

## THE RELATIONSHIP BETWEEN SOFT AND HARD FACTORS ON OPERATIONAL EXCELLENCE IN SMALL AND MEDIUM ENTERPRISES (SMES)

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**Abstract:** *The purpose of this study was to examine the relationship between soft and hard factors on operational excellence among Small and Medium Sized Enterprises (SMEs) in the manufacturing sector in Malaysia. Grounded by the Resource-Based View (RBV) Theory, this study presents a conceptual framework incorporating both soft and hard factors that impact operational excellence. While many factors influence operational excellence, this study focuses on the soft and hard factors and fills a gap in the literature by studying SMEs manufacturing sectors in Malaysia. This paper makes a valuable contribution to the existing body of knowledge by enhancing conceptual understanding of operational excellence within the context of SMEs in Malaysia. The practical implementation of effective management strategies for both soft and hard factors among Malaysian SMEs can significantly contribute to achieving operational excellence and improving their overall business performance.*

**Keywords:** *Hard Factors, Operational Excellence, Operational Management, Small and Medium Enterprises (SME), Soft Factors*

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## Introduction

Small and Medium Enterprises (SMEs) are widely recognized as a vital engine of economic growth in many countries worldwide, as they account for over 90% of all business establishments (Manzoor et al., 2019). In Malaysia, SMEs are playing an increasingly important role in the country's economic development. Based on the latest data in the Malaysia Statistical Business Register (MSBR) published by the Department of Statistics Malaysia, there were 1,226,494 SMEs in 2021, which accounted for 97.4% of the total organizations in Malaysia. There was an increase of approximately 140,000 firms compared to a total of 1,086,533 SMEs in 2016, recording an average growth rate of 5.2% per year over the six-year period. The SMEs encompasses a broad range of industries, including services, manufacturing, construction, agriculture, and mining and quarrying (Malaysia Statistical Business Register, 2022). Of these, the manufacturing sector is especially crucial to Malaysia's economic growth, contributing the largest share to total exports and ranking second in terms of gross domestic product (GDP). However, despite its importance, the performance of the manufacturing sector in Malaysia has been lagging behind that of other countries. In particular, the share of Malaysian manufacturing exports in global trade has been declining, indicating a decrease in trade competitiveness (Eleventh Malaysia Plan, 2015).

Moreover, the rapid changes in global businesses and the continuing stiff competition from emerging economies have provided new challenges for Malaysian SMEs. To effectively deal with them and to be competitive, SMEs required to pursue excellence in their business by achieving operational excellence. Operational excellence is one of the critical aspects that contribute to the performance and sustainability development of organizations (André M Carvalho, Sampaio, Rebentisch, Carvalho, & Saraiva, 2017; Wahab et al., 2022b). However, a limited study has been attempted to investigate operational excellence especially in Malaysian SMEs manufacturing industry context (Ahmad, Alekam, Shaharruddin, Marchalina, & Fok-Yew, 2018; Wahab, Ismail, & Muhayiddin, 2020). Additionally, in order to increase performance and still growing in the business environment, Malaysian SMEs manufacturing sector required to achieve the operational excellence which in turn leads towards sustainability (Wahab et al., 2022a).

A part from that, the literature on operational excellence has been growing, but most studies have focused on overseas situations (Chakraborty, Sharma, & Vaidya, 2020; Nair & Thomas, 2020; Sartal & Vázquez, 2017), with very few addressing the context of Malaysia (Ahmad et al., 2018) and even fewer examining SMEs in Malaysia (Wahab et al., 2020). Furthermore, there is still a limited amount of research investigating operational excellence, with most studies conducted in developed countries (Shehadeh, Zu'bi, Abdallah, & Maqableh, 2016). Operational management is a critical functional area in any organization, and despite significant research in finance and marketing among SMEs, there has been limited research in the operational area (Urban & Naidoo, 2012).

Therefore, it is crucial to investigate further the factors that influence operational excellence to achieve operational excellence. The main objectives of this study are to examine the factors influencing operational excellence among SMEs in Malaysia. This paper aims to focus on the factors that enhance the survival of small firms, reduce failure rates, and increase success rates. Hence, this area presents an opportunity for further research and the gap identified is in operational management among SMEs in Malaysia.

## Literature Review

### Operational Excellence

Operational excellence is becoming a popular option among the methods used to achieve continuous improvements. Operational excellence can be viewed as the state of a business organization accomplished through the continuous innovation and technology implementation in the products and services it offers (Carvalho et al., 2017). Operational excellence refers to the effective design and management of a production and delivery system that continuously maximizes operating profits by offering products and services to customers at the right value (Van Assen, 2011).

Russell & Koch (2009) described operational excellence as achieving the highest level of operational efficiency by doing things better, faster, and cheaper. Traditionally, operational excellence focused on optimizing business processes, production, and manufacturing to meet customer demand, improve quality, and increase productivity and efficiency. However, today it encompasses much more and is a key lever for improving profitability and gaining a competitive advantage. Operational excellence is not only about efficiently managing day-to-day operations but also fostering continuous improvement (Ahmad et al., 2018; Russell & Koch, 2009). According to Cesarotti & Spada (2009), operational excellence is a comprehensive approach to achieving world-class performance in productivity, quality, and delivery of products and services. This systematic approach enables organizations to cultivate a culture of continuous improvement, deliver excellent service and customer satisfaction, and improve operational efficiency.

