

THE EFFECTS OF TOTAL QUALITY MANAGEMENT PRACTICES ON STRATEGIC PERFORMANCE USING THE BSC METHODOLOGY: THE MEDIATING ROLE OF KNOWLEDGE SHARING

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ABSTRACT

The study aims to explore the impact of TQMP on SP using the BSC methodology in Jordanian universities, through the mediating role of KS. The study adopted a quantitative approach using a survey questionnaire. The study population is represented by all faculty members in the public and private Jordanian universities in the central region, which number (11) universities, and (5,224) faculty members work in these universities. The study data was analyzed using assessment of measurement model and structural model using SmartPLS (3.3.3). The study found that TQMP affects SP using the BSC methodology. The results of the study also indicated that TQMP affect KS, and that KS enhances SP using the BSC methodology. The study also found that KS mediated the relationship total quality management practices and strategic performance. The study recommended that universities should be interested in building a culture that supports KS. Also, universities must implement TQMP and ensure its success due to its role in enhancing SP.

Keywords: Total Quality Management Practices, Strategic Performance, BSC, Knowledge Sharing, Jordanian Universities.

INTRODUCTION

Strategic performance (SP) represents the end result of the management of organizations, because it shows the effects of doing business, the competitiveness of the organization and its financial health, and through strategic performance can predict the success or failure of the organization in the future (Shah et al., 2020). Strategic performance is a good indicator for testing the effects of total quality management practices (TQMP) (Hassan & Jaaron, 2021). According to Mann and Kehoe (1994) strategic performance is measured by an organization's ability to achieve goals of profitability, sales growth, and market share improvement. However, as a result of the rapid developments in the work environment of companies, the need has emerged to search for a new direction that bridges the gaps and defects of traditional performance measures and to reach new administrative tools that measure and evaluate performance in a way that can sustain the growth and development of companies (Pietrzak, 2021; Alotaibi et al., 2021). These situations have resulted in the emergence of the Balanced Scorecard (BSC), which is a comprehensive and integrated system for measuring the SP of

organizations as it takes into account financial and non-financial indicators (Zraqat, 2020a). This model includes five basic dimensions that are the pillars of performance for most organizations, and these dimensions include on the financial dimension, the customer dimension, the internal process dimension, the learning and growth dimension and the environmental dimension (Hussien et al., 2017).

TQMP is one of the most important methods that organizations use to develop work methods, which contribute significantly to achieving the desired goals and developing performance (Anil & Satish, 2016). TQMP also contribute to helping organizations' departments to understand those matters related to SP and quality in line with the needs of the organization and improving productivity rates, which reflects the importance of TQMP in achieving enhancing the SP of the organization (Sadikoglu & Olcay, 2014). Several studies have found that TQMP can improve an organization's competitive capabilities and improve its performance. Many researchers believe that TQMP have an important relationship with employee satisfaction, product quality, and SP (Fernandes et al., 2017; Soares et al., 2017; Saffar & Obeidat, 2020; Kustono, 2020; Hassan & Jaaron, 2021). TQMP provide employees with opportunities for self-development and learning by contributing to knowledge sharing (Shah et al., 2021). It also contributes to improving work procedures by focusing on teamwork (Hassan & Jaaron, 2021). Forza and Filippini (1998) indicated that TQMP improves effectiveness, flexibility and increases the competitiveness of organizations. In the current era, knowledge has become one of the most prominent factors of production and outweighs the traditional factors of production (Zraqat, 2019), and based on the belief of contemporary institutions in the importance of knowledge as the main source of competitive advantage, survival and continuity in a rapidly changing world, knowledge management and investment in knowledge capital through knowledge dissemination and sharing it between organizations has become a reason for organizational success (Wang & Wang, 2012; Hussien et al., 2021). Knowledge Sharing (KS) can contribute to increasing productivity and achieving added value, through the use of knowledge sharing (Doğan & Doğan, 2020). Accordingly, KS is one of the basic processes of knowledge management whereby performance can be improved by providing useful and important knowledge by benefiting from the experiences of other organizations.

