

The Influence of TQM on Export Performance of Manufacturing SMEs in Jordan

Khalil Al-Hyari¹

ABSTRACT

This research aims to investigate the influence of total quality management (TQM) practices on export performance in small and medium-sized enterprises (SMEs) in the Jordanian manufacturing sector. A questionnaire was used to collect the data and 181 usable responses were received from the owners/managers of exporting manufacturing SMEs in Jordan. The data was analyzed by using a structural equation modeling technique. The findings revealed that there is a significant positive influence of TQM on SMEs' export performance. Moreover, the most important TQM practices, in terms of their impact on export performance, are employee training and development, continuous improvement and customer focus. Based on these findings, several recommendations were proposed to enhance the understanding of managers or decision makers of SMEs of the suitable factors that influence the firm in adopting TQM, which would lead to the maximum improvement in their business results in the international market as well as to better achievement in export performance. Very little research has been conducted showing the importance of TQM on the export performance of SMEs from a developing country's perspective, particularly in the Middle East. This study addresses an area that is believed to be less studied. The significance of the current study emanates from that it could be used as a model and guide to those intending to study export success in other emerging market economies.

Keywords: Performance, Jordanian SMEs, TQM, Export, Manufacturing Sector.

¹ Faculty of Business, Al-Balqa Applied University, Jordan.
kalhyari@bau.edu.jo

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أثر إدارة الجودة الشاملة في الأداء التصديري للمؤسسات الصغيرة والمتوسطة في قطاع الصناعات التحويلية في الأردن

خليل الحياري¹

ملخص

هدفت هذه الدراسة إلى التعرف إلى أثر ممارسات إدارة الجودة الشاملة في الأداء التصديري للمؤسسات الصغيرة والمتوسطة العاملة في قطاع الصناعات التحويلية في الأردن. ولتحقيق أهداف هذه الدراسة، تم تطوير استبيان لقياس أبعاد الدراسة ومتغيراتها، وتم توزيعها على المديرين العامين وأصحاب المؤسسات الصغيرة والمتوسطة، وقد تم استرجاع 181 استبياناً صالحة للتحليل الإحصائي. واستخدم الباحث النمذجة بالمعادلات البنائية لاختبار فرضيات الدراسة. وتوصلت الدراسة إلى عدد من النتائج أهمها: وجود أثر إيجابي لإدارة الجودة الشاملة في الأداء التصديرى للمؤسسات الصغيرة والمتوسطة. ودللت النتائج على أن الأثر الأكبر يبرز من خلال تدريب الموظفين وتطويرهم، والتحسين المستمر، والتركيز على العميل. وتماشياً مع نتائج الدراسة، تمت صياغة جملة من التوصيات التي يؤمن أن تساعد المديرين وصناع القرار في المؤسسات الصغيرة والمتوسطة في فهم أفضل للعوامل التي تؤثر في تطبيق إدارة الجودة الشاملة ومن ثم تحقيق أفضل النتائج في الأسواق الدولية، الأمر الذي من شأنه أن يؤدي إلى تحقيق أداء تصديرى أفضل. والجدير بالذكر أن هذه الدراسة تضيف إلى الأدبيات السابقة لسد النقص فيها حول استخدام إدارة الجودة الشاملة وأثرها في الأداء التصديرى لقطاع المؤسسات الصغيرة والمتوسطة في الدول النامية، وبالتحديد في منطقة الشرق الأوسط. كما يؤمن أن تكون دليلاً مرجعياً للراغبين في البحث عن التصدير الناجح للأسواق الاقتصادية الناشئة.

الكلمات الدالة: الأداء، المؤسسات الصغيرة والمتوسطة في الأردن، إدارة الجودة الشاملة، التصدير، قطاع الصناعات التحويلية.

¹ كلية الأعمال، جامعة البلقاء التطبيقية، الأردن.
kalhyari@bau.edu.jo

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1. INTRODUCTION

In today's manufacturing market, one of the most important forces driving an organization's business is globalization (Sahoo and Yadav, 2017). More and more firms now understand that in order to be able to compete in this ever-increasing global competitive environment, they must produce the superior quality products that customers demand (Murad and Nour, 2014; Kakouris and Sfakianaki, 2019; Sweis et al., 2019). The fierce competition of today's marketplace is driving small and medium-sized enterprises (SMEs) in the manufacturing sector to reshape their strategies in order to limit overall cost and cut down inefficiencies (Gandhi et al., 2019). Therefore, to survive in the new global marketplace, SMEs in the manufacturing sector of Jordan will have to apply some essential factors, such as cost competitiveness, customer orientation and lead time.

To overcome the challenges of international competition, several organizations have invested significant resources in implementing TQM strategies (Demirbag et al., 2006b). According to Saleh et al. (2018a), since international competition offers both challenges and opportunities for the manufacturing sector in Jordan, firm owners and managers should know which methods will maintain their participation in both national and global markets. Many SMEs across different nations have built their competitiveness and improved their export performance by following TQM principles through incorporating quality into various aspects of their products, processes and services (Imran et al., 2018a, b; Sinha et al., 2016).

Although it is not the biggest country in the region, Jordan has gained a very good reputation for not only its position in prominent historical eras and as an arbitrator of the Asian, African and European continents. Indeed, its role and position in the world has allowed the country to

become a key member of the eastern seaboard of the Mediterranean, of the Arab-Asia group and an important part of the trade passage within the Middle East and the Arabian Gulf (Al-Hyari et al., 2012). In this context, exporting is the most common form of internationalization and is an important strategic option for guaranteeing survival and growth for firms that have chosen to start internationalizing, because it is associated with minimal resources, lower risk and structural flexibility. This has made it possible for SMEs to increasingly become involved in global trade (Navarro-García et al., 2016; Njinyah, 2018).

Recognizing that TQM implementation in manufacturing SMEs contributes to the export performance and survival of such sector in Jordan is a critical step in managing and avoiding the failure of this essential sector. This has prompted the author to investigate this topic, which is significant in terms of the growth and survival of SMEs at international markets.

The issues relating to quality concept have been a common research theme in literature review for well over two decades, where researchers have tried to recognize main dimensions of TQM practices and performance (Sweis et al., 2019; Sohail and Hoong, 2003). Nevertheless, in understanding what needs to be implemented and which areas to focus on, many firms are not experienced enough (Abusa and Gibson, 2013).

The present study's ultimate aim is to fill a gap in the literature, especially in the developing countries, by explicitly focusing on the impact of Total Quality Management (TQM) practices on organizational export performance regarding Jordanian manufacturing SMEs.

