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Relational Capital, Knowledge Sharing, and Innovation Performance in Manufacturing SMEs: A Conceptual Perspective

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Abstract
Purpose: Using Resource Based View (RBV) theory, this study aims to investigate internal and external relational capital as determinants of knowledge sharing and innovation performance in Malaysian manufacturing SMEs.
Design/methodology/approach: A conceptual framework was constructed from interdisciplinary sources on manufacturing SME innovation performance based on relational capital and knowledge sharing.
Findings: In manufacturing SMEs, relational capital is a factor of innovation performance. Knowledge sharing is also a beneficial mediator in the relationship between innovation and performance.
Research limitations/implications: This study only refer to a specific subsector of manufacturing such as Chemical, Electrical & Engineering, Machinery industries, Aerospace and Medical Device in Malaysia.
Practical implications: To understand the relational capital and sharing knowledge that helps SMEs improve innovation performance. The conceptual framework may use as a foundation for future empirical study and offer owners/managers of SMEs on the variables that strengthen the firm's innovation performance.
Originality/value: To the best authors' knowledge, this is the first study to examine the relationship between internal relational capital, external relational capital and knowledge sharing and test the effects of innovation perfomance in Manufacturing SMEs, Malaysia.

Keywords: Relational Capital, Innovation Performance, Knowledge Sharing, Resource-Based View (RBV), Small and Medium Enterprises

Introduction

The current business environment is more challenging compared to the last five years. This is a worldwide phenomenon as businesses have been transitioning to the digital economy era. As a result, innovation has become an important benchmark for firm performance. SMEs that use new technologies are more innovative than SMEs that do not use technology to operate their firm. Generally, SMEs is less innovative compared to large firm (OECD,2018).

The main driving factor for business growth is innovation (Zhao et al., 2013). As a result, examining the elements that influence the development of innovation performance has become an essential component of improving organisational innovation capability. The ability to innovate is a key determinant of an organization's success or failure (Fores and Camison, 2016). Therefore, The Malaysian government has established several programmes and initiatives to encourage SMEs to be innovative (Abdullah et al., 2009). However, according to Mazidah et al. (2014), a large percentage of Malaysian SMEs overlook the importance of innovation and technology in their operations. As in SME Masterplan (2012-2020), the focus is to encourage innovation-led growth for SMEs. Although innovation performance is important for SMEs, relational capital has become a determinant for SMEs in gaining competitive advantages. Relational capital emphasis on relationship and networking roles to ensure knowledge exploration within SMEs. Wang and Wang (2012) study emphasize that knowledge sharing is an innovative, collaborative tool for SMEs to acquire new knowledge, new techniques, solve a problem and create core capabilities. To survive and expand further, businesses must adapt their methods of getting creative resources or information from outside or worldwide (Huang, 2011).

SMEs which are unprepared for the knowledge economy shift from traditional business will find it challenging to survive and perform in this competitive environment. Therefore, Malaysia needs to have more innovative performance SMEs among Manufacturing to increase the Gross Domestic Product (GDP) and export as mentioned in the Malaysia Plan.

According to previous studies, very few studies have focused on manufacturing SMEs' performance in terms of innovation in Malaysia. Hence, this study intends to concentrate on understanding the relationship of relational capital, knowledge sharing and innovation performance of manufacturing SMEs in Malaysia by proposing four research questions as below:

RQ1: What influence does internal relational capital have on knowledge sharing among Malaysian Manufacturing SMEs?

RQ2: What is the effect of external relational capital on knowledge sharing among Malaysian Manufacturing SMEs?

RQ3: What is the relationship between knowledge sharing towards innovation performance in Malaysian Manufacturing SMEs?

RQ4: Does knowledge sharing in Malaysian manufacturing SMEs mitigate the link between external and internal capital and innovation performance?

In response to these research concerns, this paper develops a conceptual model that explains the link between internal relational capital, external relational capital, knowledge sharing, and innovation performance in manufacturing SMEs.