In order to encourage universities in Jordan to take an interest in TQMP, the government has made great efforts. As a result, the number of universities implementing TQMP has increased. One of the requirements of the Jordanian government was for universities to conduct KS, especially with regard to scientific research activities, which prompted universities to make many efforts in this field, but no studies were conducted to investigate the effects of universities' TQMP on their SP. Hence, this study came with the aim of exploring the impact of TQMP on SP using the BSC methodology in Jordanian universities, through the mediating role of KS. The theoretical importance of this study emerges from the importance of the topic that relates to the extent of the impact of TQMP on SP using the BSC methodology, through the mediating role of KS in Jordanian universities, which leads to achieving some desired results, the most important of which is building a culture in the organization to support the process of implementing the TQM system and its success especially that it is one of the most important administrative entrances to the development of administrative thought, which has proven its efficiency through overcoming the problems faced by the organization related to the quality of services or productivity. The importance of the study in its field aspect lies in the results and recommendations presented by this study that can be used by Jordanian universities, which, if adopted, would contribute to the development and improvement of their SP and distinction in light of the massive environmental changes taking place in the business environment. Thus, it is

possible to reach new knowledge regarding the implementation of total quality management in Jordanian universities.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Total Quality Management Practices

The theoretical essence of TQM is linked to the establishment of a system that enhances cooperation and learning in the organization to reach the continuous improvement of the organization's operations, products and services that it provides, in order to ensure the survival of the company and enhance its performance (Hassan & Jaaron, 2021). TQM is about the ability to manage the organization with all its parts and components to reach the desired excellence (Pham, 2020). TQM is defined as a comprehensive philosophy and methodology for institutions that follow continuous improvement in their work, with the aim of meeting the desires and needs of customers and clients (Lim et al., 2021). TQM is defined as a management methodology that aims to achieve long-term success by encouraging employee reactions, meeting their needs, respecting values and beliefs, and obeying regulations and laws (Li & Houjun, 2013).

TQM seeks to create a distinct culture based on the efforts of all members of the organization to meet the needs and desires of customers at the lowest cost, effort and time (Fernandes et al., 2017), and this indicates that TQM has become of wide importance for organizations (Lim et al., 2021). Several studies have indicated that TQMP can contribute to enhancing performance by reducing costs and increasing profits and productivity (Soares et al., 2017). As well as increasing customer satisfaction (Saffar & Obeiidat, 2020; Kustono, 2020). Achieving a competitive advantage and a high return (Hassan & Jaaron, 2021). Giving the organization a good reputation in the eyes of external clients (Lim et al., 2021). Develop a sense of unity of purpose, team spirit and mutual trust among individuals, in addition to enhancing a sense of belonging in the work environment (Shah et al., 2021).

Several studies have examined the relationship between TQM practices and performance. Hackman and Wageman (1995) pointed out that the focus on teamwork provides an appropriate environment for social interaction and social reinforcement, which enhances the performance of employees, which will be reflected on the SP of the organization. Adam (1994) argues that TQMP improve employee satisfaction and increase customer loyalty. Mann and Kehoe (1994) found that the application of TQM increases the sales of the company. Easton and Jarrell (1998) concluded that the application of TQM improves the financial performance of organizations. Kalogiannidis (2021) found a relationship between TQMP and organizational performance of SMEs companies in Greece. Anggadini et al. (2021) tested the impact of TQM application on SP using the BSC methodology, and concluded that all dimensions of TQM had an impact on SP. In Jordan, Alshourah (2021) reached a high level of TQMP in Jordanian private hospitals. It also found a relationship between TQMP and performance.

Strategic Performance

SP measurement represents a performance evaluation process by measuring all activities in the organization, and the effects affect the short, medium and long term (Zraqat et al., 2021). Choosing a performance measurement method and aligning it with the company's strategy is the first step in judging the company's success (Atkinson et al., 2004). Hussien et al. (2017) argues that there are two types of performance evaluation measures for an organization's financial and

non-financial performance. Where the measurement of financial performance depends on accounting indicators, with regard to non-financial performance measuring efficiency, effectiveness and quality.