The second section of the research starts with clarifying the problem statement and relating it to the

context in the third section. Section four provides a review of literature on the importance of SMEs, the significance of exports in the manufacturing sector and the importance of TQM for SMEs. Afterwards, section five clarifies the conceptual framework and the development of the research hypotheses. Section six includes the research methodology adopted in this research and subsequently, in section seven, the results, conclusions and recommendations are presented, and finally, implications for managers and recommendations for further research are proposed.

2. Problem Statement

In order to enhance their productivity and competitiveness in the global market, many developing countries have welcomed total quality management ideas to improve the firm's products, procedures and services to achieve the customer satisfaction at a low cost, which will lead to higher export performance (Imran et al., 2018a, b).

When searching previous literature on the subject, it is quite clear that extensive research has been carried out regarding TQM and its implementation in larger firms with little focus on SMEs (Basu and Bhola, 2016). Compared to large firms, SMEs are very slow in adopting TQM practices, because they suppose that the implementation of a quality management system is overwhelming and associated with high, ongoing operational costs (Imran et al., 2018a; Sahoo and Yadav, 2017). Most of the developing economies have not realized the potentials of quality management implementation initiatives. Regardless of the benefits that can be derived, SMEs in developing countries, such as in Asia and the Middle East regions, still lack the will to implement QM practices (Chakraborty et al., 2019; Sila, 2018). Recently, there has been insufficient research, for example, which has included the effect of TQM practices on organization export performance, especially within the context of an organization operating in a developing country such as Jordan (Hameed and Abu-Rumman, 2019).

Accordingly, this research attempts to contribute to the inadequate literature on this subject by continuing the investigation of the influence on both TQM and organizational export performance of TQM implementation in Jordanian manufacturing SMEs. This study can serve as a reliable reference guide to business practitioners at SMEs that are focused on export activities.

The main question of this research is based on the assumption that SMEs adopt TQM as a process to improve their export performance. To fully investigate the influences of TQM on export performance, the key research question is proposed as: **"Is there a significant influence of TQM practices on the export performance of manufacturing SMEs in Jordan?"**

Thus, the sub-questions are formulated as follows:

- **Does** top management commitment practice have a positive and significant influence on the export performance of Jordanian manufacturing SMEs?
- **Does** employee training and development practice have a positive and significant influence on the export performance of Jordanian manufacturing SMEs?
- **Does** continuous improvement practice have a positive and significant influence on the export performance of Jordanian manufacturing SMEs?
- **Does** process management practice have a positive and significant influence on the export performance of Jordanian manufacturing SMEs?
- **Does** employee participation practice have a positive and significant influence on the export performance of Jordanian manufacturing SMEs?
- **Does** customer focus practice have a positive and significant influence on the export performance of Jordanian manufacturing SMEs?

3. Context of the Study

Jordan has an emerging economy with limited natural resources, including inadequate supplies of water, oil and gas. Furthermore, Jordan is a market-oriented economy with a copious amount of skilled human resources and is classified as a low- to middle- income country (World Bank, 2018). Jordan is a developing country situated in the middle of a region torn by strife and turmoil dynamic political, social and economic sub-systems between Iraq, Syria, Palestine and Israel (Husein, 2019). Jordan's economy has had to deal with high unemployment which rose from 12.5% in 2010 to 15.25% in 2016 and grew increasingly worse as a result of the flood of Syrian refugees entering the country (JEGP/2018-2022). While there has been a continuing rise in trade deficit, its ratio to gross domestic product (GDP) decreased, mainly due to stable growth in domestic export and a modest decrease in the rate of import growth, reflecting a growth of the economy's productive capacity.

Despite all of this, from 2017 to 2019, economic growth is anticipated to slightly improve to a 2.6 average due to expectations of improvement in exports and the effects of investment climate reforms on the economy (World Bank, 2018). Additionally, by taking advantage of its free enterprise economy, Jordan now finds itself a regional import/export transit point between the Middle East and Western Europe (Al-Hazaimeh et al., 2011). Husein (2019) found that the overall elements that contribute to long-run economic progress in Jordan are foreign aid in aggregated form, in addition to exports and human capital. Jordan has an economy that is dependent on SME businesses to meet the challenges of the economy in today's manufacturing environment, since SMEs constitute 98% of the manufacturing sector within the Jordanian context, as reported by JCI (2015).

The declining performance of manufacturing SMEs in Jordan is a matter of serious concern and is worth being

investigated (Jaradat et al., 2018). As the SME manufacturing sector is considered to be one of the major contributors to the Jordanian economy, this sector has been chosen, so that some practical and credible solutions could be recommended to improve the performance of SMEs. Also, as a result of the economic and political conditions in surrounding areas, many companies, including SMEs in manufacturing sector in Jordan, are facing challenges to survive and grow, which has highlighted the importance of TQM as a potential strategy for tackling these challenges (Hameed and Abu-Rumman, 2019). These results are the same as the findings of Chapman and Al-Khawaldeh (2002) stating that the Jordanian manufacturing sector uses TQM as an influential instrument to continuously enhance productivity and customer satisfaction.

4. Literature Review

Small and Medium-sized Enterprises (SMEs) are considered as the backbone of an economy, contributing significantly to growth, innovation and success of societies, specifically in developing countries (Chakraborty et al., 2019; Amaradiwakara and Gunatilake, 2017). SMEs play an essential role in the economies of most developing nations from the viewpoint of generating employment and economic growth (Asah et al., 2015). Because they give the economy a constant supply of ideas, skills and innovations that are essential in both encouraging competition and dealing with scarce resources in an efficient way, SMEs must be more competitive in this age of globalization and liberalization and learn to recognize the crucial success factors needed for organizational efficiency. Therefore, the fact that different studies are still being conducted to develop strategies for improving SME performance is not

surprising (Ngoma et al., 2017).

SMEs form the majority of local enterprises, ranging from 90% to 95% of all organizations in most economies (Ng and Kee, 2017). SMEs account for up to 45% of total employment and up to 33% of gross domestic product (GDP) in emerging economies (Pinho et al., 2018). SMEs play an important role in the stability of the economy in Pakistan by enriching the individuals' lifestyle and enhancing the social status (Soomro et al., 2019). Likewise, Turkey presents a comparable trend, where SMEs comprise 99% of all business organizations and employ 53% of the labor force in the manufacturing sector (Demirbag et al., 2006b). In other words, SMEs are the drivers of economic growth in most of developed and developing countries (Ng and Kee, 2017).

There is no generally accepted definition for SMEs. However, SMEs in most economies are commonly defined according to their characteristics, which comprise structure, number of employees, sales volume and worth of assets (Sahoo and Yadav, 2017). This research has used the Ministry of Industry and Trade definition of SMEs, which defines small and medium-sized enterprises according to the number of employees as those with less than 250 employees (Al-Hyari et al., 2012).

