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Abstract

Small and medium enterprises (SMEs) manufacturing sectors in Malaysia has been recognized as an important sector to the nation's economic growth. However, the contributions of SMEs GDP in 2020 declines compared to the previous year. This study aims to examine the effects of internal and external environmental factors on operational excellence in the Malaysian SMEs manufacturing sector. The literatures have demonstrated that an investigation on operational excellence is lacking particularly in Malaysian SMEs sector. In addition, the impact

of external environmental factors on operational excellence has received little attention in the literatures especially in SMEs sector. Therefore this paper presents a conceptual framework based on comprehensive review of previous study which incorporate the operational excellence, internal and external environmental factors. This study concluded that the influence of internal and external environmental factors towards the operational excellence in Malaysian SMEs manufacturing sectors. This study expected will help SMEs owners and managers in the manufacturing sector to have body of knowledge and have a better understanding on the factors that influences the operational excellence to enhance their performance. Further studies are recommended to verify the relationships between all variables in this study for Malaysian SMEs manufacturing sectors.

Keywords: External Environmental Factors, Internal Environmental Factors, Manufacturing, Operational Excellence, Operational Management, Small And Medium Enterprises (SMEs)

Introduction

Small and medium enterprises (SMEs) are the most common business across countries with the largest share of total employment and a pivotal role in economic growth (Liu et al., 2022). SMEs and have been recognized as the pillar of economic growth in many developed and developing countries in the world (Alaguraja & Nedumaran, 2020). In Malaysia, SMEs are significantly contributed to the development of the Malaysian economy and the roles of SMEs are crucial in shaping the economic landscape of Malaysia in achieving high-income nation (SME Corporation Malaysia, 2019). There are several categories in Malaysian SMEs sectors such as services, manufacturing, construction, mining and quarrying sectors. The manufacturing sectors are one of the important sectors to the economic development of the country. The manufacturing sectors in Malaysia are dominated by SMEs sector. The manufacturing sector is the largest contributor to total exports of the country and the second largest contributor to the gross domestic product (GDP). However, the contributions of SMEs GDP in 2020 declines which reflected in the 7.3 percent reduction in SMEs GDP in 2020 (Department of Statistics Malaysia, 2020). In order to support the continued growth and expansion of the SMEs, the SMEs must develop excellence business operations and management skills by achieving operational excellence (Wahab, Ismail, & Muhayiddin, 2020). Furthermore, SMEs need to search for new, innovative, flexible and imaginative ways to survive in the business competition. The organization need to rebuild themselves by creating new strategies and ideas to achieve business excellence in order to become a leader in the market competition (Ahmad et al., 2018; Ibrahim et al., 2021). The organization are require to pursue excellence in their business by seeking long-term business success to respond actively to survive with the challenges (Jaeger et al., 2014; Wahab et al., 2019b). One of the ways to achieve excellence is by pursuing the operational excellence. Operational excellence is one of the important aspects of business excellence which is an aspect of organizational structure that strives for improvements in key operational performance metrics (Shehadeh et al., 2016; Wahab et al., 2020).

On the other hand, achieving operational excellence is a requirement to the organizations. However, how to achieve the operational excellence and sustain competitive advantages still the main questions among the organizations (Ahmad et al., 2018; Dahlgaard-Park & Dahlgaard, 2007). Many organizations seeking for the excellence but unfortunately many of them failed to achieve the excellence level due the lack of understanding on the factors that influence operational excellence (Dahlgaard-Park & Dahlgaard, 2007). Additionally, the guidelines that describe how to achieve the operational excellence is remain unclear

(Mohammad et al., 2011). The organizations require practical and detailed guidance to achieve the operational excellence (Sharma & Kodali, 2008). Consequently, it is important to identify the factors that affect the operational excellence in order to be competitive in the business (Heizer & Render, 2004; Oakland et al., 2002; Wahab et al., 2019a).