According to Lynch and Cross (1991), the performance pyramid model should include the measurement of external effectiveness and internal efficiency in the organization. Since the 1990s the BSC has become the core of strategic management (Al-Beshtawi et al., 2014). BSC provides a clear and comprehensive framework for measuring performance across all levels of an organization (Camelleri, 2021; Baird et al., 2021, Zraqat, 2020b). Kaplan and Norton (1996) argue that organizations should develop a strategic management system by aligning financial and non-financial performance. The BSC describes the organization's vision and turns it into goals that can improve the company's performance. The BSC works on improving financial performance by starting with a learning and growth perspective that aims to improve the capabilities of employees in the organization. This leads to improving the quality of internal processes and improving services provided to customers (Aledwan et al., 2017), which increases customer loyalty, and this ultimately leads to improving financial performance indicators (Anggadini et al., 2021). Evaluating the performance of the organization from the perspective of the customer is of great importance, so organizations should seek to obtain new customers while retaining old customers by directing their strategy towards improving quality to meet customer needs (Mio et al., 2021). SP indicators from an internal operations perspective enable an organization to enhance knowledge, share and innovate. Knowledge sharing and innovation activities in the company are carried out by identifying the needs of existing and potential customers, which requires conducting research and product development activities (Dwivedi et al., 2021). TQMP affect all operational processes in the organization (Shafiq et al., 2019). This affects SP from the perspective of the BSC. The BSC contributes to identifying the extent to which TQMP contribute to achieving customer satisfaction and the effectiveness of the implemented procedures (Wheelen, 2002).

Knowledge Sharing

KS refers to the transfer of information from one person or organization to another person or organization (Doğan & Doğan, 2020). KS is related to an organization's ability to explore, retain and exploit knowledge (Lei et al., 2021). KS between organizations is very important in terms of learning new technologies that contribute to improving performance (Tamsah et al., 2020). The more knowledge that the organization possesses, the more this knowledge is used in the activities and operations of the organization (Mahfodh & Obeiidat, 2020) thus, improving performance by increasing the ability to provide high quality services (Al Hbabi & Alomari, 2020). There are many researchers who have indicated a relationship between KS and performance (Holste & Fields, 2010; Huang et al., 2010; Doğan & Doğan, 2020; Laily & Ernawati, 2020). Many studies have also indicated that KS may have an impact in reducing costs, speeding up achievement and enhancing innovation, which leads to enhancing SP (Doğan & Doğan, 2020). Laily and Ernawati (2020) find that when knowledge is shared between organizations with the aim of developing a common goal, a competitive advantage is gained, especially when the knowledge shared is effectively exploited. Tamsah et al. (2020) found that KS indirectly affects performance. Saffar and Obeiidat (2020) conducted a study to explore the impact of TQMP on employee performance in the presence of internal KS among employees as a modified variable, and the study concluded that TQMP had an impact on employee performance

through KS. Aljaaidis et al., (2020) concluded that employee effectiveness in educational institutions is positively related to KS.

Study Hypotheses

Based on the previous literature review, the following hypotheses were formulated:

- H1: There is a positive effect of TQMP on SP using the BSC methodology in Jordanian universities.
- H2: There is a positive effect of TQMP on KS in Jordanian universities.
- H3: There is a positive effect of KS on SP using the BSC methodology in Jordanian universities.
- H4: KS mediate the relationship between TQMP and SP using the BSC methodology in Jordanian universities.

RESEARCH METHODOLOGY

Using a survey questionnaire, this study took a quantitative approach. All faculty members in Jordan's public and private institutions in the central area, which number 11 universities and employ 5,224 faculty members, are included in the study population (Ministry of Higher Education and Scientific Research, 2020). The survey included 361 academic members from public and private Jordanian universities in the central region as participants. This study employed stratified random sampling as a sampling strategy. The total number of valid responses for further analysis was 347, accounting for 96.1 percent of the total number of disseminated questionnaires. The close-structured questionnaire used in this study was adapted from prior studies in terms of measurements.

DATA ANALYSIS

This study used PLS-SEM (3.3.3) to evaluate the measurement model and structural model of this study. PLS-SEM can simultaneously evaluate the theoretical structural model and the measurement model. Moreover, PLS-SEM is a perfect technique for complicated models with hierarchical constructs (full disaggregation approach), mediating and moderating effects (Chin, Marcolin & Newsted, 2003). Figure 1 shows measurement model assessment.