There is no doubt that SMEs currently work in an increasingly challenging environment, where customers are becoming more demanding, international competition is getting tougher and local markets are in downturn. Hence, SMEs struggle to find ways to enhance their adaptive and reactionary capacities, giving them an undeniable edge over their competitors (Bannour and Mtar, 2019). SMEs have to place emphasis on incorporating quality into various aspects of their products, processes and services. To stay competitive and to enter new global markets, SMEs have to implement QM practices (Chakraborty et al., 2019).

SMEs form the backbone of the Jordanian economy, as a strong SME sector greatly adds to the Jordanian economy

by contributing to the gross domestic product (GDP), through decreasing unemployment and poverty levels, increasing industrial production and contributing significantly to exporting (Al-Hyari et al., 2012; Al-Hyari, 2013). In 2017, Jordanian SMEs constituted more than 98 % of the total amount of registered companies and 60% of formal jobs, in addition to 50% of the GDP, thereby representing the engine of solving the unemployment problem (JYES, 2017).

To overcome local problems and continue their success, many Jordanian SMEs pursue global expansion as a survival policy. Additionally, by taking advantage of its free enterprise economy, Jordan now finds itself a regional import/export transit point between the Middle East and Western Europe. To be more competitive in the international market, SMEs need to implement productivity and quality programs (Abdullah, 2010). Therefore, the Jordanian Government should encourage participation in activities; for example, TQM.

Recently, many SMEs have successfully set up activities outside their home markets and their role is progressively vital in contributing to future growth (Ngoma et al., 2017). By diversifying their geographic market presence, exporting SMEs are able to offset sales when the life cycle of products is becoming shorter and local markets are in recession (Miocevic and Morgan, 2018; Pinho et al., 2018). Extensive evidence exists of the positive effects both at the micro- and macroeconomic level of firms' higher exports (Freixanet et al., 2018). At macro level, exporting contributes to the country's economy and balance of trade, increases productivity and creates jobs. Furthermore, export activity maximizes the country's foreign exchange and revenue reserves (Imran et al., 2018a). At the firm level, through recognizing and developing innovative international

venture opportunities, SMEs that export to markets overseas attain improved sales revenues and profits (Miocevic and Morgan, 2018). Through market diversification, exports also offer the chance for SMEs to become less dependent on the local market, to obtain new customers and to attain lower production costs while producing more proficiently (Rua et al., 2018; Haddoud et al., 2017).

In order to enhance their productivity and competitiveness in the global market, many developing countries have welcomed total quality management ideas as a result of market globalization and the increasing interdependence of economies (Sohail and Hoong, 2003). Although some attempts have been made to apply the practices of TQM and recognize its impact on SME's organizational performance, there has been little systematic empirical evidence shown concerning the degree of TQM implementation and its effects on the export performance of SMEs in the manufacturing sector (Tahir et al., 2016; Imran et al., 2018ab) in up-and-coming market economies such as that of Jordan. This is consistent with Khasawneh et al. (2012) in that there has been many research carried out on TQM and though some organizations have applied it in Jordan, its impact on Jordanian companies, particularly those in the manufacturing industry sector, is not well known. Therefore, this research is planned to fill the gap in literature by looking at the influences of TQM in the context of manufacturing-based SMEs in Jordan. For this purpose, the research has selected exports as the main outcome for the analysis in the current research. The findings can be useful for SMEs, practitioners, academics and policy makers in Jordan.

5. Conceptual Framework and Hypotheses

Export Performance of SMEs

In general, organizational performance refers to the extent to which an organization meets its stated objectives (Hameed and Abu-Rumman, 2019). Export performance

has long been a construct of essential interest in the global business literature (Njinyah, 2018; Hasaballah et al., 2019). In the context of global markets, firms' existence and growth, as well as consequent economic growth of many developing economies that view the global marketplace as a means to ensure growth are strongly dependent on a better understanding of the factors that affect export performance (Rua et al., 2018; Quaye et al., 2017). However, studies often disagree on a homogenous definition leading to a variety of performance measurements being used (Altintas et al., 2007; Altun, 2017). Chen et al. (2016) define export performance as "the outcome of a firm's activities in the export market". Therefore, to enhance export performance, one needs to determine the range of TQM implementation and measure its influence on export performance.

Previous research has been conducted spotlighting that different indicators to measure organizational export performance have been used by many researchers (Sousa, 2004; Demirbag et al., 2006a). Many researchers agree that choosing suitable indicators to measure export performance is not an easy task (Njinyah, 2018). Many studies used a scale containing five items that captured finance managers' satisfaction with return on export investments, export profit to export sales ratio, net profit from export operations and gross profit margin from export operations (Olabode et al., 2018). However, some studies attempted to use more sophisticated measures, with a multi-dimensional approach that includes objective and subjective measurements of export performance (Freixanet et al., 2018).

Traditionally, organizational export performance is divided into two main areas: operational performance and objective/financial performance.

Financial performance is related to export volume, export intensity and exports to total assets (Freixanet et al., 2018; Demirbag et al., 2006a), while operational performance is related to the determinants of the results (productivity, quality) (Saunila, 2016).

Previous research has measured SME export performance based on economic/financial measures, such as export profitability, export sales growth, export sales and export intensity. Conversely, the satisfaction with export performance and perceived success about international activities is often used to assess non-economic/non-financial export performance. Non-economic performance measures are less frequently used (Chen et al., 2016). According to Demirbag et al. (2006b), non-financial performance indicators are also equally significant in implementing TQM practices, since TQM practices may influence performance indirectly; for instance, increasing innovation, market competitiveness, overall organizational performance, sales growth, market share growth and productivity.

In his research reviewing literature on export performance indicators and classifying them into objective and subjective measures, Sousa (2004) found that of the 50 different export performance indicators he reviewed, 11 were objective measures, while 39 were subjective measures. This research measured export performance subjectively, where respondents evaluated firm performance based on market share, overall sales, profitability and satisfaction, since objective financial performance tends not to be readily available at SME sector, because SMEs are privately held and thus not required to provide detailed financial information (Rua et al., 2018). Despite the gap identified in the previous section, the present research puts forward a conceptual model which investigates the influence of TQM on the organizational export performance of SMEs in the manufacturing sector of Jordan.

Total Quality Management "TQM" and SME Export Performance

Total Quality Management (TQM) has been defined as a philosophy and a set of guiding principles that incorporate essential management techniques which aim to continuously improve each function of a firm in an effort to produce and deliver merchandise or services consistent with the needs of consumers and superior to their competitors, which, in turn, reflects a solid technical system approach to management that involves continuously improving an organization (Yaseen et al., 2018; Al-Hyari et al., 2016; Abdullah, 2010; Demirbag et al., 2006a). TQM has become a catchphrase in today's organizations for the development and practice of quality measurement in businesses that seek adaptness to competitive advantage and optimal task achievement in firms, which, in turn, guarantees the complete satisfaction of both customers and stakeholders, thereby influencing the overall organizational performance (Abu Zyeada, 2012; Alolayyan et al., 2011; Al-Madi and Nseirat, 2011).