Moreover, the operational excellence is an important topic and has been an issue in both academia and industry. Review on the related literature have shown that there are limited studies conducted on the operational excellence and mostly focus on other types of performance (Shehadeh et al., 2016) and also lack of study conducted on the SMEs sectors especially in Malaysia (Wahab et al., 2020; Yew & Ahmad, 2014). Thus, this study attempts to help filling the gap by investigate the factors that affects the operational excellence in Malaysian SMEs manufacturing sector through examining their effect on operational excellence and the moderating effect of external environmental factors on the relationship between internal environmental factors and operational excellence. This study aimed to develop a conceptual framework that purposely for SMEs manufacturing sectors in Malaysia. In addition, the study contributes to add new insight of the moderating factors that will influence the operational excellence in Malaysian SMEs manufacturing sector.

Literature Review

Operational Excellence

The deployment of operational excellence is gaining attention by the international industrialist who are concerns to improve the organization and increase productivity, agility and quality of an organization (Elouarat et al., 2011). Operational excellence focused on operational performance and organizational sustainable performance. Operational excellence emphasizes on performance of internal operations of a company where the excellence will proved quality improvement, flexibility improvement, delivery improvement, productivity improvement, cost and waste reduction (Susanti et al., 2015). Additionally, operational excellence also concerned the better performance and effectiveness in all dimensions of the organization. Operational excellence is not only about operation performance such as cost, time, quality, and flexibility metrics but also about sustainable performance such as handling people and resources efficiently to support the business growth (Dunggan, 2011). In order to enhance customers value, operational excellence does not only concern on the production process, consistency and reduce waste but also concern on creating value through interaction performance of employees, customers and supply chain (Miller, 2014).

Operational excellence involves the continuous improvement of the efficiency and effectiveness of the business processes. Operational excellence assures both organizational efficiency and effectiveness through reducing cost without decreasing volume of output and quality, reducing waste of time, raw materials, unnecessary processing, and energy used in transportation, storing, and operating plant (Allen, 2014). Moreover, operational excellence provides competitive advantage to the organization by giving greater satisfaction to the customers. The organization achieve the operational excellence will lead them towards excellence in internal organizational processes of production and its delivery to the customers with high score of satisfaction. The strength of internal organization then will rewards the organization with the competitive advantages which in turn leads to sustainability of the organization (Ojha, 2015).

The importance of the operational excellence to the organizations has been acknowledged in the literature. Treacy & Wiersema (1997) stated that the operational excellence is one of the

disciplines and value propositions that organizations can choose to compete with their competitors in the business environment. Operational excellence is the design and management to maximize operating profit by continuous operational excellence in production and delivery system which can deliver customers the right value of products and services. The organizations that pursue the operational excellence will deliver value to the customers with a combination of speed, quality, price and ease of purchase and it will differentiate them in the market competition (Van Assen, 2011).

Internal Environmental Factors

The internal environment factors is a corporate environment that is in the organization and normally has direct and specific implications to the organizations (Hubeis & Najib, 2008). The internal environment factors are one of the core factors and criterion for the organizations to survive in the competitive business environment (Talwar, 2011). Based on the review of the previous studies, the internal environmental factors are one of the core success factors towards operational excellence. Thus, this study identifies and propose the construct of the internal environment factors refer to leadership style, organizational culture, human resource practices, operation strategy, organizational structure and process management.

Leadership Style

Leadership has been recognized as a key factor in organizational success and this factor has been validated empirically in many fields. This element is considered as a key component in achieving excellence which fostering change and ensuring stability in operational excellence by the leaders through facilitates establish structures, planning for improvements, organizing activities, establishing routines, caring about people, communicating, coaching, supporting and motivating employees (Friedli et al., 2013).

Human Resources Practices

Human resources (HR) are recognized as one of the most important assets in an organization where it can produces valuable benefits to the organization (Barney, 1991). HR consists of strategies and practices that work as a tool for the organization in order to achieve superior performance (Yew & Ahmad, 2014). HR practices will lead the organization to the higher performance and be a source for of sustaining competitive advantage because these practices are often unique, usually ambiguous and difficult to imitate (Barney, 1991; Wright et al., 2001). HR practices can contribute to sustain competitive advantage through enabling the development of competencies that is embedded in the firm's culture and history (Lado & Wilson, 1994).

2.1.1 Organization Culture

The organizational culture is an important factor to the organization which will affect the performance of the organization. Organizational culture influence and control the way the interaction between people and between groups of people in an organization and the interaction with stakeholders outside the organization (Summerill, Pollard, & Smith, 2010). The organizational culture was the one of greater effect on the performance and the operational excellence (Jaeger et al., 2014; Ojha, 2015; Romano, 2003; Yew, Ahmad, & Baharin, 2013).

