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Introduction of “IKIT” Framework in Sustainable Competitive Advantage of SMEs in Malaysia

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Abstract

The service industry is currently presenting significant hurdles for small and medium enterprises (SMEs) in their pursuit of sustainable competitive advantage (SCA), mostly due to the prevalence of homogenous products and services within this sector. This element has resulted in heightened competition and rivalry among them. This study introduces the "IKIT" framework, which examines the relationship between information management, knowledge management, innovation, technology, and the sustainable competitive advantage of small and medium-sized enterprises (SMEs) in Malaysia. The purpose of this research is to investigate this topic. In anticipation of the year 2050, it is projected that Malaysia would achieve a level of development comparable to other nations, particularly in the context of the fourth industrial revolution (IR 4.0). The vast amount of information that is readily accessible presents prospects for its utilization in the development of novel products and services. In contemporary times, the prevalence of information and communication technology (ICT) and rapid technical progress has led to a significant reliance on electronic means for conducting business. This strategic approach is adopted by organizations³ to maintain a competitive edge and distinguish themselves from their rivals. However, it should be noted that despite the abundance of resources, not all businesses, particularly small and medium-sized enterprises (SMEs), possess the necessary competences to effectively manage these resources. Capability refers to the inherent capacity possessed by small and medium-sized enterprises (SMEs) to effectively utilize their available resources in order to accomplish their intended objectives. The findings indicate that the strategic competitive advantage (SCA) of small and medium enterprises (SMEs) is highly influenced by their knowledge capability, innovation capability, and technological capability.

Keywords: SMEs, Sustainable Competitive Advantage, Information Management Capability, Knowledge Capability, Innovation Capability, Technology Capability

Introduction

The Small-Medium Sized Enterprises (SMEs) are recognised as an integral component in economic development and nation building not only in creating jobs but also in stimulating the economy of a country (The World Bank, 2022).

In the context of this paper, SMEs are the main subject due to their increased contribution to the national GDP of 5.8 per cent in comparison with the 6.2 per cent documented in 2018 (Figure 1.1). Based on the latest data in Malaysia Statistical Business Register (MSBR) published by the Department of Statistics, Malaysia (DOSM), there were altogether 1,226,494 MSMEs (micro, small and medium enterprises) in 2021 which accounts for 97.4% of overall establishments in Malaysia (SME Corp Malaysia, 2022).

The contribution of SMEs GDP to Malaysia’s GDP rose to 38.9 per cent from 38.3 percent in the previous year. This has proved the importance of SMEs as economic agents to backbone of the country’s economic growth. In 2018, SME GDP at constant 2015 prices climbed to the previous year’s prices of RM552.3 billion (Department of Statistics, 2021).

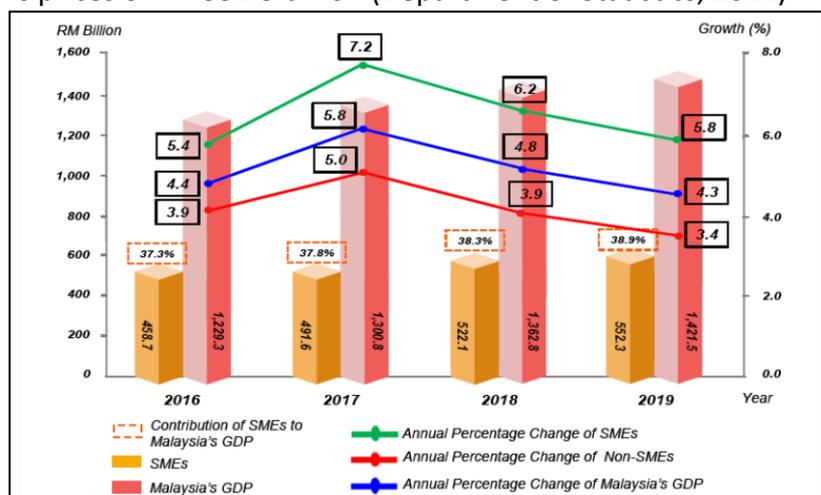


Figure 0 Value added and annual percentage change for 2016-2019 at constant 2015 prices
Source: Department of statistic Malaysia (2021)

Despite the fact that SMEs exhibit annual exponential development, it is important to track the percentage of SMEs that fail each year and compare those numbers over time. According to Peña (2004), who acknowledged the fragility of SMEs and the fact that the majority of them cease operations after a few years of beginning, the subject is not new but has been addressed for a very long time. This proves the issue is still relevant. This claim has been supported in light of the SME Corp Malaysia (2016) research, which found that the majority of start-ups fail in their first five years and that this is a common occurrence both in Malaysia and globally. The rates of survival vary from fewer than one in five in Lithuania and two-thirds in Sweden, although Austria, Belgium, Luxembourg, the Netherlands and Sweden have consistently displayed better rates than others.