Also, it is a philosophy that, in practice, both large as well as SME firms use. However, as TQM is mostly domineered by large firms, the fear of losing contracts to these large firms is what motivates SMEs to incorporate quality into their systems (Sahoo and Yadav, 2017). TQM has been broadly implemented by SMEs in many countries in order to process and manage the organization through quality, enhancement in productivity and meeting customer needs, thereby providing a competitive edge (Imran et al., 2018a). According to Demirbag et al. (2006b), bearing in mind the firm's size in regard to the relationship between TQM implementation and organization performance, it seems that the evidence is muddled, as on one hand, there are some TQM

advocates who dispute that TQM cannot produce dependable performance for SMEs, whereas, on the other hand, some tout the important results of TQM implementation on SME performance.

In TQM literature review, much research has examined what constitutes TQM and what the key principles, practices, critical success factors or principles for the success of TQM implementation are. Notice that, in the literature review, TQM signifies the interconnection of both the human (soft) and technical (work) factors, resulting in higher performance with the outcomes being fewer defects, higher productivity and lesser costs related to waste (Sinha et al., 2016). Moreover, distinction is made between TQM “hard” and “soft” practices. Hard practices are considered to be most relevant to production and operation management, where statistical techniques are used to assess quality, whereas soft practices are those which have a more qualitative focus, combining elements, such as leadership, employee involvement and team work (Hameed and Abu-Rumman, 2019; Saleh et al., 2018b).

Abdullah et al. (2008) examined the effects of TQM factors on organizational performance (OP). Their study disclosed that management commitment, customer focus and employee involvement both significantly and positively affected OP. They also showed that firms implementing additional quality improvement practices increase their organizational performance. According to Sila (2018), visionary leadership is one of the essential values of TQM and is critical for the ongoing success of a business. Similarly, a study conducted by Basu and Bhola (2016) on Indian IT-enabled service SMEs recognized a number of important relations between TQM practices and quality performance. The results revealed that organizational management, capacity management, quality documentation and security management positively influence quality performance.

Mashal and Ahmed (2015), in their research on the

effects of TQM practices on banking sector performance in Jordan, revealed that top management, technical systems, employee satisfaction and customer focus of TQM practices have significant influence on bank performance. Similarly, Alolayyan et al. (2011) identified the most TQM principles, stating that, in Jordanian hospitals, the united efforts of the work force, entrusted support from top management, employee participation, training, customer focus, constant improvement and process management influence operational flexibility of these hospitals. Also, a study conducted by Hameed and Abu-Rumman (2019) on the role of total quality management in facing the challenges in Lafarge, Jordan, showed that customer focus, senior management support and continuous improvement are the most significant variables that improve the ability to face different types of obstacles in Lafarge Jordan. This is consistent with the research of Androwis et al. (2018) on the effect of TQM application and organizational performance on the construction of chemical companies in Jordan, with a significant importance being placed upon the impacts of top management commitment, customer focus, supplier management, process control and continuous improvement on an organization’s performance.

On the other hand, Abusa and Gibson (2013) developed the theoretical foundation of TQM elements containing top management commitment, customer focus, people management, supplier quality management, continuous improvement and process management. As pointed out by Khasawneh et al. (2012), the main TQM principles that affect organizational performance were top management commitment, customer focus, employee involvement and continuous improvement.

Ooi (2015) provided a deeper insight into a

more detailed view of six dimensions of TQM practices; i.e., HR management, customer focus, leadership, information analysis, process management and strategic planning, in order to examine whether these dimensions have the same effect on both Malaysian manufacturing and service sectors in relation to knowledge management behaviours. Similarly, a study conducted by Sinha et al. (2016) on the Indian auto component sector recognized a number of noteworthy relationships between TQM practices and organizational performance. The study provides evidence that the application of TQM principles (i.e., the process approach, a mutually beneficial supplier relationship and an accurate approach to decision-making) is fundamental and that managers can use these principles as an outline to steer their organizations towards performance improvement.

Jordanian manufacturing SMEs fight for their goods and services to be accepted on the global markets. The majority of manufacturing SMEs struggle to produce and improve their businesses effectively to constantly provide quality products that meet customer needs (Al-Hyari et al., 2012). The Jordanian government should enforce quality regimes to ensure that goods and services produced meet international standards. Though, there are many factors influencing the SME export performance in Jordan (Al-Hyari et al., 2012; Al-Hyari, 2013). Previous researchers found that few studies investigated the influences of TQM in the manufacturing sector (Khasawneh et al., 2012; Tahir et al., 2016).

Imran et al. (2018b) found that firms with higher-level implementation of TQM will be more effective in the international market and can attain superior export performance. According to Tahir et al. (2016), the increase of TQM implementation among Pakistani manufacturing SMEs can yield several appropriate outcomes, such as exports. Moreover, a comprehensive literature evaluation has shown that few studies have investigated the effect of

TQM on SME export performance (Tahir et al., 2016; Imran et al., 2018b). Therefore, this research attempts to investigate the influence of TQM on SME export performance in Jordan and fulfill the above mentioned research gap.

Implementing multidimensional framework needs extra care on the role of each practice as well as the interrelatedness among them, particularly in developing countries, where TQM implementation is still in its initial stages (Saleh et al., 2018b). Empirical research on the impact of TQM on firm performance has increasingly attracted researchers' attention recently (Saleh et al., 2018a; Abdullah et al., 2008). Yet, the empirical results from this research on the direct effects of TQM on firm performance up to now remain largely inconclusive, showing sometimes a significant positive impact (Imran et al., 2018a, b; Demirbag et al., 2006a; Basu and Bhola, 2016; Abdullah et al., 2008), while some firms have reported less than optimal results (Chakraborty et al., 2019; Sinha et al., 2016; Demirbag et al., 2006b). These inconsistent findings in the literature require more scholarly examination of the relationship between TQM and export performance in the context of manufacturing SMEs in Jordan. Since the practices are in harmony with each other, our discussion and measurement of TQM are essentially related to the practices of high export performance frequently described in literature. Thus, the conceptual framework of this study claims that TQM practices will have a significant positive impact on export performance.

Figure 1 illustrates the above hypothesized influences between TQM practices and export performance of manufacturing SMEs in Jordan. Thus, the main hypothesis is formulated as follows:

H1. TQM practices have a positive and significant

influence on export performance of Jordanian manufacturing SMEs.