Literature Review

Innovation performance

SMEs' innovativeness refers to a company's capacity to learn from various sources and adopt ideas from both within and outside of its existing market (Fernando et al., 2013). According to Buenchea-Elberdin et al. (2018), firm innovation includes creating, developing, commercializing, and improving products, services, techniques, processes, and business models. Fernando et al. (2013) notice that innovations are different from the perspective of the services and manufacturing industry in terms of investment to develop innovations. Based on previous studies, the firm innovation performance is linked to innovation capability (Terziovski & Samson, 2007; Vicente et al., 2015; Yeşil & Doğan, 2019). Moreover, firm innovation capability can be improved by adopting new technology (Li et al., 2019). In this study, innovation performance in manufacturing SMEs refers to the development of new products, processes, or techniques. Therefore, innovation performance is identified as the important indicator for SMEs to create a competitive advantage in the industry.

Internal Relational Capital

Internal relational capital refers to a relationship established on a network to accumulate knowledge (Edvinsson & Malone, 1997). The internal relational capital is known as relational social capital. According to Kong and Farrell (2010), internal relational capital factors include employees' loyalty, customer value, commitment and mutual trust of strategic partners, and firm reputations. Internal relational capital is salient to ensure internal communication across different departments and roles able to collaborate effectively and efficiently within SMEs. Additionally, knowledge and resources transfer between the firm and stakeholders can be facilitated, which benefit the firm (Wang et al., 2018).

External Relational Capital

External relational capital refers to a firm's relationship with external structure (Buenchea-Elberdin et al., 2018). Thus, the external relational capital is known as relational intellectual capital. According to Li et al. (2019), external relational capital factors consist of relationships with customers, suppliers, governments, or other stakeholders based on trust, commitment, and respect. In addition, through cooperation, experiences, and lessons learned from others, external relational capital focuses on improving connections with partners and consumers (Cousins et al., 2006).

Knowledge Sharing

Knowledge sharing refers to knowledge transmission or transferring from various forms such as an individual, group or organization to another through several media (McAdam et al., 2012; Wen & Qiang, 2016). Knowledge is an essential resource for the organization to gain a competitive edge in today's knowledge-based economy (Danskin et al., 2005; Wang, 2013). In human and organizational capital, knowledge sharing may impact individual and organizational capabilities and competencies while also strengthening the organization's intellectual capital (Wang et al., 2014; Akhavan & Khosravian, 2016). Furthermore, external obtained knowledge shared, integrated, and exploited through organizational learning can be converted into new goods, technologies, and services to fulfil consumer demands and increase business innovation performance (Li et al., 2019). Hence, knowledge sharing is important as a firm without proper knowledge are dead inside and unable to utilize the resources to enhance and improve firm innovation performance (Vafaei-Zadeh et al., 2019).

Resource-Based View (RBV)

Resource-Based View (RBV) theory perceives organization resources are salient for outstanding firm performance, consisting of four indicators: valuable, rare, imperfectly imitable, and imperfectly substitutable (Barney, 1991). Two types of resources have been identified in RBV such as tangible assets (physical items) and intangible assets (non-physical items). The source of an organization is possessed heterogeneous and immobile resources, which empower an organization to gain a competitive advantage. The manufacturing industry was chosen in this study because it is not only a significant contributor to Malaysia's GDP under the 11th Malaysia Plan, but it may also create more job opportunities for Malaysians.

Hypothesis Development

Five hypotheses have been established to examine the relationship between all of the variables depicted in Figure 1. First, this study examines the relationship between internal and external relational capital and knowledge sharing. Then, followed by the relationship between knowledge sharing and innovation performance. Finally, utilize knowledge sharing roles as mediator between the internal and external relational capital and innovation performance of manufacturing sectors in Malaysia.

The linkage of Internal Relational Capital and Knowledge Sharing

The emotive character of interpersonal behavior that fosters knowledge sharing is known as internal relational capital (Chang and Chuang, 2011). When employees trust one another, they are more ready to share information (Maurer etal., 2011). When employees exhibit this behaviour, they are more inclined to seek information and support. Internal relational capital is a primary determinant in knowledge sharing (Kim & Lee, 2010). The internal relational capital involves building relationships across internal departments such as stakeholders and employees to encourage knowledge-sharing for innovation performance. SMEs that capitalise relational resources to create trusting relationships with employees, assist them in tough circumstances, and provide a cooperative atmosphere for sharing important information and knowledge should be able to increase their knowledge sharing. Hence, the below hypothesis has developed accordingly:

H1: *Internal relational capital has a significant impact on knowledge sharing in Malaysia's manufacturing sectors.*