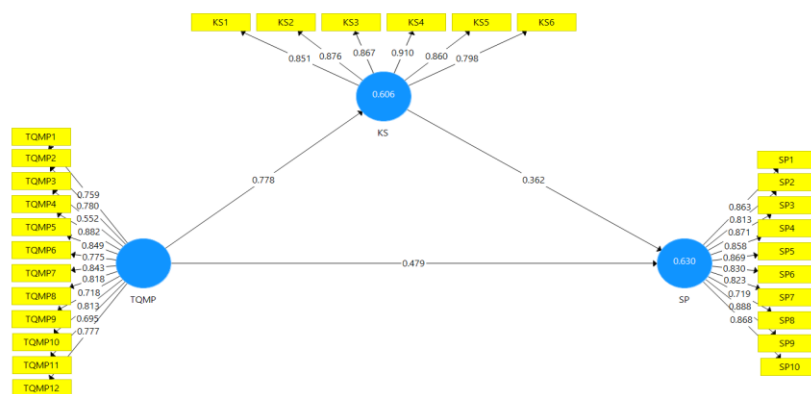


FIGURE 1 MEASUREMENT MODEL ASSESSMENT

The convergent validity and discriminant validity were performed to evaluate the measurement model. As indicated in Table 1, items have loadings between 0.552 to 0.910 with values more than 0.7 for Cronbach's alpha and composite reliability. Regarding average variance extracted, all variables achieved values more than 0.5. Therefore, the model of this study has convergent validity based on proposed of Hair, Sarstedt, Matthews, and Ringle (2016).

Table 1 CONVERGENT VALIDITY					
Variable	Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
TQMP	TQMP1	0.759	0.938	0.947	0.602
	TQMP2	0.780			
	TQMP3	0.552			
	TQMP4	0.882			
	TQMP5	0.849			
	TQMP6	0.775			
	TQMP7	0.843			
	TQMP8	0.818			
	TQMP9	0.718			
	TQMP10	0.813			
	TQMP11	0.695			
	TQMP12	0.777			
KS	KS1	0.851	0.930	0.945	0.741
	KS2	0.876			
	KS3	0.867			
	KS4	0.910			
	KS5	0.860			
	KS6	0.798			
SP	SP1	0.863	0.954	0.960	0.708
	SP2	0.813			
	SP3	0.871			
	SP4	0.858			
	SP5	0.869			
	SP6	0.830			
	SP7	0.823			
	CP8	0.719			
	CP9	0.888			
	CP10	0.868			

Regarding discriminant validity, Table 2 shows the HTMT test, where all variables achieved values between 0.769 to 0.818, which falls within the recommended range by Hair, Sarstedt, Matthews & Ringle (2016).

Table 2 HTMT TEST			
	TQMP	KS	SP
TQMP			
KS	0.818		
SP	0.790	0.769	

Using bootstrapping statistic in SmartPLS (3.3.3), the structural model assessment has been tested, as shows in Figure 2.

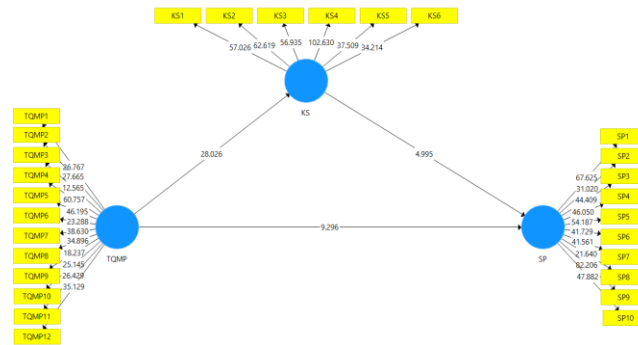


FIGURE 2
STRUCTURAL MODEL ASSESSMENT

Then, P-Values and T-Values was created to conclude whether the hypotheses are statistically significant or insignificant. Table 3 shows the hypotheses test.

No.	Hypotheses	Path Coefficient	T-Value	P-value	Confidence Interval		Decision
					95% LL	95% UL	
H1	TQMP→SP	0.479	9.296	0.000*	0.385	0.583	Supported
H2	TQMP→KS	0.778	28.026	0.000*	0.714	0.824	Supported
H3	KS→SP	0.362	4.995	0.000*	0.216	0.497	Supported

Note: *: p<0.001

As shown in Table 3, total quality management practices have a positive direct effect on strategic performance (Path Coefficient = 0.479; T-Value = 9.296; P-Value = 0.000; 95% LL= 0.385; 95% UL= 0.583), therefore H1 was supported. The essence of TQMP is customer focus, where all employees view customers as the focus of activity and concern, whatever the nature of their jobs, and workers must investigate customer reactions to the services or products offered (Saffar & Obeidat, 2020; Kustono, 2020; Fernandes et al., 2017) Which has a direct impact on improving the services provided to customers, which increases customer loyalty, which is one of the dimensions of BSC, and continuous improvement contributes to the development of performance and production processes, which is measured in the internal operations dimension in the SP using BSC methodology. TQMP also includes the participation of workers, which provides them with the ability to take responsibility and make them ready to deal with solving problems and making appropriate decisions (Adam, 1994), which is reflected in the SP.