Thus, the sub-hypotheses are formulated as follows:

- H11.** Top management commitment practice has a positive and significant influence on export performance of Jordanian manufacturing SMEs.
- H12.** Employee training and development practice has a positive and significant influence on export performance of Jordanian manufacturing SMEs.
- H13.** Continuous improvement practice has a positive and significant influence on export performance of

Jordanian manufacturing SMEs.

- H14.** Process management practice has a positive and significant influence on export performance of Jordanian manufacturing SMEs.
- H15.** Employee participation practice has a positive and significant influence on export performance of Jordanian manufacturing SMEs.
- H16.** Customer focus practice has a positive and significant influence on export performance of Jordanian manufacturing SMEs.

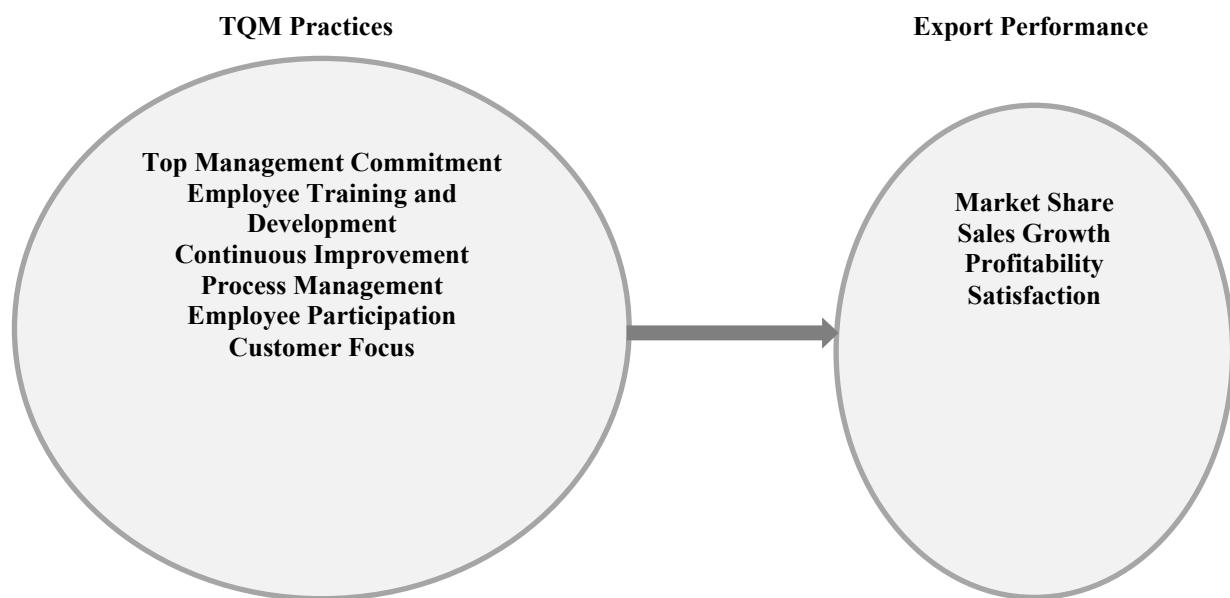


Figure (1): Research framework

Four items, all of which were rated on a Likert-type scale ranging from 1 "strongly disagree" to 5 "strongly agree", were adapted from Jin and Cho (2018) and Imran et al. (2018a, b) to measure subjective export financial/non-financial performance. Respondents were asked to evaluate their performance in major export markets over the past three years regarding their market share, sales growth, profitability and satisfaction in overseas markets. To measure TQM practices, six TQM practices were adapted

from (Hameed and Abu-Rumman, 2019; Androwis et al., 2018; Saleh et al., 2018b; Imran et al., 2018a; Sohail and Hoong, 2003), all of which were rated on a five-point Likert scale, where 1 represented "strongly disagree" and 5 represents "strongly agree" and were used to measure the extent to which managers agree that the total quality management practices were implemented.

6. Research Methodology

This research was conducted using a quantitative research method, where an empirical investigation was carried out to determine the influences of TQM practices on export performance of Jordanian manufacturing SMEs. Data collection took place between October 2018 and March 2019. Frameworks for describing TQM and performance derived from the literature were reviewed and used to develop a questionnaire to assure content validity. The hypothesized influences of this model are tested with the data collected using a survey targeting Jordanian exporters from 181 manufacturing SMEs by using AMOS. Two quality management academics and two quality managers who had more than 5 years' experience in manufacturing firms have been asked to review the questionnaire statements to assess the content and the readability of the instrument.

There were three sections included in the questionnaire. The first section focused on the demographic data of manufacturing firms in Jordan. The second section focused on evaluating the extent of TQM elements within the SMEs. Finally, the third section focused on evaluating the impact of TQM implementation on a firm's export performance. The 30 items concerning TQM practices were measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5), asking respondents about their perception of the actual implementation of each practice. The four items concerning performance were measured on a five-point Likert scale ranging from strongly disagree to strongly agree in this research.

SMEs were identified by the number of employees in the firm. Because each element in the population has a known and equal probability of being within the sample actually selected and is usually always easy to understand, simple random probability sampling was utilized. Additionally, subjective financial/non-financial measures

were used to measure export performance.

The firms in the sample frame were chosen according to certain criteria, such as following the definition of SMEs and whether they are involved in manufacturing and export operations. The same criteria were used by Imran et al. (2018b) in different contexts. SMEs in this research were defined as firms that employ less than 250 employees, based on the definition of the Ministry of Industry and Trade in Jordan. A sampling frame of actively exporting SMEs was established based on a nationwide database gathered by both Jordanian Chamber of Commerce and Jordanian Chamber of Industry. Furthermore, to achieve a fair level of representation, the targeted SMEs came from various manufacturing sectors, including pharmaceutical, food, health and personal care, textile and clothing, chemicals and detergents, plastic, among others, thus reflecting a high degree of heterogeneity. Table 1 reports the characteristics of the demographic data of the study sample.

The questionnaire was originally designed and written in English. It was then translated into Arabic and checked for inter-translator consistency. The questionnaire was pre-tested many times to guarantee that the wording, format and sequencing of its questions were suitable. To check for non-response bias, an extrapolation procedure advanced by Armstrong and Overton (1977) was adopted using t-test by comparing 15 early respondents with 15 late respondents, where it was suggested that the late respondents, particularly after follow-up, might be relatively similar to non-respondents using randomly selected items. There were no significant differences between early and late respondents. Therefore, the sample can be considered appropriate for relevant data analysis.

