente (2021) pointed out that the evolution of ITRM to the holistic view

of effective ITRM requires the destruction of barriers between organizational silos and the exchange and application of knowledge from different ITRM areas. The main difference between ITRM and effective ITRM is in the enterprise strategic view of risk analysis for the whole organization as opposed to RM's "silo view".

Naeve et al. (2008) pointed out that organizations that lack effective learning processes will experience the knowledge gap, influencing their abilities to acquire and utilize IT risk-related knowledge, thus hindering the effectiveness of ITRM, i.e. achieving and sustaining the ITRM. Despite the significance of the ITRM knowledge gap, however, few studies have investigated the measures that organizations can adopt to resolve it. In this research, we develop a research focusing on organizations learning processes to fill the knowledge gap and eventually achieve the effectiveness of ITRM process. It is argued that without more emphasis on the dynamic nature of the implementation process, an incomplete understanding of the problem will result.

2.2 The Concept of Knowledge Sharing (KS)

KS defines as "the act of placing knowledge possessed by an individual at the disposition of others within the organization" (Suppiah & Singh Sandhu, 2011), it has identified as a key factor in innovation by directly influencing product innovation, radical innovation (Alavi, et al., 2006; Azizi et al. 2019) and innovation capability. KS has been recognised a major challenge in the field of knowledge management (Nonaka & Takeuchi, 1995). The main problem of KS resides in the transfer of knowledge from one department to another.

The researcher such as Kucharska (2021) investigated effective factors on KS can be divided into three main groups: individual, organizational, and technological. At an individual level, effective factors on KS are mostly associated to elements such as lack of trust, and lack of communication skills, at an organisational level, these factors can be considered as lack of organisational culture (OC), lack of resources, at a technology level, these factors seem to correlate with factors such as lack of training, lack of alignment IT systems and processes KS and so on.

According to De Moraes et al., (2022), it is impossible that an organisation manages its risks effectively without managing its knowledge. A project failure can be the result of lack of knowledge between the project team, lack of KS during project progress, capturing the appropriate knowledge at an inappropriate time of the project (Haass & Azizi, 2020; Özkan et al. 2021). Actually, without KS as a facilitator to communicate risks among people of a project team, RM might suffer from ineffectiveness and inefficiencies. Hence, most authors recognized how well integrated KS and ERM are vital to improve IT projects executions.

2.3 Factors Influencing the Effectiveness of RM

This category of success factors of ITRM is related to the people who are involved (their interpretations), influence on, or are influenced (their needs and motivation) by the RM. Thus, success factors in this categorisation is based on interpretation and values and beliefs of organisations' members. Considering participation, social network, communication, knowledge sharing, trust between individual and experience levels can be identified as key success factors (Haass & Azizi, 2019; Öbrand et al. 2019).

The most frequent subcategory of success factors in this group is culture including the dimensions of the organisations in which RM is performed such as values and believes, motivating to encourage more effective collaboration, and flexibility (Sha et al., 2020). Azizi & Rowlands (2020) pointed out the importance of OC in which values and expectations for sharing of experiences to mitigate risks, need to be developed widely and effectively throughout the organisation. However, OC plays a key role in the RM framework. There are needs to have a constant and continuous communication on values and on processes that can enhance sharing of experiences and early identification of risks (Azizi & Rowlands, 2019).