2.1.2 Operation Strategy

Operation strategy can be viewed as the effective use of production capability and technology for achieving business and corporate goals such as profit, innovation, customization, product flexibility, product reliability, quality, response, delivery reliability and after sales service (Kim & Lee, 1993). Operations strategy involves the overall transformation process in the business. It concerns on how to achieve a sustainable competitive advantage through long-term development of its operations resources and processes (Slack & Lewis, 2002, 2011). Operation strategy was a good determinant factor of operational excellence (Yew & Ahmad, 2014). Shehadeh et al (2016) also revealed that the operation strategy factor was the highest contributor factor on operational excellence.

2.1.3 Organizational Structure

Organizational structure can be defined as the way that the labor is divided into different tasks and then its coordination is achieved among those tasks (Mintzberg, 2007). For most of small firms, firm performance is determined by the organizational structure where labor is the most important input to small firms. The effectiveness of organizing and transforming inputs such as labor and capital into sellable product and services will contribute to the firm performance (Meijaard , 2005).

2.1.4 Process Management

Process management is important to the firms where it allows the firms to adapt to the continuously changing requirements of the market. Process management is one of the best practice management principles that help the firms to sustain competitive advantage (Hung, 2006). The process management is one of the key areas that are important to improve the SMEs productivity of the basic elements to achieve the operational excellence in the complex environment (Lee et al., 2013; Pellissier, 2009).

External Environmental Factor as Moderating Variable

External environment can be defined as the physical and social factors that influence the decision-making behavior of individuals in the organization. The external environment comprises all variables outside the organization that affect the organization activities (Duncan, 1972). According to Clark et al (2011), external environment is one of the top priorities and that often becomes constraints on profitability for the industrial companies. The environmental issues are highly related to the operation and maintenance of an industrial plant and need to be managed for the organization profitability. The external environmental factors are very important to the organizations which are beyond the organizational control. It will affect the organization with the adoption of new ideas. For example, the arising of new technology has positively motivated organization to promote a quality standard thus affecting the organization to adopt the new ideas (Johnson, 2004).

Moreover, the external environment is an important factor which will influence the operational excellence (Ojha, 2015). The organizations need to identify the issues in external environment such as social values, technology, political pressures and economic for the future where it will constantly challenge and reshape the organizations by the changes in the external environment. Therefore, the organizations will shape their organizations in order to achieve the excellence performance through identifying the issues in the external environment (King, 1989). Moreover, a good relationship between strategy and external environment is a key to develop sustainable competitive advantage (Black & Porter, 1996). A

proper alignment and good fit between internal and external organizational factor will reward the organizations to be more successful in maintaining and improving performance (Lawrence & Lorsch, 1967). External environment is one of the major variables that affect the correlation amid the business strategies and performance of organizations (Jabeen & Mahmood, 2015). Thus, this study proposed the external environmental factors as moderating variable which may influence the relationship between the internal environmental factors and operational excellence in Malaysian SMEs manufacturing sector.

Conceptual Framework

Based on comprehensive review of previous study, a conceptual framework has been developed for Malaysian SMEs manufacturing sector which consists of internal environmental factor as an independent variable, external environmental factors as a moderating variable and operational excellence as a dependent variable as presented in Figure 1. The conceptual framework in this study has been summarized based on above discussion. The conceptual framework is link to operational excellence. The internal environmental factors proposed for Malaysian SMEs manufacturing sector consist of six factors namely leadership style, human resource practices, organizational culture, operation strategy, organizational structure and process management.

As discussed above, the external environmental factor is proposed as a moderating variable that may influence the relationship between the internal environmental factors and operational excellence. This is in line with previous studies shown that the external environmental factors are important element where it should be considered by the organization towards achieving a sustained competitive advantage and operational excellence. Therefore, the external environment factors would moderate the relationship between the internal environmental factors and operational excellence in the Malaysian SMEs manufacturing sector.