Operational excellence refers to a management approach that strikes a balance between quality, cost, and time while also prioritizing customer requirements. Its emphasis on performance and organizational practices entails a continuous pursuit of superior performance and improvement across all aspects of production, measured by efficiency and effectiveness. To attain operational excellence, top management must engage employees in the structure and culture of operational excellence employees (Friedli, Basu, Bellm, & Werani, 2013). According to Miller (2014), operational excellence involves a continual pursuit of better performance and effectiveness in all facets of the organization. It entails not only streamlining production processes and reducing waste but also creating value through interactions among employees, customers, and the supply chain. Rather than striving for perfection, operational excellence employs a systematic approach that prioritizes people and involves customers, constant innovation, continuous improvement, and optimal speed to achieve superior performance and profits.

Moreover, several factors have been discussed by researchers and practitioners that organizations should consider to achieve business excellence. Previous studies and literature suggest that internal factors may influence operational excellence (Ahmad et al., 2018; Chakraborty et al., 2020; Jaeger, Matyas, & Sihn, 2014; Nair & Thomas, 2020; Ojha, 2015; Sartal & Vázquez, 2017; Wahab et al., 2022b). Internal factors are those controlled by the organization and comprise both soft and hard factors. To achieve excellent results, organizations should strengthen both soft and hard factors. The combination of these factors will reward the organization with improved overall performance (Calvo-Mora, Picón-Berjoyo, Ruiz-Moreno, & Cauzo-Bottala, 2014; Carvalho et al., 2017).

### **Soft Factors and Hard Factors**

The soft factors are related to work organization while the hard dimension is related to production organization in the production management models. The soft factors pertain to the organization of work, which includes methods, job content, roles and responsibilities within a production system, as well as the social relationships among individuals and groups, their behaviour, skills, capabilities, feelings, and other human aspects. On the other hand, the hard factors are related to production organization, which refers to the processes, activities, types, and physical arrangement of equipment and material flow that result in the production of goods and services within a production system. The hard factors are quantifiable technical factors, while soft factors are intangible social factors that are difficult to quantify. Integrating both hard and soft factors can lead to improvements in organizational performance (Bourke & Roper, 2017; Zeng, Zhang, Matsui, & Zhao, 2017).

The concepts of soft and hard factors are fundamental to TQM and appear in almost all TQM definitions, as stated by Ali and Johl (2022) and Ershadi, Najafi and Soleimani (2019). In the TQM framework, these dimensions are complementary, where soft aspects encompass social and behavioural factors, while hard aspects relate to technical factors. Quality improvement tools and techniques fall under hard factors, while soft aspects encompass management principles such as leadership, employee empowerment, and culture (Fotopoulos and Psomas, 2009).

Ershadi, Najafi and Soleimani (2019) explained that the hard factors in achieving production and operation improvement involve the methods, processes, and procedures for continuous improvement of goods and services to customers, while the soft factors refer to human resources management, leadership, teamwork, training, and employee involvement. The hard and soft dimensions are also present in business excellence models such as EFQM and MBNQA. Furthermore, Calvo-Mora, Picon, Ruiz, & Cauzo (2013) classified the elements of the EFQM model into soft and hard factors, with the leadership and people criteria falling under the soft factors and policy and strategy, strategic management of partners and resources, and processes management as hard factors.

Moreover, Ali & Johl (2022) explained that both soft and hard factors have an impact on organizational outcomes and are crucial for achieving excellence. Ahmad et al., (2018) further supported this claim by stating that both the hard and soft elements contribute to the attainment of operational excellence in Malaysian electrical and electronic manufacturing firms. Their findings indicated a positive relationship between these factors and the achievement of operational excellence. Moreover, the combination of both hard and soft factors can facilitate the introduction and development of organizational structures, maintain continuous improvement in services, and cultivate an operational excellence culture throughout the organization, which can lead to overall improvement.

### **Underpinning Theory**

The research framework has been guided by the resourced based view theory (RBV). The RBV theory has been widely used in previous literature to explain how firm resources are related to performance. This theory provides a framework for understanding how to achieve and maintain competitive advantages within firms (Barney, 2001). According to Barney (1991), the RBV theory views the firm as a package of resources that generate value for the firm when those resources are unique. The RBV theory explains that resources are the most important factors in achieving competitive advantage.

Moreover, the RBV theory suggests that potential sources of competitive advantages are within the firm. These resources include all assets, capabilities, organizational processes, and knowledge controlled by a firm that enable it to consider and implement strategies to improve its performance. Firm resources are classified into three categories: physical capital resources, human capital resources, and organizational capital resources. These attributes of a firm's physical, human, and organizational capital enable a firm to improve its performance (Jay B. Barney, 1991; Wernerfelt, 1984).

