

# The Influence of Information Technology (IT) Knowledge on Organization Performance with Adaptability to Change as a Moderator among Small Medium Enterprises (SMEs) in Malaysia: A Conceptual Paper

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**Keywords:** Information Technology (IT) Knowledge, Adaptability to Change, Organization Performance, Resource-based View Theory, Small Medium Enterprises (SMEs).

**Abstract:** The raising business cost with ever-changing business environment forces SMEs to develop adaptability and flexibility that will ensure their survival and improved performance. In the digital age, no business can grow without the use of information technology (IT). Organization performance of SMEs is the key focus for this study as SMEs are the key contributors to national economy. This study will be useful for entrepreneurs as well as academic scholars in generating a framework that can improve overall organizational performance in an emerging economic context.

## 1 BACKGROUND

Organizations operate in an environment where internal and external forces affect its overall performances. Measurement of organization performance also varies. As highlighted by Dess and Robinson (1984), strategic management researchers often encounter problems obtaining objective measures of selected aspects of organizational performance that are reliable and valid. However, such data are frequently not available with privately-held firms or such data is indistinguishably mingled with corporate-wide data for the conglomerate business units.

Performance measurement has great significance in the effective management of an organization and in the enhancement of the process since only measurable things is manageable. As such, the enhancement of the organizational performance requires some measurements to determine the impact of the level of organizational effectiveness upon business performance. Measurement of performance can offer invaluable information to allow management to monitor performance, report progress, improve motivation and communication and pinpoint problems. Accordingly, it is to the firm's best interest to evaluate its organization

performance. Various ways have also been brought forward to measure financial performance and among them are: measurement of performance as the level of Return on Assets (ROA), Return on Equity (ROE), Tobin-Q, Profit Per Employee (PPE), Return on Fixed Assets (ROFA) etc (Al-Matani et al., 2014).

The Malaysia Productivity Blueprint 2015 identifies various challenges to the growth of productivity of the country. These challenges were categorized into five categories i.e. talent, technology, incentive structure, business environment, and productivity mindset; are applicable for both big corporate and SMEs. The second thrust identified by the Malaysian Productivity Blueprint 2015 was driving digitalization and innovation. To achieve digitalization and innovation, the organizations need to strengthening of technology readiness by knowledge and adoption of technology across all sectors and strengthen digitalization among SMEs through e-commerce and adopting innovative technology. Therefore, it is of importance for the business organizations to align themselves in a fast changing environment by acquiring the digital technology and remaining relevant by enhancing organizational performance (Malaysia Productivity Corporation, 2017).

Referring to Digital News Asia (2018), 7% of the Malaysia's GDP in 2017 was based on digital products and services i.e. mobile services, clouding, and internet of things (IoT), artificial intelligence (AI) etc. IT and digital are transforming economy landscape and changing the competition among businesses. Riding on the importance of change, this study also focuses to test whether the moderator known as 'adaptability to change' moderates between the knowledge-IT and organization performance.

### **1.1 Small and Medium-sized Enterprise and Organization Performance**

As noted by Kannan (2016), 97% of business establishments in Malaysia are SMEs and they provide almost 50% of the total employment generated in Malaysia. It is estimated that more than 600,000 SMEs in Malaysia employ almost 3.7 million workers. These figures show the importance of SMEs in the country's economy. Unfortunately, according to the US Small Business Administration, almost 50% of SMEs fall in the first year itself and 95% tend to fail by the five-year mark. SMEs with fewer than 20 employees have only a 37% chance of surviving for four years and a 9% chance of surviving for 10 years (Kannan, 2016). Similarly in Malaysia, the SME's survey in the Third Quarter of 2016 found that majority of SMEs continue to face the pressure of rising cost and 7.1% of the SMEs reported the 10% annual increase in total operation cost. The increased operation cost (i.e. cost of raw material and input, electricity rates, and import cost due to depreciation of currency) in performing business forced SMEs to opt for cost-cutting measures and other initiatives such as intensified promotional activities and introduction of new product and services in the near future as an extended business strategy (SME Annual Report 2016/17).