The linkage of External Relational Capital and Knowledge Sharing

The degree of engagement with significant external partners is the major emphasis of external relational capital (Chang and Chuang, 2011). It enables organizations and their external partners (such as suppliers) to create a collaborative working environment (Chowdhury et al., 2017; Preston et al., 2017), as well as the sharing of deeper and tacit knowledge and complementary information. Li et al. (2019) advocates those ideas and information from external relational capital such as alliance partners may be leveraged to increase a company's value. Besides that, inter-firm relationships with efficient knowledge sharing can create a competitive advantage (Krishnan et al., 2006). Hence, this study hypothesized that:

H2: *External relational capital has a significant impact on knowledge sharing in Malaysia's manufacturing sectors.*

The linkage of Knowledge Sharing and Innovation Performance

Knowledge sharing may be characterised as interpersonal communication that includes both communicating and receiving information from others. It, like human interaction, is one of the primary means of knowledge transfer (Saenz et al., 2009). Based on previous studies Jantunen

et al. (2008); and Saenz et al. (2009), a firm that adopts knowledge sharing inside a team or throughout the organization is more likely to present new ideas for business possibilities, promoting innovation and boosting innovation performance (Hener & Shariff, 2008; Lundvall & Nielsen, 2007). Furthermore, knowledge sharing has been shown to impact innovation performance positively (Qammach, 2016). Estrada et al. (2016) state that knowledge sharing can enhance a firm's capability to innovate and contribute to innovation performance. Hence, the following hypothesis develop:
H3: *Knowledge sharing positively affects innovation performance in Malaysia's manufacturing sectors.*

The linkage of Relational Capital (Internal and External) and Knowledge Sharing on Innovation Performance
Li et al. (2019) study point out that firms improve innovation performance by referencing the solutions of other businesses or integrating their expertise with access to the available information. Additionally, internal and external relational capital describes the information shared inside and outside the organization (Buenchea-Elberdin et al., 2018). Hence, the below hypothesis develops:
H4: *Knowledge sharing mediates the relationship between internal relational capital and innovation performance of manufacturing sectors in Malaysia.*
H5: *Knowledge sharing mediates the relationship between external relational capital and innovation performance of manufacturing sectors in Malaysia.*

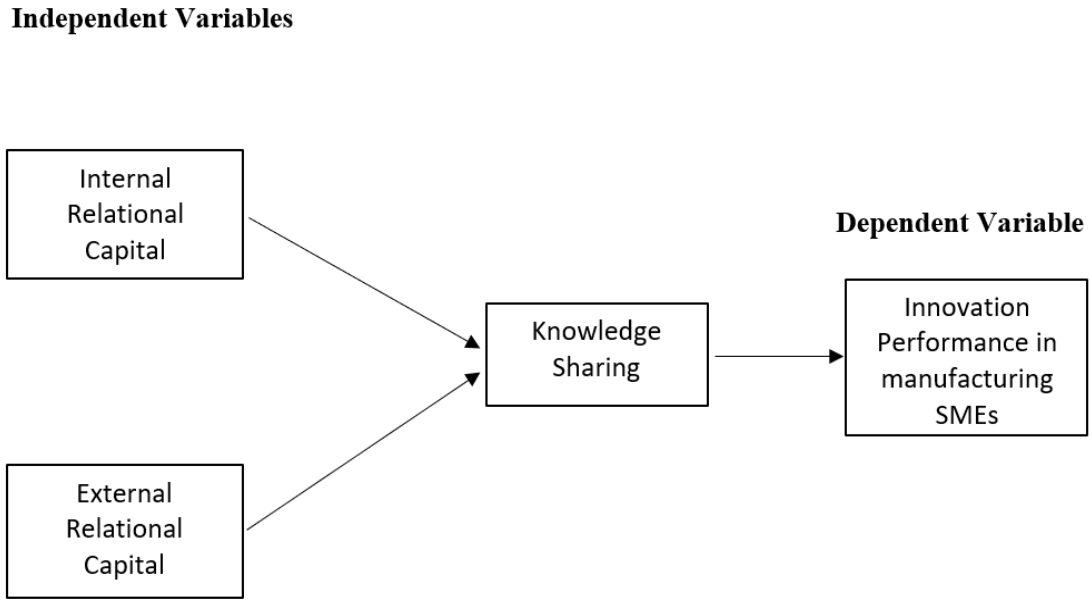

Figure 1: Conceptual Framework

Methods
A set of questionnaires will be distributed to respondents according to the purposive sampling method. The purposive sampling method refers to specific characteristics of the population according to the study's objective. The target respondents list obtained from The Federation of