Sample Characteristics

A total of 336 questionnaires were distributed to SME owners/managers. A total of 207 questionnaires were returned. About 26 questionnaires were excluded because of largely missing values. The actual response rate for the survey was 54 %, which was considered satisfactory for subsequent analysis. Table 1 shows that, with respect to

managers' characteristics of the sample, a majority of respondents (79%) were between 24 and 55 years of age. Younger owners/ managers are more interested in growth and are more likely to engage in business development activities by seeking different ways to increase the value and the quality of their products and satisfy customers' needs.

Table (1): Sample characteristics

Measure	Value	Frequency	Percentage
Gender	Male	145	80.1%
	Female	36	19.9%
Age	18- less than 24 years	17	9.4%
	24- less than 40 years	77	42.5%
	40- less than 55 years	66	36.5%
	More than 55 years	21	11.6%
Academic Qualification	High school or less	5	2.8%
	Bachelor	139	76.8%
	Master	24	13.2%
	PhD	13	7.2%
Management Level	General manger	45	24.9%
	Quality manager	66	36.5%
	HR manager	14	7.7%
	Marketing manager	27	14.9%
	Others	29	16%
Experience	Less than 5 years	34	18.8%
	5-10 years	48	26.5%
	11-15 years	52	28.7%
	16-20 years	29	16%
	More than 20 years	18	10%
Company Size	1-9 employees	19	10.5%
	10-49 employees	56	30.9%
	50-249 employees	106	58.6%
	250 and above	-	-
Firm Sector	Pharmaceutical	4	2.2%
	Food	19	10.5%
	Health and personal care	13	7.2%
	Chemicals and detergents	37	20.4%
	Textile and clothing	27	15%
	Plastic	14	7.7%
	Others	67	37%

Table 1 shows the demographic profile of respondents of the sample selected for this research. The percentage of male managers was (80.1%) and that of female managers was (19.9%) of the study sample. With regard to educational qualification, most of the participating managers (97.2%) had a minimum educational qualification of a bachelor degree. Better educated managers seem to be more proactive and interested in TQM practices, thus more willing to objectively evaluate the advantages of TQM to enhance their competitiveness through incorporating quality into various aspects of their products and processes, which could improve export performance of their businesses.

The sample included a wide range of small and medium-sized manufacturers. Our sample included micro (10.5%), small (30.9%) and medium-sized (58.6%) manufacturers. SMEs are more likely to perceive implementing total quality management practices as significant to the survival and growth of companies in the manufacturing sector, which is considered the largest export industry in Jordan. It is thought that SMEs were well represented by acquiring this response rate. The respondents included quality managers (36.5%) and general managers (24.9%), with the remaining being top management committee members. Since the questionnaire was distributed to those thought to have a sound knowledge of and deep involvement in quality improvement in their firms, homogeneity among contributors is anticipated. More than (54.7%) of the total number of managers participating in this study had over ten years of work experience with the firm.

Validity and Reliability

In quantitative research, reliability is attributed to whether or not the results are replicable, whether or not the extent to which results over time are consistent and whether or not there is a precise representation of the total population under study (Sekaran and Bougie, 2016). The

method that is commonly used as a measure of reliability is Cronbach's alpha. The relative reliability of each TQM practice as a scale was tested and the values are shown in Table 2. Cronbach's alpha values are higher than 0.70, suggesting acceptable model reliability. The values range between 0.885 and 0.913, which means that they are acceptable and our questionnaire has internal consistency.

Confirmatory Factor Analysis (CFA) using Structural Equation Modeling (SEM) has been widely used to test the validity and reliability of research instruments by assessing both of convergent and discriminant validity. Ideally, for a model that fits the data, the standardized root mean square residual (SRMR) would be close to 0.09 or lower, the comparative fit index (CFI) would be close to 0.95 or higher and the incremental fit index (IFI) with values that exceed 0.90 is regarded as acceptable. The fit indices of our study have been found to be: SRMR = 0.056, CFI = 0.96 and IFI = 0.907. According to the threshold values suggested by Hu and Bentler (1999), our model can be accepted. Table 2 shows that discriminant validity was supported, because the average variance extracted (AVE) is greater than 0.50 and square root of AVE is more than each correlation coefficient, which resembles with the values suggested by Fornell and Larcker (1981). Convergent validity of the measured variables was confirmed through confirmatory factor analysis and correlation analysis, since all item loadings should be significant and exceed 0.6 and composite reliabilities (CRs) should be greater than 0.7. The calculated composite reliability results were based on the factor loadings for the research model which are in the range (0.888-0.909), which is higher than the recommended value of 0.7 (Gefen et al., 2000), further confirming adequate reliability of the model's constructs. The

same criteria were used by Sila (2018) in different contexts. Table 2 shows that all the results are well above the

recommended values. Thus, convergent validity and composite reliabilities were supported.

Table (2): Measurement items, validity and reliability analysis results

Measures	Factor loading	AVE	CR	Cronbach's alpha (α)
Top Management Commitment				
1	0.833	0.667	0.909	0.909
2	0.859			
3	0.831			
4	0.779			
5	0.777			
Employee Training and Development				
1	0.835	0.614	0.888	0.885
2	0.83			
3	0.837			
4	0.873			
5	0.732			
Continuous Improvement				
1	0.77	0.637	0.897	0.892
2	0.798			
3	0.841			
4	0.849			
5	0.725			
Process Management				
1	0.789	0.634	0.896	0.895
2	0.838			
3	0.806			
4	0.819			
5	0.724			
Employee Participation				
1	0.806	0.637	0.898	0.899
2	0.816			
3	0.775			
4	0.784			
5	0.81			
Customer Focus				
1	0.861	0.618	0.889	0.886
2	0.78			
3	0.828			
4	0.793			
5	0.651			
Export Performance				
1	0.728	0.727	0.914	0.913
2	0.758			
3	0.731			
4	0.678			

The relationships between the six TQM practices and the dependent variable (export performance) were

examined using Pearson's correlation analysis. Table 3 shows the results of the correlation analysis. The

correlation coefficients for the variables under investigation

were relatively high, ranging from 0.403 to 0.637.

Table (3): Descriptive statistics and correlations

Variables	1	2	3	4	5	6	7
Top Management Commitment	0.817						
Employee Training and Development	0.482**	0.784					
Continuous Improvement	0.654**	0.630**	0.798				
Process Management	0.471**	0.552**	0.655**	0.796			
Employee Participation	0.390**	0.334**	0.629**	0.332**	0.798		
Customer Focus	0.423**	0.462**	0.641**	0.465**	0.508**	0.786	
Export Performance	0.451**	0.498**	0.637**	0.451**	0.403**	0.456**	0.852

Note: The bold numbers on the diagonal are the square root of the AVEs.

*P< 0.05; **P< 0.01.