In contrast, total quality management practices have a positive direct effect on knowledge sharing (Path Coefficient = 0.778; T-Value = 28.026; P-Value = 0.000; 95% LL= 0.714; 95% UL= 0.824), therefore H2 was supported. KS involves the transfer of information from one organization to another (Doğan & Doğan, 2020). Thus, the organization's ability to explore, retain and exploit knowledge is improved (Lei et al., 2021). Here, TQMP plays an important role in enhancing the organization's ability to benefit from the knowledge obtained (Saffar & Obeidat, 2020).

Moreover, knowledge sharing has a positive direct effect on strategic performance (Path Coefficient=0.362; T-Value=4.995; P-Value=0.000; 95% LL=0.216; 95% UL=0.497), therefore H3 was supported. This result is consistent with previous literature that showed a relationship between KS and performance (Holste & Fields, 2010; Huang et al., 2010; Doğan & Doğan, 2020; Laily & Ernawati, 2020). KS improves SP in several ways, for example reducing costs and speeding up delivery (Doğan & Doğan, 2020). Enhance employee effectiveness (Aljaaidis et al., 2020). Also, investing in knowledge capital through KS may be a reason for organizational success (Wang & Wang, 2012). KS also contributes to enhancing SP by providing useful and relevant knowledge by benefiting from the experiences of other organizations.

No.	Hypothesis	Indirect Effect	T-Value	P-value	Confidence Interval		Decision
					95% LL	95% UL	
H4	TQMP→KS→SP	0.281	4.978	0.000*	0.169	0.388	Supported

Note: *: p<0.001

Regarding the mediating effect of knowledge sharing, as shown in Table 4, knowledge sharing mediated the relationship total quality management practices and strategic performance (Indirect Effect = 0.281; T-Value = 4.978; P-Value = 0.000; 95% LL= 0.169; 95% UL= 0.388), therefore H4 was supported. This result is consistent with the management literature, as KS ensures access to information and knowledge that may have an impact in reducing costs, speeding up delivery and enhancing innovation, which leads to enhancing SP in organizations that adopt TQMP (Doğan & Doğan, 2020). KS enables the organization's management to formulate the strategy and set applicable and measurable goals, which is the essence of the BSC as one of the SP measures. The BSC works on improving financial performance by starting with a learning and growth perspective that aims to improve the capabilities of employees in the organization. This leads to improving the quality of internal processes and improving services provided to customers, which increases customer loyalty, and this ultimately leads to improving financial performance indicators. All elements of the BSC need the availability of knowledge in the organization, which is obtained through KS with other organizations. Knowledge enhancement and sharing is one of the indicators of SP measurement from the perspective of internal operations in the BSC (Dwivedi et al., 2021).

CONCLUSIONS

The study aims to explore the impact of TQMP on SP using the BSC methodology in Jordanian universities, through the mediating role of KS. The study adopted a quantitative approach using a survey questionnaire. The study population is represented by all faculty members in the public and private Jordanian universities in the central region, which number (11) universities, and (5,224) faculty members work in these universities. The current study used stratified random sampling as a strategy for sampling technique. Regarding the measurements of this study, the close-structured questionnaire was adopted from previous studies. Data analysis of this study included two main aspects are assessment of measurement model and structural model using SmartPLS (3.3.3). Assessment of measurement model included convergent validity and discriminant validity. The study found that TQMP affects SP using the BSC methodology. This finding supports previous literature (Saffar & Obeidat, 2020; Kustono, 2020; Fernandes et al., 2017), as the TQMP are concerned with customer focus, improvement of previous processes and