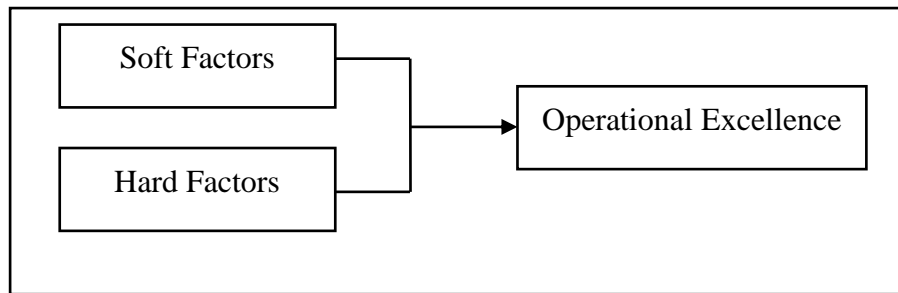
The resource-based view theory (RBV) has been widely used in previous literature to explain the relationship between firm resources and performance in the context of operations management. This theory highlights the importance of operations as a source of valuable, rare, inimitable, and non-substitutable resources and capabilities for sustainable competitive advantage (Brown, Squire, & Blackmon, 2007; Winter, 2003). Operations management plays a crucial role in organizing these capabilities and resources to support business strategy and contribute to overall performance (Anderson, Schroeder, & Cleveland, 1991; Brown et al., 2007). RBV theory also suggests that best practices of operations strategy, including processes and content, are potential sources of competitive advantage. Operations strategy is the process of developing operating capabilities that firms need for the future, involving knowing what to do and why (Hayes & Pisano, 1996). Traditionally, operations capabilities have been defined as quality, cost, dependability, flexibility, and innovation, and their performance is related to business performance (Brown et al., 2007).

Moreover, RBV theory views firms as bundles of resources and the way in which these resources are utilized within a firm to differentiate it from others. These resources are tangible and intangible assets that firms can exploit to achieve sustainable competitive advantage (Amit & Schoemaker, 1993; Wernerfelt, 1984). The theory also explains that both soft and hard factors are resources and capabilities that can give a competitive advantage to the organization. Integrating both soft and hard elements can contribute to a competitive advantage and improved performance (Barney, 1991). Thus, RBV theory was used as a fundamental theory in this study to examine the relationship between the soft and hard factors on operational excellence.

### **Conceptual Framework**

Previous studies and literature have examined the factors that are believed to have an impact on operational excellence, with independent variables having a direct effect on dependent variables. In this study, the independent variables are classified as soft and hard variables, which are used to determine operational excellence as the dependent variable.

The conceptual framework proposed that the independent variables of the soft and hard variables will influence the operational excellence. The RBV theory (Barney, 1991) asserts that soft and hard elements, being internal resources, are crucial in attaining sustained competitive advantage and superior performance, which is operational excellence. The effective utilization of resources in operations is the key to achieving operational excellence (Ahmad et al., 2018). This study identifies soft and hard dimensions as factors that may determine operational excellence among SMEs in Malaysia, with previous research highlighting the importance of these factors on performance (Ahmad et al., 2018; Calvo-Mora, Picón-Berjoyo, et al., 2014; Carvalho et al., 2017; Wahab et al., 2020). The relationships between the variables in this study are shown in Figure 1.



**Figure 1: Conceptual Framework**

### Discussion and findings

This study aims to investigate the factors that influence operational excellence in the SME sector of Malaysia. Specifically, it aims to identify the soft and hard factors that impact operational excellence and provide insights to SME owners and managers on how to improve their performance and achieve operational excellence. Additionally, this study contributes to the existing literature by providing a better understanding of the soft and hard factors that impact operational excellence in the context of SMEs in Malaysia, which has not been extensively studied in previous research. By addressing this research gap, this study offers valuable insights for managers and stakeholders and supports existing theories on the impact of these factors on operational excellence.

This study also provides a novel insight for management and stakeholders on the factors that influence performance improvement. Moreover, it contributes to a better understanding of soft and hard factors, which have mainly been studied in developed countries. The managerial decisions regarding the factors and strategies needed to achieve operational excellence in the context of SMEs in Malaysia are still unclear. In addition, previous research on the relationship between factors influencing operational excellence remains limited, with a focus mostly on large companies and a lack of research in the context of SMEs. Thus, this study is expected to contribute to filling this gap, adding to the existing literature, and providing support for past theories on the impact of soft and hard factors on operational excellence.

### Conclusion

This paper presents a conceptual understanding of the factors that influence operational excellence in the SMEs of Malaysia. The development of a conceptual framework, which includes both soft and hard factors, was guided by the literature and previous studies. The two dimensions of factors that influence operational excellence are discussed, namely soft and hard factors, and their positive contribution to operational excellence is explained. The literature highlights the need for a study in the context of Small and Medium Enterprises in Malaysia. The conceptual understanding on the relationship between the soft and hard factors in achieving operational excellence presented in this paper can be beneficial to firms, managers, and stakeholders. The paper will provide SMEs owners and managers with valuable knowledge that will aid in their understanding of how the soft and hard factors impact the operational excellence of their businesses, ultimately leading to improved performance.

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