The effective knowledge of information and communication technology (ICT) is vital for the long run of the SMEs. However, according to the Malaysian SMEs corporation, Malaysian SMEs are still lacking sufficient investment for digital technology due to insufficient commercial funds and low awareness. Lack of an effective mechanism to transfer knowledge and technology from large firms to SMEs is also a challenge. Malaysia also lacks an affordable and high quality digital infrastructure that could be helpful for SMEs (Malaysia Productivity Blueprint, 2015). Furthermore, Malaysian SMEs are

found to provide a lower contribution to the nation's GDP and exports compared to SMEs of many neighboring nations such as Japan, South Korea and Singapore (Halim, Ahmad & Ramayah, 2013).

During the 2017 Annual Conference, former Malaysia prime minister, Datuk Seri Najib Razak also urged the SME sector to strive harder after the government allocated RM22.2 billion to help spur the industry under Budget 2018. It was highlighted that the government is targeting 41% growth for the sector deemed to be a catalyst for the country's economic expansion leading to 2020. However, the industry only posted 36.9% growth which is still below the target up to 2017 (SME Corp, 2017). Understanding the importance of SMEs to the national economies, Malaysian government has developed various programs to support SME growth with the motive to fulfill the 2020 vision to become high income nation with developed status. However, despite various efforts, Malaysian SMEs are still losing their global competitiveness due to the poor performance and low productivity (Tehseen et al., 2015).

## **2 LITERATURE REVIEW**

The literature review of the three key variables relevant to this study comprises of Organization Performance, Information Technology (IT) Knowledge, and adaptability to change.

### **2.1 Organization Performance**

The success of a firm can be measured by its performance over a period of time as measurement of performance is vital for the effective management of the firm. By measuring the outcome of performance, the process of functioning of a firm can be improved. Hence, the enhanced organizational performance needs tools which can measure the impact of resources responsible for business performance (Al-Matani et al., 2014). According to Lo et al. (2016), organization performance is the measurement of financial and non-financial factors which complement each other and provide a richer description of actual performance. It can also be defined as the degree to which an operation fulfils the performance objectives (primary measures) and meets the needs of the customers (secondary measures).

A review study performed by Stores et al. (2013) on technological investment and organization performance revealed that a comprehensive

framework based on operational and administrative technology is needed to effectively use technology investment. According to Lo et al. (2016) technology orientation has positive relationship with financial and non-financial performances of the organization. The firms which have given emphasis on technology can achieve superior firm performance.

In the current knowledge-based business setting, the fundamental question arises is whether and how information technology can become a tool for the firms to gain competitive advantage in the uncertain environment. To provide the answer Mikalef and Pateli (2017) performed an empirical study to investigate the relationship between IT-enabled dynamic capabilities and competitive advantage of the firms. The results of the study revealed that the two types of agilities are facilitated by IT-enabled dynamic capability, i.e., market capitalizing agility and operational adjustment agility which ultimately leads to competitive performance.

## 2.2 Information Technology (IT) Knowledge

Information technology is the application of computers to store, study, retrieve, transmit, and manipulate data, or information, often in the context of a business or other enterprise. IT is considered a subset of information and communications technology (ICT). Having staff with the knowledge in this area will ensure the company reaches its desire level of organization performance in today business world. In this era of digitalization, it is hard for the businesses to survive without using information technology. The different IT platforms such as cloud-based services, social network, and e-commerce used software for accounting and data analysis to enable organization to reach new clients and partners. However, in some cases, organizations ignore the extensive use of IT as the budget for procuring, training, and management of technology was not sufficiently allocated (Kannan, 2016).

