UNLOCKING THE MYSTERY OF MANUFACTURING SMEs’ PERFORMANCE BY UTILIZING THE POWER OF STRATEGIC INNOVATION

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INTRODUCTION

In the context of developing nations, Small and Medium Enterprises (SMEs) make significant contributions to economic development (Isaga, Masurel, & Van Montfort, 2015; Abor & Quartey, 2010; Kapurubandara & Lawson, 2006). Many nations have targeted the development of the SME sub-sector as a major part of their overall economic plans (Khalique, Bontis, Abdul Nassir, & Hassan, 2015). In general, SMEs around the world have a key role in the growth and sustainability of the economy (Kaur & Sharma, 2016). In this regard, organizations that enjoy a competitive edge are more likely to achieve high value and optimum performance, as revealed by Barney (1991). Over the years, the role of competitive advantage in improving the performance of business organizations has been comprehensively scrutinized (e.g., Albrecht, Bakker, Gruman, Macey & Saks, 2015; Asmussen & Foss, 2014). Organizations have to shift from technology-oriented entities into ones that thrive on strategic innovation (Shams, Vrontis, Weber & Tsoukatos, 2018). In the field of strategic management, both performance and competitive advantage are deemed to be the topmost challenges (Rothaermel, 2015). Despite the greater efforts exerted to shed light on aspects of strategic management, its clarity remains elusive, particularly when it comes to industries that are driven by advanced technology (Shahmansouri, Esfahan & Niki, 2013). In the present times, owing to the dynamically changing business environment coupled with the knowledge-driven economy, businesses have been challenged with competitiveness in all aspects, including pricing, quality,
product knowledge, innovation and time duration (Wingwon, 2012). The above factors have necessitated that SMEs conduct an assessment of the strategies that they have already adopted and need to adopt in future in order to survive.

Strategic innovation (SI) has been acknowledged as a significant factor that brings about sustainable competitive advantage and high performance among organizations (Huang, 2011). Firms should depend on featured and innovative ideas to survive and compete in the rapidly changing and aggressive marketplace (Reguia, 2014). In fact, several industrial sectors in developing countries have to learn to adapt innovation for their survival and to compete successfully (Kodama, 2018).

Although the growth and development of SMEs can be seen globally, SMEs in Yemen have yet to extensively engage in innovation activities (Aljazeera, 2012). Many SMEs are faced with innumerable problems in their innovation processes; in fact, the lack of innovation has prevented new product development and ideas. It is thus important to tackle the expectations of customers for new and higher standards in order to satisfy them (Aljazeera, 2012). Regardless of the size of the industry, they should be able to adopt SI.

Yemen is characterized as a developing nation, which has a low Gross Domestic Product (GDP) (USD 2820.8), according to the World Bank (2016) Report. The Yemeni economy primarily depends on foreign aid and the help of its neighbouring oil-endowed nations as well as its citizens’ remittances from abroad. Also, given the slow progress of the country, the performance of SMEs in major sectors is showing a downward trend. Based on an extensive survey, the economy of the country is facing massive problems, stemming from the lagging and underdeveloped industries as compared to the neighbouring ones, significantly low annual GDP (4%) contributed by manufacturing industries owing to low competitiveness and weak performance of Yemeni-made products and a high rate of inflation (11%) (World Bank, 2016). Additionally on the basis of current statistics, the economy of Yemen depends largely on oil, which constitutes 93% of the GDP. Moreover, the industrial exports are estimated to be low (0.07%), with a high unemployment rate (70%) because of the poor growth of industries (Aljazeera, 2012).

Despite the significant number of manufacturing SMEs in Yemen (Yemeni Ministry of Industry and Trade, 2017), these enterprises have contributed little to the GDP. This fact urged the World Bank (2015) to appraise the performance of the Yemeni economy, and subsequently the report declared it as being very poor. This is particularly true for the performance of the country’s manufacturing sector that has shown considerable weaknesses, which have been attributed to low innovation adoption. The World Bank Report also evidences decreased contribution of the manufacturing sector of Yemen to the GDP from 19% (1990-1994) to 15% (2005-2010). This decrease in the contribution of the manufacturing sector to the national economy indicates issues that have to be determined and addressed. Evidently, according to the World Bank Report (2015, p.15), the small size
and the low performance of private manufacturing SMEs are what make the country’s growth performance weak. This clearly indicates that the poor performance of manufacturing SMEs in Yemen lies behind the country’s overall poor economic performance.