Malaysian Manufacturers (FMM) directory of 2019 and required to fulfil the below criteria to participate in this study:

a) Manufacturing subsectors such as Chemical, Electrical & Engineering, Machinery industries, Aerospace and Medical Device.
b) Manufacturing was established more than five years in Malaysia.
c) Manufacturing has fewer than 200 full-time employees and sales turnover of less than RM50 million

Once the target respondent is identified, a formal invitation will be sent with an extensive cover letter explaining the study objective to the participant in advance. Then, the questionnaire survey link will be distributed via electronic methods such as e-mail, WhatsApp and Telegram. Finally, a reminder will be sent to the respondent who cannot complete the survey after three weeks.

Discussion and Conclusion

Knowledge sharing was discussed, and it was discovered that it had a direct impact on organisational innovation performance. One rationale is because employees are the major source of knowledge sharing. When employees share their expertise with others outside the organization, the inventory of enterprise knowledge resources grows, and the knowledge application process must include knowledge screening and selection. This phase requires a substantial knowledge reserve and the capacity to discriminate. Knowledge sharing may help organisations and the outside world communicate more often. When outside organisations are unable to comprehend the information given by organisations, the latter acquires relevant items or services, which may foster mutual exchange of information and collaboration, therefore improving individual creativity and organisational performance.

Thus, SMEs must leverage their competitive advantage and innovativeness to improve their innovation skills to improve their performance. The innovative performance can be enhanced with internal and external relational capital, which facilitates knowledge sharing. According to Twelfth Malaysia Plan (12th MP), efforts and initiatives will focus on developing entrepreneurs' capabilities in SMEs to enhance competitiveness, especially in high impact industry include the electrical and electronics industry and aerospace

This conceptual paper successfully determines the internal relational capital and external relational capital relationship with innovation performance in Manufacturing SME in Malaysia by underpinning RBV theory. Taking the current debate that Malaysian SMEs lacks innovation performance, this study hopes to encourage more discussion and development of theories related to SMEs innovation performance.

Theoretical Implications

This study provides a theoretical perspective on internal relational capital and external relational capital on the impact of innovation performance among Manufacturing SMEs in Malaysia. Based on previous studies, Innovation Theory has been used to underpin a firm's product innovation performance. However, RBV theory is chosen in this study because it stated that businesses should examine their organizations utilizing current resources and identify new ways to gain new skills or grow for new opportunities. Besides that, RBV supports firms in assessing the available resources inside the firm and silently relating them to its capabilities (Colbert, 2004). According to Colbert (2004), a firm can achieve a competitive advantage when fully utilizing resources and capabilities.

Practical and Social Implications

This study provides a better understanding for the Manufacturing sector in SMEs Malaysia on the impact of internal relational capital and external relational capital relationship on the firm's innovation performance. Furthermore, knowledge sharing has been added as a mediator in this study to enhance understanding of the relationship between internal and external relational capital towards innovation performance. Besides that, this study also benefits government agencies in outlining training and development strategies for SME Manufacturing to enhance innovation performance.

Limitations and Suggestions for Future Research

In this digital economy, innovation performance of Manufacturing sector SMEs is important for sustain and growth. The digital economy has created more business opportunities but also increased the competition across the industry. There are a few limitations highlighted in this study. Firstly, this study is based on the selected five manufacturing subsectors such as Chemical, Electrical & Engineering, Machinery industries, Aerospace and Medical Device in Malaysia and based on the FMM 2019 directory. The sample size of the study should be extended to more sectors under the manufacturing industry. Secondly, the innovation performance in this study is based on the internal relational capital and external relational capital relationship. The future study should consider more strategic resources to be included to have a more comprehensive understanding of the innovation performance of manufacturing SMEs. Lastly, a future study can consist of Innovation Theory or Communication Theory to analyze the constructs' innovation performance relationship more in-depth. This study only adopts the RBV theory, which focuses on the resource perspective point of view.

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