There has been a drastic increase among SMEs on utilization of ICT in their businesses. The SME Survey conducted by SME Corporation Malaysia in Q1 of 2016 showed that the majority of respondents utilized computers, smartphones and Internet in their daily life, both for business operation or for personal use. Looking at the business usage, about 89.1% of the respondent cited that they have utilized computers for business as compared to only 27.0% recorded in 2010. Besides that, about 20.3% of respondents were involved in online transactions to better reach out to their customers. Going forward,

SMEs should further capitalize on ICT to modernize and improve their business performance. Hence, IT knowledge is one of the crucial skill for the SMEs' workforce as their organization have now adopted information technology, realigned to the new technology and acknowledged the importance of ICT (SME Annual Report 2016/17).

In the contemporary knowledge-intensive business environment, a central question is whether and how IT can help build competitive advantage in uncertain environments. Mikalef and Pateli (2017) explored the relationship between IT-enabled dynamic capabilities and competitive performance. The authors argue that the impact of IT-enabled dynamic capabilities on competitive performance is mediated by organizational performance. The findings suggest that IT-enabled dynamic capabilities facilitate two types of agility, which are market capitalizing agility and operational adjustment agility, which subsequently enhance competitive performance.

Similarly, Lo et al., (2016) found that technology orientation is significantly and positively related to both financial and non-financial performance. It is evidenced that firms which are technology-oriented have a better chance to achieve superior performance. If the firm fails to adapt the advanced technology into customers' benefits, the business performance of the firms could not improve. Therefore, any high technology adaptation should align with high organizational performance.

## 2.3 Adaptability to Change

Pulakos et al., (2015) defines that every organization need to change in this dynamic environment and as such the need for adaptive workers has become increasingly important. With respect to business and manufacturing systems and processes adaptability has come to be seen as an increasingly important factor for their efficiency and economic success. As highlighted by Kannan (2016), most SMEs are wiped out because they get comfortable with their original business plan and do not want to tweak it according to the current flow. The question "What's next?" should always exist in a business. SMEs that are not willing to change and are in denial will remain in the danger zone. "Change" is the mantra that should always be at the forefront of an SME to ensure the organization's sustainability.

It is apparent that changes are necessary for employees and employer, so it is the responsibility of the organization to articulate how change is positive to them and in what manner it is

implemented in the existing scenario (Muthuveloo and Teoh, 2013). According to Pulakos et al., (2015), all workers need to increase their skill of adaptability, and they also need to be versatile and tolerant of uncertainty to stay in today dynamic working life situation. Enhancing adaptability in the work place has been seen as a trend and important by both researchers and practitioners in the organizations. Previous studies have also identified and discussed the reasons why employees in an organization do not adapt the changes. The Tariq et al., (2011) study links an approach towards the employee adaptability to change and the competitive advantage.

According to Pulakos et al., (2015), to enhance or improve their performance, organizations need to increase their workers' skills of adaptability, versatile and tolerant of uncertainty so that they can stay in today's dynamic working life situation. Workers should change their way of working according to these changing and diverse environments. Adaptability to change and enhanced adaptability in the working place have become important for both researchers and practitioners. In psychological literature, the terms adaptability, versatility, and flexibility are incomprehensible concepts which are not defined clearly, therefore, they have been difficult to measure, predict, and train effectively.

#### **2.4 Underpinning Theory: Resource based View Theory (RBV)**

The resource-based view is an approach to achieving competitive advantage of a firm which lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Wernerfelt, 1984). According to RBV proponents, it is much more feasible to exploit external opportunities using existing resources in a new way rather than trying to acquire new skills for each different opportunity. In RBV model, resources are assigned a major role in helping companies to achieve higher organizational performance. There are two types of resources namely tangible (physical thing namely land, buildings, machinery, equipment and capital) and intangible (example: brand reputation, trademarks, intellectual property). Physical resources can easily be bought in the market, so they confer little advantage to the companies in the long run because rivals can soon acquire identical assets whereas intangible assets are everything else that has no physical presence but can still be owned by the company. Two critical

assumptions of RBV are that resources must also be heterogeneous and immobile.