In addition, according to Aljazeera (2012), Yemeni firms lack advanced technology and they are positioned as 137th in the world when it comes to their innovation capability, based on the Global Innovation Index Rankings (2015). The index report suggests that Yemeni firms adopt the most current SI and integrate it into their business operations in order to achieve optimum performance (Global Innovation Index Rankings, 2015). In this context, firms that lack appropriate innovative functional capabilities may not be so inclined to adopt and sustain innovative projects in an attempt to enhance their business operations and performance (Aljazeera, 2012; Ministry of Industry and Trade, 2015). However, those with innovation capacity will be able to generate and introduce new products and contribute to a positive performance. Finally, studies dedicated to Yemeni SMEs’ performance are still lacking, with most of them largely ignoring innovation and its strategic role in manufacturing SMEs’ performance. This has created a gap in the literature that the present study conceptually addresses.

**LITERATURE REVIEW**

**Strategic Innovation and Manufacturing SME Performance**

*The Relationship between Strategic Innovation and SME Performance*

Strategic innovation is considered as one of the most important factors influencing firm performance (Lilly & Juma, 2014; Markides, 1998). It refers to the entire process through which companies redesign their business processes and products to enable them to provide superior products and services to their customers (Xu, 2011; Drejer, 2006). Strategic innovation refers to the process undertaken by firms which totally changes the nature of competition within an industry as well as gaining competitive advantage by employing strategies different from their competitors (Drucker, 2014; Afuah, 2009).

Indeed, strategic innovation does not just refer to activities in the Research and Development (R&D) department performed for the creation of next-generation products and services; it also challenge the conventional wisdom in particular areas (Derrick & Soren, 2007). Strategic innovation involves recreating markets, consumers’ needs and the entire value-delivery chain. Through innovation, companies can also redesign methods used by their businesses and, ultimately, bring more value to customers in the marketplace (Mootee, 2013).
In Yang’s (2014) study, the differences between foreign and local cosmetic firms were compared in terms of the SI adopted in the Chinese market. They also determined the differences between large-sized cosmetic firms and SMEs. According to their findings, different types of firms should not choose the same type of SI. Similarly, Lilly and Juma (2014) examined the effects of SI on the performance of commercial banks in the Kenyan context. They found a significantly positive SI-performance relationship among the study sample. Meanwhile, Kalay and Lynn (2015) examined the effects of SI on Turkish manufacturing firms’ performance and revealed positive effects.

In addition, due to the importance and strategic nature of performance, it has received a lot of emphasis in the literature. SME performance has been widely investigated (Hudson, Smart & Bourne, 2001) and it has been noted that operators of SMEs have not given serious attention to performance, perhaps due to the informal manner in which they run their businesses. Although numerous studies have been conducted on performance generally (Mandhachitara & Allapach, 2017; Aminu & Shariff, 2015; Hudson, Smart, & Bourne, 2001), very few studies on SME performance are available (Ates, Garengo, Cocca & Bititci, 2013). This observation by Oura, Zilber and Lopes (2016); Boachie-Mensah and Acquah (2015); Mokhtar, Yusoff and Ahmad (2014); Taticchi, Tonelli and Cagnazzo (2010); and Ates et al. (2013), points to a theoretical gap in terms of SME performance research. Moreover, developing countries usually lag behind the advanced countries; hence, there is a need to investigate the peculiar nature of SMEs and their performance in the context of developing countries.

It is evident that there are major theoretical gaps in the literature when it comes to studies that have focused on investigating the relationship between SI and organizational performance, as brought to attention by Muhammad (2014). Specifically, prior studies have primarily stressed innovation capability, product innovation, process innovation and marketing innovation and their effects on performance, with only a few studies tackling the SI-performance relationship (Muhammad, 2014). There are several ways through which SI can lead to firm performance and the present work adopts SI measurement from Yang’s (2014) study that consists of 12 different ways (refer to Figure 4.1).
PECULIARITIES OF MANUFACTURING SMES IN YEMEN

Organizations depend on innovative ideas to survive and compete in the fast-changing, aggressive and competitive markets of the 21st century (Nusair & Osman, 2016). Researchers have revealed that most developed nations largely depend on innovation for their survival and competitive advantage (Zoo, Vries & Lee, 2017; Iizuka & Gebreeyesus, 2017; Szapir, Vargas, Brito, & Cassiolato, 2016). In the Yemeni case, the manufacturing industry is lagging behind in innovation adoption in comparison to its neighbours (Yemeni Ministry of Industry and Trade, 2016). According to both the World Bank Report (2015) and the Global Innovation Index Rankings (2015), Yemeni manufacturing firms are lagging behind in innovation adoption. Both entities are not the only agencies that have...
connected the economic problems of Yemen to the low level of innovation and performance of manufacturing SMEs in the country. Prior to their report, the United States Agency for International Development (USAID) (2009) highlighted this issue, stating that manufacturing firms contribute only 9.9% of the GDP in Yemen and a mere 4% of the workforce. In comparing the data obtained for Yemen with that from Malaysia, there is evidence that Yemeni manufacturing SMEs have poor performance. This may be exemplified by the contribution of 21.7% to the GDP by Malaysian SMEs (Malaysian Department of Statistics, 2015), against the contribution of 9.9% of Yemeni SMEs. Added to this, in contrast to Yemen that has been experiencing growth decline among its SMEs, Malaysian manufacturing SMEs displayed a 6.6% growth in 2015 alone. It can thus be concluded that challenges are rife in the development of Yemeni SMEs, particularly in the manufacturing sector. The World Bank (2015) noted that this has led to practical economic issues in Yemen, including the low level of employment and sluggish growth of the economy.