7. Analysis and Results

Hypotheses were tested with the use of path analysis. AMOS 22 was used to test the study hypotheses. The fit indices are $\chi^2/df = 2.217$, RMSEA = 0.077, NNFI = 0.97,

CFI=0.98 and SRMR=0.015. According to the threshold values suggested by Hu and Bentler (1999), our model can be accepted.

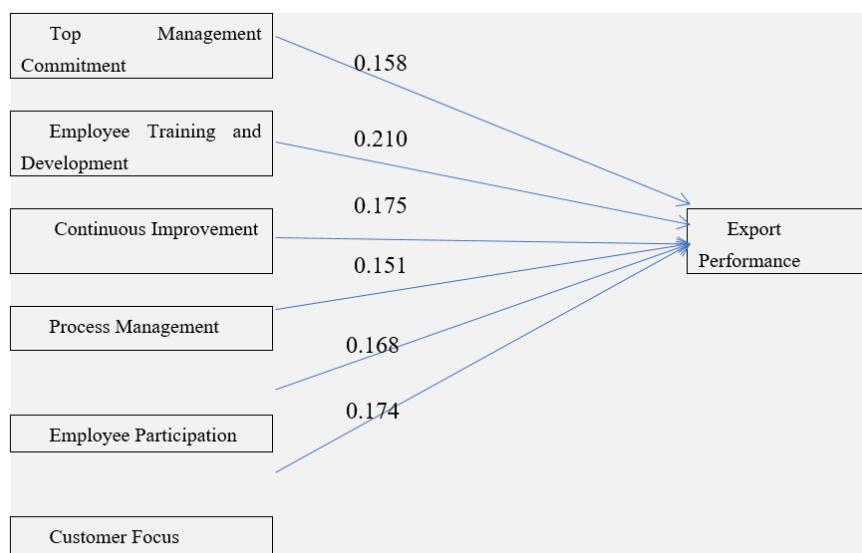


Figure (2): Hypothesis testing results

The standardized path coefficients are shown in Figure 2 and Table 4.

- H11 states that top management commitment practice influences export performance. The coefficient for this path is significant ($\beta=0.158$, $p<0.05$), which supports H11.
- In addition, H12 states that employee training and development practice influences export performance. The coefficient for this path is significant ($\beta=0.120$, $p<0.05$), which supports H12.
- H13 states that continuous improvement practice influences export performance. The coefficient for this path is significant ($\beta=0.175$, $p<0.05$), which

supports H13.

- H14 states that process management practice influences export performance. The coefficient for this path is significant ($\beta=0.151$, $p<0.05$), which supports H14.
- H15 states that employee participation practice influences export performance. The coefficient for this path is significant ($\beta=0.168$, $p<0.05$), which supports H15.
- H16 states that customer focus practice influences export performance. The coefficient for this path is significant ($\beta=0.174$, $p<0.05$), which supports H16.

Table (4): Path analysis for the constructs of the study

Path			Estimate	C.R.	P
Export Performance	<---	Top Management Commitment	0.158	2.351	0.019
Export Performance	<---	Employee Training and Development	0.21	2.94	0.003
Export Performance	<---	Continuous Improvement	0.175	2.15	0.032
Export Performance	<---	Process Management	0.151	2.171	0.03
Export Performance	<---	Employee Participation	0.168	2.441	0.015
Export Performance	<---	Customer Focus	0.174	2.477	0.013

This research focuses essentially on the impact of implementation of TQM practices on export performance of SMEs in the Jordanian manufacturing sector, which plays a significant role in the Jordanian economic and social development. SMEs implement key practices of TQM to develop their export performance and improve their global competitiveness. The current research has found positive influences of TQM practices on SME export performance. This result is consistent with previous studies (Imran et al., 2018b; Tahir et al., 2016).

From the data presented and discussed, results of the

research indicate that the most important TQM practices were found to be employee training and development as well as continuous improvement. Research results emphasize that firms must focus on applying strategic human resource management to ensure flexibility. Appropriate training and education are important for insuring the success of TQM implementation in improving the performance of organizations, noting that the outcome cannot be realized immediately. These results are in agreement with previous literature which indicated that

education and training have positive influence on performance (Basu and Bhola, 2016).

The top managements of these firms have to be aware of the fact that implementing TQM practices in their everyday management could help them in avoiding errors and mistakes. In addition, they should be conscious that TQM concept is one of the ways to enhance the competitive edge of their businesses. Actually, success of TQM application depends on effective leadership that must be initiated by the top management through determining objectives and developing measurable goals to satisfy customer expectations and improve their firms' performance. This supports the same finding by Sinha et al. (2016) and Demirbag et al. (2006a). Therefore, to promote employee participation, firms must improve formal reward and recognition systems that both support teamwork and offer feedback to the employees. Every employee then has the opportunity to aid in reaching the organization's goals in attaining continuous progress in quality of products or services more cost-effectively.

Also, the results have proposed that SMEs of Jordan need to have TQM capabilities, which can provide further business reputation concerning product and service quality, leading to maximum success in the global markets, which in turn leads to improve export performance. Jordanian manufacturing SMEs struggle for their goods and services to be accepted in the global markets. Manufacturing SMEs struggle to produce and improve their businesses effectively to constantly provide quality products that meet customer needs and compete efficiently with their external and internal competitors.

Additionally, effective CI enhances the organizations' products or services to meet and satisfy changing customer needs. TQM philosophy is aiming at CI in all functions of a business in order to produce and deliver goods or services corresponding to customers' needs or requirements while maintaining costs as low as possible and satisfying

distributors through providing them with effective delivery, as well as reducing rework and waste, since CI can reduce scrap and rework costs and enhance productivity with the participation of all employees under the leadership of the top management. In the form of rejection rate elimination and rework reduction, improvements in both productivity and quality of the business are observed to have some tangible and intangible benefits. These results resemble the result of Saleh et al. (2018a).

SMEs represent the backbone of the Jordanian economy. Long-run competitiveness of Jordan critically depends on the ability of SMEs to be active in international markets (Al-Hyari, 2013). Consequently, Jordan has to reconsider its situation and give transitional support to SMEs so as to maintain and develop their role in developing the Jordanian economy. The Jordanian Government must also enforce quality regimes to ensure that goods and services produced meet international standards. Also, the Government should invest in promotion embarking on a TQM program to enhance firms' export performance, which will consequently improve the overall Jordanian economic performance.

The economy of Jordan has received black eye due to amalgamation of the regional turbulence caused by the Arab Spring. Furthermore, an energy crisis has resulted in an increase of oil prices, which has put a substantial stain on the economy of Jordan and the competitiveness of SMEs in the global market. Moreover, it is suggested that existing production and operation methods be changed using modern techniques in an effort to lower costs. TQM practices can lead to decrease manufacturing costs, which will improve the production quality and the development of innovative products at best price.