employee development. And their education, which constitutes the dimensions of strategic performance measurement using the BSC methodology, and all TQMP will ultimately have an impact on financial performance. The results of the study also indicated that TQMP affect KS, and that KS enhances SP using the BSC methodology. KS involves transferring information from one organization to another (Doğan & Doğan, 2020). Thus, the organization's ability to explore, retain and exploit knowledge improves, which enhances performance (Lei et al., 2021). The study also found that KS mediated the relationship total quality management practices and strategic performance. This result is consistent with the management literature, as KS may have an impact in reducing costs, speeding up achievement and enhancing innovation, which leads to enhancing SP in organizations that adopt TQMP (Doğan & Doğan, 2020). KS enables the organization's management to formulate the strategy and set viable and measurable goals, which is the core of the BSC. KS contributes to realizing the learning and growth dimension that aims to improve the capabilities of employees in the organization. This leads to improving the quality of internal processes and improving services provided to customers. All elements of the BSC need the availability of knowledge in the organization, which is obtained through KS with other organizations. Knowledge enhancement and sharing is one of the indicators of strategic performance measurement from the perspective of internal operations in the BSC (Dwivedi et al., 2021).

The study recommends that universities should pay attention to building a culture that supports the KS. Also, universities should apply the TQMP and ensure its success especially that it is one of the most important administrative entrances for the development of administrative thought, which has proven its efficiency by overcoming the problems faced by the organization related to the quality of services or productivity. The study also recommends enhancing SP by defining clear measures of performance such as BSC. The study also recommends conducting more studies on sectors other than the educational sector.

REFERENCES

- Adam, E. (1994). Alternative quality improvement practices and organization performance. *Journal of Operations management*, 12(1), 27-44.
- Al Hbabi, K.N., & Alomari, Z.S. (2020). The impact of knowledge management processes on organizational innovation. *Asian Social Science*, 10(11), 949-967.
- Al-Beshtawi, S.H., Zraqat, O.M., & Moh'd Al-hiyasat, H. (2014). The impact of corporate governance on non-financial performance in Jordanian commercial banks and Islamic banks. *International Journal of Financial Research*, 5(3), 54-67.
- Aledwan, B.A., Zraqat, O.M., & Hussien, L.F.M. (2017). The impact of ownership structure on the insurance companies applicability of corporate governance instructions. *Journal of Business & Management (COES&RJ-JBM)*, 5(3), 131-152.
- Al-Hafez, T.A., & Al-Mahdy, Y.F. (2015). The reality of the practice of knowledge sharing among faculty members: An empirical study at the colleges of education in some arab universities. *Journal of Educational & Psychological Sciences*, 16(4).
- Alharafsheh, M., Harahsheh, A., Lehyeh, S.A., & Alrawashedh, N. (2021a). The impact of entrepreneurs characteristics of private jordanian universities leaders on strategic performance: The mediating role of strategic planning. *International Journal of Scientific & Technology Research*, 10(1), 299-309.
- Alharafsheh, M., Zraqat, O. M., Houssien, A.H.M.A., & Shajrawi, A. (2021b). Crisis management strategies during the COVID-19 pandemic and its impact on performance developing of Jordanian universities: The mediating role of strategic ambidexterity. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(4), 3985-4007.
- Aljaaidis, K., Bagais, O., & Al-Moataz, E. (2020). Knowledge sharing and individuals' effectiveness in educational institutions. *Management Science Letters*, 10(15), 3477-3484.