As stated, with the large number of Yemeni manufacturing SMEs (Yemeni Ministry of Industry and Trade, 2017), it is a wonder that such enterprises only contribute to a minimum level to the country’s GDP. A critical appraisal was made by the World Bank (2015) of the performance of the Yemeni economy and the conclusion is that its economy is very poor. The performance of the manufacturing establishments is weak because of low innovation (World Bank, 2015). Decreased contribution to the GDP by such establishments was also noted, from 19% (1990-1994) to 15% (2005-2010). This decrease is indicative of issues in the sector that need examination and rectification. According to the World Bank Report (2015, p.15), private manufacturing firms’ lacklustre performance is the core of the problems of poor economic performance of Yemen and the role of SMEs which contributes to it.

In relation to the above, Yemeni manufacturing SMEs are facing several common problems in their innovation process adoption, in that the level of innovation and implementation of new ideas is low in their attempts to create new product value. Therefore, it is important for such establishments to take into consideration the expectations of customers, while adhering to the new standards to satisfy them (USAID, 2009). Innovation should be adopted by all companies, notwithstanding their size and industry.

Moreover, the firms in Yemen lack advanced technology, as evidenced by the country’s 137th position in terms of global ranking of innovation capability (Global Innovation Index Rankings, 2015), although this ranking improved to 128th position by 2016. In the present globalized market, goods and services are continually moving across international boundaries (World Bank, 2017). Yemen is no exception in the effects of globalization, which is why SMEs in the manufacturing sector have to be proactive in adopting innovation to be at par with the rest of the SMEs around the world. Without innovation, Yemen will remain backward and display poor performance. Innovation in manufacturing
SMEs, or the lack thereof, has also been highlighted by USAID (2009), in that Yemeni SMEs operate at the lower end and are limited to food and beverage products as opposed to advanced types of manufacturing, indicating that innovation may be lacking, which in retrospect, has adversely affected their performance.

In sum, the manufacturing SMEs in Yemen are lagging behind in terms of performance (World Bank, 2015; Nusair & Osman, 2015), with the main reason being their low level of innovation adoption. According to the Global Innovation Index Rankings (2015), Yemen occupied 137th position, and thus low innovation activities may be the major factor that has prevented optimum performance of the manufacturing SMEs in the country.

CONCLUSION AND POLICY RECOMMENDATIONS

The conclusion of this study has implications for policy in terms of how to improve innovation among Yemeni SMEs. The study presents 12 different ways in which manufacturing SMEs can adopt innovation and engage in it, but it may be difficult for them to adopt all the ways. However, product and marketing innovation is crucial for the development of Yemen. The same goes for financial innovation as financial access is one of the major problems of SMEs in developing countries (Yang, 2014).

This study recommends that the Yemeni government assists SMEs by providing and facilitating training for its employees. This argument is backed by the fact that innovation can only be possible through the provision of effective training of the workforce. In this regard, there is a marked lack of trained human resources in Yemen. Similar to other developing nations, Yemen lacks the financial resources to provide training, and in this regard, it is recommended that the government subsidize training costs for SMEs. This study recommends that the Yemeni government addresses the issue of intellectual capital reformation through the adoption of the following steps:

1. Establish an entity that is responsible for managing the affairs of manufacturing SMEs in Yemen, to enable them to concentrate on their manufacturing activities on a national level.
2. Provide SME personnel with effective training in order to increase their intellectual capital. Because SMEs lack financial resources to provide training on modern approaches and techniques, the government should encourage training among SMEs through subsidies.
3. Boost innovation through the recognition of SMEs that are capable of generating innovative products and reward them for doing so.
4. Leverage on globalization to expose SMEs to the best practices found in the global market place. This will allow the SMEs to benchmark their products against those that are offered by other countries for optimum enhancement.
5. Direct the focus on knowledge development as opposed to the type of knowledge to be developed for timely action of trained employees.

6. Develop knowledge through the constant search for novel approaches and methods of analyzing and optimizing opportunities within the organizations or in the global market.

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