Additionally, the worldwide COVID-19 outbreak has made this situation worse. According to a survey conducted by online services platform Recommend.my in Malaysia, which was reported in the Malay Mail of March 27, 2020, 68.9% of local small and medium-sized businesses (SMEs) had experienced a decline in business of more than 50% by the first week of the movement control order (MCO) (Annuar, 2020).

This situation has shown that most SMEs especially those in the service sector cannot sustain for a certain period. Focusing on the key economic sectors, the services sector has consistently accounted for more than 80% of all MSMEs throughout the period. For the latest 2021 MSMEs profile, services sector constituted 83.8%, amounting to 1,028,403 firms (SME Corp Malaysia, 2022).

Therefore, acquiring a sustainable competitive advantage is essential for businesses to outperform their rivals and maintain their relevance in the market. Meanwhile, research revealed that the majority of SMEs that were still operating after three years did so because they had implemented strategic planning and management practises (Lim & Teoh, 2021).

A business can get a competitive advantage by producing innovative, effective products (Guan, 2002). According to the competitiveness framework used in the GCR study as a reference, a corporation can only be competitive if it has access to technology, innovation, knowledge, and information. But in the Malaysian context, the future is not always better. Statistics demonstrate that only 20% of firms, or 645,1360 SMEs, use ICT substantially in day-to-day operations, although accounting for 97.3% of all businesses (DOSM, 2016). According to several studies (Alvarez, 2016; Wielicki & Arendt, 2010; Cuevas-Vargas et al., 2016; Grguri-Rashiti et al., 2017; Sin, 2010), SMEs with low technology adoption have experienced limited productivity, thus reducing the competitiveness of the enterprises and resulting in failure to produce the expected outcome since ICT and innovation are the keys to organisational success (Agafonov et al., 2017; Hashim, 2007; Saira et al., 2010).

Bromiley and Rau (2016) implied that the RBV of the firms cannot gain SCA through practices that are not RBV resources. Nonetheless, identifying and assessing the robustness of SCA in the context of the service sector are difficult tasks. SMEs especially in the context of Malaysia must ensure they develop and make use of strategic assets that tend to be intangible, rare, valuable and non-substitutable (VRIN) due to heterogeneity and the nature of business (Kabue & Kilika, 2016; Popa et al., 2016; Hamel & Prahalad, 2000).

However, the problems with SMEs that were highlighted remained problems and unresolved, which gave this paper the inspiration to look into and tackle the problems with achieving sustainable competitive advantage (SCA). Therefore, a company's ability to produce VRIN services is crucial for it to overcome the problem and stay viable in the market. This involves information management capability, knowledge capability, innovation capability, and technological capability (IKIT). Based on this, it became apparent that there was a vacuum in the research since the previous researchers (Kibet et al., 2010; Ramón et al., 2018; Sulistyo and Siyamtinah, 2016) used a performance- and competence-focused approach. Only a few discussed the aspects of SCA from IKIT but studied it separately. Therefore, this paper has combined all four aspects together in order to examine whether IKIT can really have an impact on the SCA of the service sector in Malaysia

Literature Review

Information were considered as a critical challenge to SMEs even in the current era of information availability (Ahmed et al., 2016). Despite the importance of information management (IM) in SMEs' environment, most services sector were still not exposed sufficiently to the importance of managing information as well as records, with relatively low

level of awareness towards it (Costa et al., 2016; Lybaert, 1998; Melchor Medina, 2015). In SMEs, supply chain management (SCM) as it shows the control of the flow of goods and services, which encompasses all procedures for turning raw resources into finished commodities that contributes to the sustainability of the SMEs. Effective information flow is necessary for managing SCM operations and activities in an efficient manner (Jermisittiparsert & Rungsrisawat, 2019).