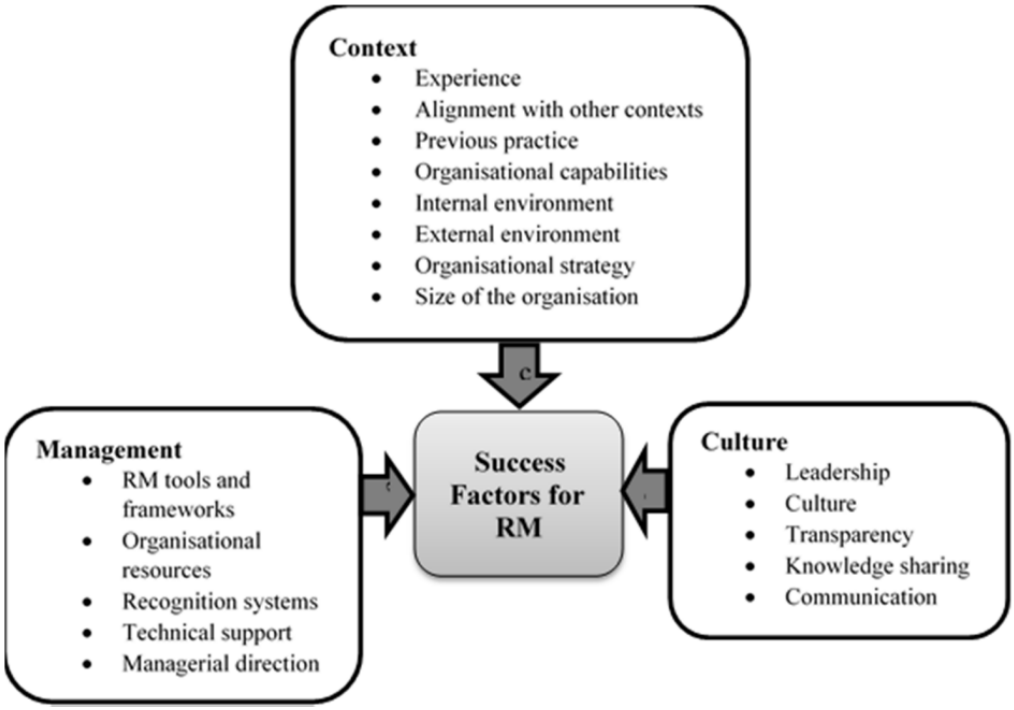

Figure 1: Categories and Subcategories of Success Factors for RM Success

3. A Conceptual Model of a Successful Implementation of ITRM

This research will develop a model for assistance in understanding implementation of ITRM, and considers a number of different aspects of context that are likely to be involved in the implementation. From the socio-technical perspective, it seems reasonable to explore the concept of ITRM schemes requires some understanding of IT people per se and perhaps some interpretation of the assumed link between human and non-human resources.

This research presents the factors that are posited to be linked to the implementation process and their conceptual and/or empirical support in the literature. These success factors were initially categorised in 3 categories. Figure 1 illustrates the categories and subcategories of factors. The problem of how these factors intertwine over time and influence an implementation outcome – the process – remains unknown.

Based on the findings of literature review and in line with our research a conceptual model will be constructed by grouping the various contextual issues into three distinct, but interrelated categories. However, what is missing from this model is a description of the dynamics of how these factors interact over time. This study will argue that researchers have not adequately examined the implementation issues involved in individual own perceptions and a specific type of IT artefact (ITRM); that is, the dynamic set of contextual elements interacting with one another over time leading to a successful implementation.

4. Research Method

This research proposes a two-stage research design (see Figure 1). In Step 1, we have identified from prior literature, a relationship between KS and ITRM success. We interpreted the three success factors to link them to KS and cultural values underlying ITRM as shown in Figure 1. At this step, it is argued that a KS culture is indeed needed and must be integrated effectively with IT-RM to ensure correct execution. In Step 2, this research will employ a qualitative study within a paradigm helping the researcher to explore data from selected documents. The statistical population of the research is the employees present in a scientific research organization. This study adopts a subjectivist epistemology, complemented with an interpretive paradigm and inductive reasoning.

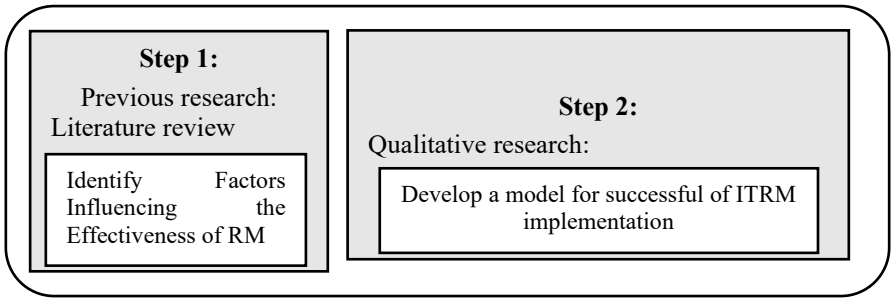

Figure 2: Research Method

5. Conclusion and Overview of Next Phase of Research

The KM and ITRM concepts increase the employees' and working teams' productivity, communications, cooperation and assistances among people, encourages team collaboration, reduces the ratio of errors, enhances employees' participation and engagement in organizational issues. ITRM significantly helps IT managers achieve this objective by encouraging people to do beyond what is determined as their job description.

This paper is a research-in-progress focusing on understanding the relationships between KM and ITRM as well as proposing an appropriate method to analyze the collected data. Our exploratory research will develop a success model and address a lack of a theoretical research to steer empirical studies that can contribute to the domain of management field. This research includes a two-step research design that was introduced in Figure 2.

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