A key contributing factor to the success or failure

of small firms in international market is the quality of the product. More serious attention must be given by manufacturers to the higher value of producing new products with high quality to meet and satisfy changing customer needs in international markets. According to Ćuzovic and Ćuzovic (2011), the consumer is that “king” who requires a high level of quality of products and services.

Consequently, it can be concluded that TQM leads to manufacturing development-based SMEs in Jordan, as it can support SMEs to gain more market share in global markets as well as superior social benefits for the country as well. These results agree with many studies that have reported the same results, such as Tahir et al. (2016) and Imran et al. (2018b).

It is vitally important for managers, as well as for the policy itself, to develop and encourage the international activities of SMEs, especially when it comes to exporting. Therefore, in order to increase their productivity and continue to be more competitive in the international arena, SMEs must invest more resources into TQM. If the TQM plan is implemented properly, it can be a source of competitive advantage of organizations in international markets by understanding customers' needs, solving problems better and with fewer errors, leading to improved customer satisfaction.

According to the idea of TQM practices, it was seen that these practices have positive influences on performance. So, it is recommended that Jordanian SMEs in the manufacturing sector undertake the following practices in their strategy to get the desired results:

- Employee participation in decision-making should be encouraged, as well as empowering them through the decentralization of decision-making and supporting quality team in preparing plans to develop quality.
- Communication should be open and continuous between the different levels and the department.

- Interest and attention should be increased by firms towards making a clear plan about quality with specific goals set by the management towards developing a training plan to improve employees' skills and abilities.
- SMEs should pay more attention to the areas in which TQM is implemented and spread the concept of TQM as a culture rather than a change in the internal environment of the firm, since they have a flat organizational structure which leads to a positive influence regarding flexibility, adaptability and rapidity when responding to environmental TQM changes and supportive culture building.
- The awareness of the TQM practices should be transmitted to the employees through seminars, workshops and training courses in order to help them implement the quality management system more effectively and successfully as well as to understand how influential TQM is on enhancing the performance of businesses.
- Firms should recognize the vital role of their top managements and quality policies involved in implementing TQM practices.
- Firms should constantly develop and continually find ways to increasingly augment every aspect of their businesses to better serve their customers and become difficult to attack by their competitors.

Implications

The results of this study have implications for both SME export managers, policy makers and researchers. To policy makers, building up foreign exchange reserves, enhancing the employment ratio and improving productivity (all of which can lead to a more wealthy Jordanian society) are some of the benefits of exporting. The results of research imply

that public policy makers and export assistance institutions in Jordan should play a more active role in developing exporting among local firms. Government agencies can work on decreasing the costs related to export activities by enhancing the use of TQM. Consequentially, this will raise the dispersal of export practices by SMEs, which can positively affect the Jordanian economy.

It can be very valuable from the managers' perspective to export to global markets in light of the fact that exporting activities have become more essential to the survival of SMEs. Moreover, SMEs can generate more money through exporting activities that can be used for reinvestment and growth, to extend the life cycle of their products and to minimize business risks by working in numerous markets.

For both literature and practice, the present research is crucial, because it adds to the already meaningful contribution made by existing TQM literature by highlighting TQM practices affecting the organizational performance of Jordanian SMEs in the manufacturing sector. Practically speaking, this research's findings provide an outline for Jordanian SMEs to become more competitive by aiding them in identifying and strengthening those TQM practices through the use of various performance metrics. As a result, Jordanian managers need to closely examine TQM practices with a low-level score of implementation, allow them to be implemented in an acceptable period of time and always look for ways to continually improve each TQM practice (Abusa and Gibson, 2013).

The results of this research imply that public policy makers and export assistance institutions in Jordan should play a more active role to increase quality awareness and instill the philosophy of quality culture in Jordan. This research has valuable implications for the Jordanian decision makers to motivate firms to embark on a TQM program to enhance their export performance, which will consequently improve the Jordanian economy. This can be

achieved by establishing quality institutions to stimulate education, training, qualification and professional development of employees working in different sectors.

The results showed that the relationship between CI as one of the TQM practices and export performance was statistically significant. To find an innovative way to develop products or services and to lower scrap and rework costs, firms should continuously seek out new ways to improve all aspects of business, searching for new space for incremental improvement by continuously investigating the root causes of the problems to avoid their reoccurrence, guaranteeing customer satisfaction and asking employees for their suggestions regarding new ideas in product design. Saleh et al. (2018a) supported these findings by arguing that continuous improvement can improve productivity and lead time through reducing scrap and rework costs.

SMEs should look at TQM as a management tool that helps improve organizational performance in somewhat more active environments. This research offers a number of managerial implications, especially for quality managers and researchers in Jordanian SMEs. Quality managers need to sync processes and resources based on a factual approach to decision-making in order to achieve greater organizational performance (Sinha et al., 2016; Sila, 2018). A more holistic approach is needed regarding quality management and increased institutional support for quality initiatives in Jordan through suitable arrangement and incorporation of their different components and organizations. Moreover, this research offers a design advice for professional managers and academics who work within SME businesses through an understanding of TQM practices. Moreover, having a strong enthusiasm for

implementing TQM is not enough to guarantee success of TQM strategy. Firms must make the quality culture deep in their critical values and make quality a foundation of their competitive advantage (Saleh et al., 2018a). Moreover, this research has contributed to the literature and to the practices of firms by assisting firms in understanding how the process of TQM creates a superior export performance.

Limitations and Suggestions for Future Research

Obviously, this study's results are not without limitations and there are many open opportunities available for future research. For example, because of the cross-sectional nature of the data, one limitation is that the causal relationships between export performance and TQM in this research should be interpreted with caution, since cross-sectional research is confined to a specific point of time, so there is a need for a longitudinal research that allows researchers to look at changes over time to overcome this limitation. Second, the performance measure is subjective and may be subject to response bias. Future research should consider both subjective and objective dimensions of export performance.

Regarding the conceptual model, future research should

be designed by creating a more comprehensive and integrative model by adding other variables vital to TQM practices and export performance. Another limitation concerns using a single method instead of multiple methods to collect data. The use of multiple methods which enables both a quantitative and a qualitative approach toward data collection would help improve the accuracy of the parameter estimates and the generalizability of the findings.

The final limitation concerns the generalization of results. The study was conducted on Jordanian SMEs. Therefore, generalization to SMEs in other countries would require further investigation. Furthermore, there is a need for additional research of the cultural and behavioral issues of firms operating in developing countries, which can influence the successful application of TQM in the face of hard times. Also, this research could also be extended to more analysis of various sectors or between two different countries. So, to generalize the conclusions, studies are needed with samples from a broader geographical area, including large enterprises and non-industrial sectors.

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