- Alotaibi, M.Z., Alotibi, M.F., & Zraqat, O.M. (2021). The impact of information technology governance in reducing cloud accounting information systems risks in telecommunications companies in the state of Kuwait. *Modern Applied Science*, 15(1), 143-151.
- Alshourah, S. (2021). Total quality management practices and their effects on the quality performance of Jordanian private hospitals. *Management Science Letters*, 11(1), 67-76.
- Anggadini, S.D., Surtikanti, S., Saepudin, A., & Saleh, D.S. (2021). Business performance and implementation of total quality management: A case study in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(5), 1039-1046.
- Anil, A. P., & Satish, K. P. (2016). Investigating the relationship between TQM practices and Firm's performance: A conceptual framework for Indian organizations. *Procedia Technology*, 24(555), 554-561.
- Atkinson, A.A., Kaplan, R.S., & Young, M. (2004). *Management accounting*. Upper Saddle River, NJ: Prentice Hall.
- Baird, K., Su, S. X., & Nuhu, N. (2021). The mediating role of fairness on the effectiveness of strategic performance measurement systems. *Personnel Review*.
- Camilleri, M. A. (2021). Using the balanced scorecard as a performance management tool in higher education. *Management in Education*, 35(1), 10-21.
- Chen, L., & Stewart, R.A. (2010). The moderating effect of knowledge sharing on the relationship between manufacturing activities and business performance. *Knowledge Management Research & Practice*, 8(4), 285-306.
- Chin, W.W., Marcolin, B.L., & Newsted, P.R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research*, 14(2), 189-217.
- Doğan, M., & Doğan, H. (2020). Knowledge sharing, innovation and firm performance: Evidence from Turkey. *Financial Studies*, 24(87), 36-52.
- Dwivedi, R., Prasad, K., Mandal, N., Singh, S., Vardhan, M., & Pamucar, D. (2021). Performance evaluation of an insurance company using an integrated Balanced Scorecard (BSC) and Best-Worst Method (BWM). *Decision Making: Applications in Management and Engineering*, 4(1), 33-50.
- Easton, G. S., & Jarrell, S. L. (1998). The effects of total quality management on corporate performance: an empirical investigation. *The journal of Business*, 71(2), 253-307. <https://doi.org/10.1086/209744>
- Fernandes, A.C., Sampaio, P., Sameiro, M., & Truong, H.Q. (2017). Supply chain management and quality management integration: A conceptual model proposal. *International Journal of quality & reliability management*, 34(1), 53-67.
- Forza, C., & Filippini, R. (1998). TQM impact on quality conformance and customer satisfaction: a causal model. *International journal of production economics*, 55(1), 1-20.
- Hackman, J.R., & Wageman, R. (1995). Total quality management: Empirical, conceptual, and practical issues. *Administrative science quarterly*, 40(2), 309-342.
- Hair Jr, J.F., Sarstedt, M., Matthews, L.M., & Ringle, C.M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I—method. *European Business Review*, 28(1), 63-76.
- Hassan, A.S., & Jaaron, A.A. (2021). Total quality management for enhancing organizational performance: The mediating role of green manufacturing practices. *Journal of Cleaner Production*, 308, 127366.
- Holste, J.S., & Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of knowledge management*, 14(1), 128-140.
- Hussien, L.F.M., Aledwan, B.A., & Zraqat, O.M. (2017). The extent of applying the balanced scorecard in the Jordanian banks, and its effects on performance. *Journal of Social Sciences (COES&RJ-JSS)*, 6(3), 532-547.
- Hussien, L., Okour, S., AlRawashdeh, H., Ali, O., Zraqat, O., & Zureigat, Q. (2021). Explanatory factors for asymmetric cost behaviour: Evidence from Jordan. *International Journal of Innovation, Creativity and Change*, 15(4), 201-219.
- Kalogiannidis, S. I. (2021). The effects of total quality management practices and marketing on performance of SMEs. A case of selected manufacturing industries, Greece. *Business Management and Strategy*, 12(1), 48-62.
- Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: Translating strategy into action*. Boston, MA: Harvard Business School Press.
- Kustono, A.S. (2020). How Total Quality Management Mediates Antecedent Variables of Employee Performance? *The Journal of Asian Finance, Economics, and Business*, 7(12), 523-534.
- Laily, N., & Ernawati, D.P. (2020). The Effect of Knowledge Sharing and Innovation Behavior on the Performance of Batik Entrepreneurs. *Jurnal Manajemen*, 24(2), 194-209.