Information management facilitates efficient and effective information access, process and use by people and organisations. Organisations will thus be more competitive and strategically run while employees will perform their work more efficiently and be better informed. In this paper, information can bring about sustainable competitive advantage only if it possesses certain capabilities. According to Mithas et al (2011), information management capability offers users accurate, timely, reliable, secure and confidential data and information that are curated to their users' respective levels.

A competitive advantage over the competition is attained when SMEs have innovative products or services, and this leads to their internationalisation and engagement in foreign collaborative projects (Pierguiseppe & Guisseppina, 2005; Ramayah et al., 2005). Nevertheless somehow this cannot be implemented without the help of good information as a global enabler and the information practices of firms can be of benefit to firms which have the potential or intent to pursue international activities (Julien & Ramangalahy, 2003; Levy & Powell, 2005). The use of information and the internet has helped produce innovation in clusters, rather than geographically (Gupta, 2007).

A firm's KM capability is the extent it creates, shares and uses knowledge resources in the firm's functional limits. Being vibrant, the KM capability makes it possible for the firm to manage its knowledge bases in a dynamic manner when the knowledge exploration, retention and exploitation processes inside and outside the firm are reconfigured and realigned (Lichtenthaler & Lichtenthaler, 2009). Moreover, KM capability is the determinant of the knowledge that is appropriate for incorporation in the knowledge bases of the firm. However, a firm should be prudent in assimilating external knowledge that is comparable to its current knowledge bases as this could outweigh the advantages of its external knowledge exploration (Dahlander & Gann, 2010; Messeni et al., 2007, 2009).

Previous studies investigating the relationship between knowledge capability and sustainable competitive advantage have also produced consistent results. The correlation analysis showed that knowledge capability is significantly related to the sustainable competitive advantage of SMEs in Malaysia (Azyabi, 2017). The knowledge capability of the company will reveal the ability of the company to apply that knowledge when it conducts its business. The smart use of knowledge by SME managers will produce greater productivity and performance as well as enhance the competitive advantage among SMEs especially in Malaysia. The decision and action of the managers play an important role in forging this alliance and the fit between the firm and its external environment (Goll et al., 2007).

Meanwhile, the results of the study pertaining to innovation capability as conducted by Ismail et al (2010) indicated that companies must be innovative if they are to grow and become more competitive domestically and internationally. Through innovation, SMEs can gain their

share of the market and sustain their position in spite of the tremendous challenges brought by SMEs in OECD member countries. Malaysia is now moving towards becoming a high income and innovation driven nation (MOSTI, 2014). The context of innovation networks for SMEs is fairly unique. SMEs need to adapt, improve and extend their own resource base by developing and linking complementary contributions and resources in an agile manner. Several different IT systems and application software were used in parallel in SME innovation networks (Rehm & Goel, 2016).

A proposed of “IKIT” framework

As mentioned by Barney (2001), based on RBV, resources are said to be rare as long as the number of firms that possess the particular resource is fewer than the number of firms needed to generate perfect competition dynamics in an industry. The current situation is the opposite as SMEs need to keep abreast of the changes and innovation, causing them to produce the same products/services.

According to Wójcik (2015), the perspective of capabilities has evolved within the RBV. This stream of thought focuses on endogenous factors, for instance the interior of the company, its resources, competencies and capabilities. Therefore, based on the discussion on the theories, this paper employed RBV and DC, integrating them together with the capabilities of information management, knowledge management, innovation and technology from the previous model in influencing the sustainable competitive advantage of SMEs (Yatim et al., 2021).

Resource Based View of Firm and Dynamic Capability

In order to study how they apply in the context of Malaysian SMEs, this paper examined a set of specific RBV theory elements, including value, rareness, imitability, and substitutability that could enable sustained competitive advantage. A conceptual framework is developed linking RBV and DC with some modification, with SCA as a dependent variable (DV), information management capability, knowledge capability, innovation capability, and technology capability as independent variables (IV). This framework is based on value, rareness, imitability, and substitutability. The SME Masterplan 2012-2020 states that this adjustment will be appropriate for Malaysian SMEs. Based on the literature and methodology preceding researchers had proposed, the factors were identified.