The conceptual framework for this study is developed based on Resourced based view theory (RBV) and contingency theory in order to examine the relationship between the internal environmental factors, external environmental factors and operational excellence. The RBV theory argues that competitive advantage is achieved by emphasizes on the internal organization's resource and capabilities (Amit & Schoemaker, 1993; Barney, 1986). Moreover, the proposed conceptual framework is also supported by contingency theory to explain the moderating effect of external environmental factors on the relationship between internal environmental factors and operational excellence. The contingency theorists maintain that successful operations of an organization do not come from any single factor but from fitness of the organization's external environment with a set of internal organizational characteristics and skills (Simon, 2001). The relationships between all variables in this study are shown in Figure 1 below.

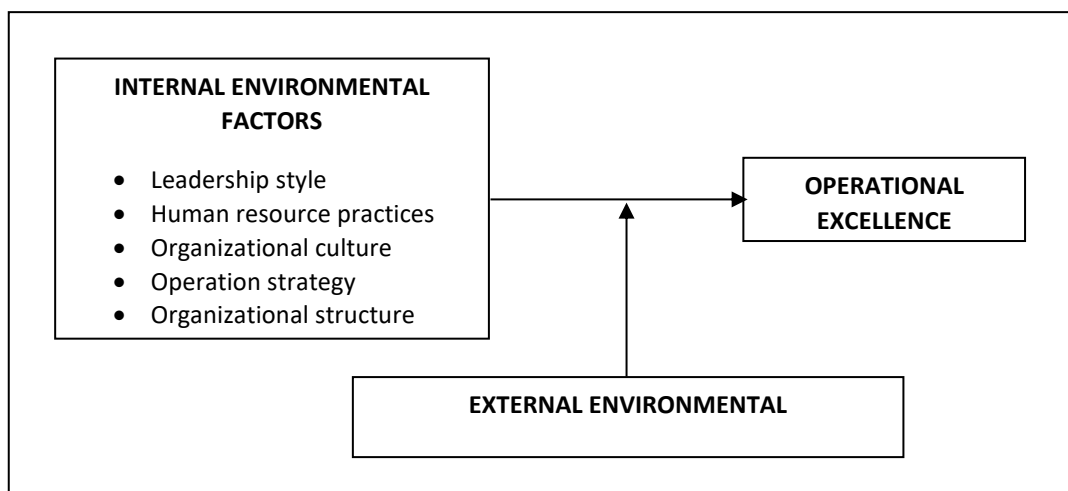


Figure 1: Conceptual Framework

Discussion and Conclusions

The performance of Malaysian manufacturing sector has been generally encouraging with positive growth in GDP and exports. The manufacturing sector accounts the largest contributor to the total exports and the second largest to GDP. However, the contributions of SMEs GDP in 2020 declines which reflected in the 7.3 percent reduction in SMEs GDP in 2020 (Department of Statistics Malaysia, 2020). In addition, operation management is one of the major barriers and challenges faced by SMEs manufacturing sector which affects the business performance. Many of SMEs have failed to grow and as a result it accounted to the high mortality rate of SMEs because they were encountered by barriers that occurred in the operation functional area (Mbizi, Hove, Thondhlana, & Kakava, 2013; Nurach, Thawesaengskulthai, & Chandrachai, 2011; Pahurkar, 2005). Thus, it is absolutely important to the SMEs to improve their operations management by pursuing the operational excellence to remain competitive in business environment (Ifeanyichukwu, 2010; Urban & Naidoo, 2012; Wahab et al., 2020).

Furthermore, operational excellence is an important topic and often considered synonyms in terms of operations. However, research on operational excellence is still limited where there is a lack of research and discussion on operational excellence in the SME sectors particularly in Malaysian SMEs manufacturing sector context (Wahab et al., 2020; Yew & Ahmad, 2014). Additionally, research on the factors or strategy to attain the operational excellence in the context of SMEs like Malaysia remains unclear. Previous study on the relationship between factors influencing and operational excellence is still limited and mostly focused on big company context and is still lacking in the SME context.

Therefore, this paper contributes to identify the factors that affects the operational excellence. This paper proposed a conceptual framework purposely for SMEs manufacturing sectors in Malaysia. Further investigation will be conducted by using this proposed conceptual framework to verify the relationships between all variables in this study. This will help SMEs owners and managers in the SMEs manufacturing sector to have body of knowledge and have a better understanding on the factors that influences the operational excellence in order to enhance their performance.

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