- Lehyeh, S.M.A., Alharafsheh, M., & Abushareah, M. (2020). Understanding the impact of knowledge management on marketing in Jordan: Excellence perspective. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 15423-15440.
- Lehyeh, S.M.A., Alharafsheh, M., Ahmed, E., Alzghoul, M., & Alnawafleh, D.A. (2021). Knowledge management and its impact on the organizational learning: An experimental study. *Ilkogretim Online*, 20(5), 5577-5588.
- Lei, H., Gui, L., & Le, P.B. (2021). Linking transformational leadership and frugal innovation: the mediating role of tacit and explicit knowledge sharing. *Journal of Knowledge Management*, 25(7), 1832-1852.
- Li, J., & Houjun, Y. (2013, June). Towards a frame work of quality management for cooperative higher education. In 2013 the International Conference on Education Technology and Information System (ICETIS 2013). Atlantis Press.
- Lim, A.F., Lee, V.H., Foo, P.Y., Ooi, K.B., & Tan, G.W.H. (2021). Unfolding the impact of supply chain quality management practices on sustainability performance: an artificial neural network approach. *Supply Chain Management: An International Journal*.
- Lynch, R.L., & Cross, K. (1991). *Measure up! Yardstick for continuous improvement* [2nd Ed]. Hoboken, NJ: John & Wiley Publisher.
- Mahfodh, A.B.S.B., & Obeidat, A. M. (2020). Knowledge sharing tools and their impact on enhancing organizational performance. *International Journal of Academic Research in Business and Social Sciences*, 10(9), 91-112.
- Mann, R., & Kehoe, D. (1994). An evaluation of the effects of quality improvement activities on business performance. *International Journal of Quality & Reliability Management*, 11(4), 29-44.
- Mio, C., Costantini, A., & Panfilo, S. (2021). Performance measurement tools for sustainable business: A systematic literature review on the sustainability balanced scorecard use. *Corporate Social Responsibility and Environmental Management*.
- Pham, T.M.D.P. (2020). On the relationship between total quality management practices and firm performance in Vietnam: The mediating role of non-financial performance. *Management Science Letters*, 10(8), 1743-1754.
- Pietrzak, M. (2021). The application of a balanced scorecard in higher education institutions: A case study of Wuls. Springer, Cham: *Handbook of Operations Research and Management Science in Higher Education*.
- Sadikoglu, E., & Olcay, H. (2014). The effects of total quality management practices on performance and the reasons of and the barriers to TQM practices in Turkey. *Advances in Decision Sciences*.
- Saffar, N., & Obeidat, A. (2020). The effect of total quality management practices on employee performance: The moderating role of knowledge sharing. *Management Science Letters*, 10(1), 77-90.
- Shafiq, M., Lasrado, F., & Hafeez, K. (2019). The effect of TQM on organisational performance: empirical evidence from the textile sector of a developing country using SEM. *Total Quality Management & Business Excellence*, 30(1-2), 31-52.
- Shah, H.A., Yasir, M., Majid, A., & Javed, A. (2020). Promoting strategic performance through strategic orientation and strategic renewal: a moderated mediation model. *Management Decision*, 58(2), 376-392.
- Shah, I.A., Khaskheli, G.A., Alkilany, S.B., Birohi, N.A., & Tunio, R.A. (2021). Efficiency measurement of universities in sindh through total quality management practices. *Ilkogretim Online*, 20(5), 4654-4658.
- Soares, A., Soltani, E., & Liao, Y.Y. (2017). The influence of supply chain quality management practices on quality performance: an empirical investigation. *Supply Chain Management: An International Journal*, 22(2), 122-144.
- Tamsah, H., Yusriadi, Y., & Farida, U. (2020). Training, knowledge sharing, and quality of work-life on civil servants performance in Indonesia. *Journal of Ethnic and Cultural Studies*, 7(3), 163-176.
- Wang, Z., & Wang, N. (2012). Knowledge sharing, innovation and firm performance. *Expert systems with applications*, 39(10), 8899-8908.
- Wheelen, T.L.J.D.H. (2002). *Strategic management and business policy*. Boston, MA: Addison-Wesley Publishing Company, Inc.
- Zraqat, O.M. (2019). Sustainability Practices Disclosure and Value Relevance: Evidence from Jordan. *Modern Applied Science*, 13(9), 75-86.
- Zraqat, O.M. (2020a). The Effect of Voluntary Disclosure on the Cost of Capital: Evidence from Jordan. *European Journal of Scientific Research*, 157(1), 17-26.
- Zraqat, O.M. (2020b). The moderating role of business intelligence in the impact of big data on financial reports quality in Jordanian Telecom Companies. *Modern Applied Science*, 14(2), 71-85.
- Zraqat, O., Zureigat, Q., Al-Rawashdeh, H. A., Okour, S. M., Hussien, L. F., & Al-Bawab, A. A. (2021). The Effect of Corporate Social Responsibility Disclosure on Market Performance: Evidence from Jordan. *The Journal of Asian Finance, Economics and Business*, 8(8), 453-463.