Building on the resource based view of the firm, the knowledge based theory of the firm considers knowledge as a unique, most strategically significant resource (Grant, 1996) by focusing on knowledge (Barney, 1991). Resources that are intangible and particular to a firm, which include knowledge, allow the firm to add value to its production factors (Hitt et al., 2001). It is a firm's competitive advantage (Levy et al., 2001; Prahalad & Hamel, 1990; Collis & Montgomery, 1995; Post, 1997; Markides, 1997; Bogner et al., 1999). This advantage, which is not easily replicated, is gradually gained over the years. Core competencies are the collective learning in the organisation (Prahalad & Hamel, 1990).

This paper integrated these works and developed a framework to serve as its guide or direction that contributes to the body of knowledge. Therefore, the use of RBV and DC theory as an underpinning theory seems to be important as they highlight important capabilities for

sustainable competitive advantage as an asset that will ensure sustainable competitive advantage can be applied in Malaysian SMEs.

Methodology

The questionnaire for this paper is based on quantitative data by applying non-probability sampling, using purposive sampling. A purposive sampling method is more suitable because filtration had been conducted at early stage before the questionnaire was administered. Therefore, only SMEs from services sector were chosen and those were not involved were excluded from the sample. The reason is due to the results obtained are as precise as those from probability samples as asserted by Sarstedt et al (2017), whereby the factors must determine the presence or absence of a population member in the sample are (1) not related to the variables of interest or (2) fully accounted for through adjustments before or after collecting the data.

The results showed that the data collected was not multivariate normal, with Mardia's multivariate skewness ($\beta = 5.019$, $p < 1.570$) and Mardia's multivariate kurtosis ($\beta = 74.015$, $p < 0.01$). Since the skewness is more than 3 and kurtosis more than 20, according to Cain et al (2016), the rule of thumb for Mardia's multivariate is not normal. Therefore, this paper proceeded to use the SmartPLS which is non-parametric analysis software.

Discussion

Measuring the sustainable competitive advantage

This paper shows that SCA is important for SMEs in this IR4.0 era from only small companies into company that can competitively rivalry with big multinational companies. As asserted by (Richard et al., 2009), the inability to understand and characterize performance consistently reduces the effect and relevance of management research. Inconsistency leads to a divergence in results, undermining the clarity of the findings and the confidence of researchers and managers alike.

The competency was closely related to the performance of individual and organizations, whereby the recognition of employee increased, their motivation will improve and affect the positive performance (Dobre, 2013). When the performance increases, the sustainability can easily achieved. Due to the challenges they need to face in this competitive era from the aspect of skill, ability and knowledge, it was concluded that organizational values directly influence the way how people performed their tasks.

Upholding resources such as information, knowledge, innovation and technology were likely to motivate SMEs to higher production and overall standards. There were many more studies that contributed to the sustainable competitive advantage of SMEs. If we go to any companies, what do you think can boost up their competitive advantage? The resources and capabilities of that company that already there or company that only dependent on other competitors before can create their own resources?

Therefore, based on the variables highlighted, the essential elements that can be considered in this paper has been outlined in the following proposed "IKIT" framework.

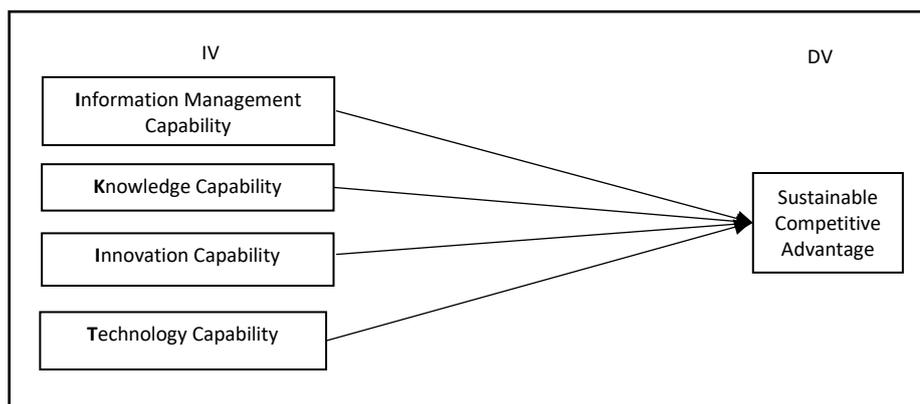


Figure 2: A proposed of “IKIT” framework

Based on the partial abovementioned literature review, it is observed that “IKIT” elements are very important resources in a knowledge-based economy towards sustainable competitive advantage of SMEs in Malaysia.