The RBV framework was adapted in numerous organization performance studies. For example, Muthuveloo and Teoh (2014) used RBV to explore organizational capabilities and investigate its influence on manufacturing firms' performance. Sawng et al., (2018) studied the adoption of Radio frequency identification (RFID) to improve company performance and found that strategic decision making is required for adopting smart technology (i.e. RFID) in the perspective of technology convergence to improve the performance of companies among heterogeneous industries. Gligor and Holcomb (2014) found that logistics capabilities positively impact supply chain agility which helps the companies to respond in a timely and effective manner to market vitality and other uncertainties. Literature on core capabilities of a firm derives from RBV, and RBV of an organization consists of various powerful resources which are valuable, rare, difficult and costly to imitate. Organization must be able to wisely integrate their organizational capabilities to gain sustainable competitive advantages and thus resulting in outstanding organizational performance.

### **3 CONCEPTUAL FRAMEWORK**

The conceptual framework as per depicted in Figure 1 was developed based on the research gap identified through the literature review and Resource based view theory (RBV). Among the major factors impacting economic progress in today's global business atmosphere is the transmission and application of the latest technologies in organizations. However, the latest technologies alone will not guarantee organizational success as technological innovation without applying and employing them may not grant the expected higher organization performance. The fast development of IT which created an explosion of information is essential for today's market as it creates new opportunities and development for the organizations. On the other hand, it also creates unpredictability and organizations that do not embrace the change will be left behind.

Hence, it is a central question for organizations to examine how IT-moderated knowledge on adaptability to change can enhance organization performance in order not to be left behind or to lose its competitive advantage. Thus, this study proposed a conceptual framework focusing on the

organization's IT knowledge and adaptability to change as valuable resources in the current business environment.

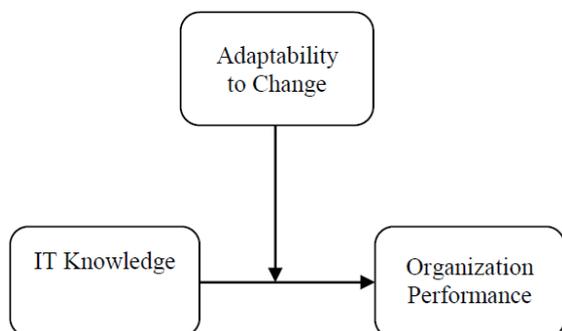


Figure 1: Conceptual Framework.

#### 4 SIGNIFICANCE OF STUDY

From the theoretical point of view, this study provides a theoretical contribution by investigating the SMEs' organization performance through the lens of Resource-based view (represented by IT-knowledge) with incorporation of adaptability to change as a moderator. In terms of practical perspectives, the findings will enable businesses, SMEs specifically, and direct them to contribute towards formulating strategies to achieve higher organizational performance.

#### 5 CONCLUSION

In the present business environment, the raising business cost with ever changing business environment forces SMEs to develop adaptability and flexibility that will ensure their survival and improved performance. As noted by Blanco and Botella (2016), business adaptive resilience is an overall competence, summarizing company internal competitive advantages. At the company level, differences in the ability to respond to change and survival are explained by differences in productivity, organizational and innovative culture, technology etc which are linked to resilience. In a similar vein, Alamro et al., (2018) found significant positive relationship between both new product flexibility and market flexibility and operational performance in Jordanian manufacturing companies.

This study intends to fill the gap by identifying critical success factors for SMEs in the context of Malaysia and by studying the relationship between

identified critical success factors (IT-knowledge) and organizational performance while incorporating adaptability to change as a moderator. The outcome of this study will be useful for entrepreneurs as well as academic scholars in generating a framework that can improve overall organizational performance in an emerging economic context.

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