Interestingly, based on the results, only three (3) variables showed a significant result in relation to sustainable competitive advantage, namely knowledge management capability, innovation capability and technology capability. Although the reliability and validity of all variables achieved more than ≥ 0.7 and ≥ 0.5 for CR and AVE respectively as in the guideline, contribution to the sustainable competitive advantage was due to other factors, not just information, knowledge, innovation and technology.

Unfortunately, the findings indicated that IMC did not positively relate to SCA. In IMC, some of the factors are related to the accessibility and acquisition of the information. Although the respondents agreed that information could be accessible, due the homogeneity of the products and services offered, most of the SMEs from the service sector remained unwilling to jeopardise their business by allowing others to acquire their information.

Table 1
Summary of Hypotheses Testing

No.	Hypotheses	Statement	Results
1.	H1	Information management capability has a positive relationship with the sustainable competitive advantage of SMEs in Malaysia.	Not Supported
2.	H2	Knowledge capability has a positive relationship with the sustainable competitive advantage of SMEs in Malaysia.	Supported
3.	H3	Innovation capability has a positive effect on the sustainable competitive advantage of SMEs in Malaysia.	Supported
4.	H4	Technology capability does influence the sustainable competitive advantage of SMEs in Malaysia.	Supported

Conclusion

The goal of this paper is to determine the importance of “IKIT” capabilities towards the sustainable competitive advantage of SMEs in Malaysia. Based on the previous studies that

have been highlighted in this paper, it shows that information management, knowledge management, innovation and technology capability have given the impact to the sustainable competitive advantage of SMEs. However, the findings indicated that information management capability did not positively relate to SCA. Since most of the studies only focused on the manufacturing context, therefore this paper seeks to apply it in the services sector in Malaysia because of the huge contribution towards Malaysia economy.

The paper also looking at the validity and reliability of the measures carried out using the PLS approach. The results showed that the measures used exhibited both convergent and discriminant validity. Next, to assess the reliability of the measures, we proceed by looking at the Cronbach alpha values and composite reliability values. Both the Cronbach alpha values and composite reliability values were at par with the criteria set up by other established researchers. As such the measures in the model were shown to be reliable.

Based on the discussion and future recommendations, most service sector firms in Malaysia attained their sustainable competitive advantage due to the capability of innovation and technology of their companies. Although these two seem to be important among SMEs, the existence and awareness among the companies seem to be at a low level, that is, until the COVID-19 crisis, whereby the impact has opened the eyes of the firms to the benefits of innovation and technology. Therefore, a small effort is to create awareness within the service sector with enforcement by the government especially as the country moves towards IR 4.0, where almost everything will be based on digital transformation. It is necessary for all SMEs around the world, specifically in Malaysia, to integrate technology in their daily business to remain competitive.

Sometimes, the service sector needs much time and effort in order to sustain the business since SMEs face unfavourable conditions, such as a lack of resources and unexpected problems (Yoo et al., 2018). Therefore, it can be concluded that a successful service sector would assimilate and become more efficient in integrating strategic capabilities than its competitors even without sufficient facilities. The service sector must know how to survive and remain sustainable. Many things can be done especially in this IR4.0 where nothing is impossible with technology. The entire social media platform should be utilised in order for the service sector to become visible compared to its competitors. Now is the time for the service sector to relook the importance of innovation and technology capabilities especially in running their businesses especially if unpredictable thing, for instance the movement control order (MCO) happens again. The service sector firms must be ready to face challenges in order for them to maintain their sustainable competitive advantage. Although the final result shows only "KIT" give impactful meaning towards SCA on SMEs, however this paper will continue to highlight "IKIT" to be embedded in the framework for SMEs in another sectors.

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Future Recommendations

In view of this, future studies could perhaps venture into qualitative research to understand the capability management process as well as to test “IKIT” in different sectors of SMEs. Finally, it is hoped that this research will facilitate detailed roadmaps of a new dimension of sustainable competitive advantage for SMEs in Malaysia to overcome the relationship between those capabilities discussed and sustainable competitive advantage and how those capabilities can be transformed into competencies and competitive advantages that will place the firms in an advantageous position vis-à-vis their competitors.

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