



## Product Quality augmentation through Agile Operation: A Critical perspective on Supply Chain Capabilities on Reducing Operations Cost

Mehak Vasta<sup>1</sup>, Afra Tasneem<sup>2</sup>

<sup>1</sup> School of Business, Skyline University College, Sharjah, UAE

<sup>2</sup> School of Computing, Skyline University College, Sharjah, UAE

### ARTICLE INFO

#### Keywords:

Product Quality, SC Capabilities, Cost Reduction, Agile Operations.

Received: May, 20, 2023

Accepted: June, 09, 2023

Published: July, 22, 2023

### ABSTRACT

This study focuses on the impact of product quality improvement and supply chain capabilities on reducing operational costs through agile operation. It highlights the significance of adopting agile operation principles and practices to enhance product quality, optimize supply chain operations, and achieve cost efficiencies. The study underlines the importance of continuous improvement processes, such as Lean Six Sigma, in identifying and eliminating inefficiencies, defects, and waste to improve product quality and reduce costs associated with rework and warranty claims. Additionally, it emphasizes the role of agile supply chain capabilities in minimizing inventory carrying costs, production disruptions, and transportation expenses through efficient inventory management techniques. The research emphasizes that integrating product quality improvement and agile supply chain capabilities drives down operational costs by streamlining processes, reducing waste, and fostering a culture of continuous improvement. Overall, this study highlights the critical role of product quality improvement and supply chain capabilities in reducing operational costs and achieving operational excellence through agile operation practices.

### 1. INTRODUCTION

Organizations work to offer products of great quality while minimising their operational expenses in today's fiercely competitive business environment. Companies must always look for ways to raise the quality of their products and expand the capabilities of their supply chains in order to achieve this delicate equilibrium. Agile operations is a strategy that has gained a lot of traction recently that enables businesses to be responsive, adaptable, and effective in their operations (Morgan et al., 2001).

Improving product quality is a key component of every company's success. Customers want items to live up to or surpass their expectations, and businesses must satisfy these demands to maintain

a competitive advantage (Koval et al., 2019). Organizations may promote brand loyalty, boost consumer satisfaction, and spur revenue development by concentrating on improving the quality of their products (Afonso et al., 2008). Furthermore, the impact of supply chain capabilities on operational costs cannot be overstated. An agile supply chain ensures timely availability of raw materials, components, and finished goods, thereby minimizing inventory carrying costs and production disruptions (Morash, 2001). By implementing efficient inventory management techniques, such as just-in-time (JIT) and vendor-managed inventory (VMI), companies can significantly reduce storage costs

and eliminate the risk of excess or obsolete inventory (Ivanov and Dolgui, 2021). Additionally, agile supply chains facilitate rapid response to market fluctuations and demand volatility, allowing businesses to optimize production planning and reduce the need for costly expediting or rush orders (Ray Gehani, 2013).

The integration of product quality improvement and agile supply chain capabilities creates a powerful synergy that drives down operational costs (Ahmed and Huma, 2021). When organizations focus on enhancing product quality, they reduce the incidence of defects, rework, and customer complaints, leading to lower costs associated with warranty claims, returns, and repairs (Al-Zu'bi et al., 2012). Simultaneously, agile supply chains enable efficient procurement, production, and distribution processes, minimizing inventory carrying costs, transportation expenses, and production delays (Khataie and Bulgak, 2013). By fostering a culture of continuous improvement and responsiveness, businesses can achieve operational excellence, strengthen their competitive position, and realize substantial cost savings (Tang, 2006).

This study will delve into the key aspects of product quality improvement and supply chain capabilities and how they impact reducing operational costs through agile operation. We will explore various strategies, tools, and methodologies that organizations can employ to enhance product quality, optimize supply chain operations, and achieve cost efficiencies. By understanding and implementing these practices, businesses can unlock the full potential of their operations, improve their financial performance, and deliver superior value to their customers.

### 1.1. Research Objectives

Research objectives aiming to provide valuable insights into the role of agile operations and supply chain capabilities in augmenting product quality while reducing operational costs:

1. To examine the relationship between agile operations and product quality in the context of supply chain management.
2. To identify and analyze the key supply chain capabilities that contribute to reducing operational costs in an agile operation environment.
3. To assess the impact of agile operations on

product quality improvement, focusing on the reduction of defects, rework, and customer complaints.

4. To investigate the role of supply chain capabilities in enhancing operational efficiency, responsiveness, and flexibility within an agile operation setting.
5. To explore the challenges and barriers associated with implementing agile operations and leveraging supply chain capabilities for reducing operational costs while improving product quality.

## 2. THEORETICAL BACKGROUND

### 2.1. Cost Reduction

Reducing operations cost is a continuous process of critically examining different kinds of the cost such as procedures, products, managements, and methods (Khatib et al., 2022b). It is all done with a view to improve the efficiency of the company for reduction of the cost (Muhammad Turki Alshurideh et al., 2023c). Also it is important to implement a strategy first before the reducing of the cost and some costs are necessary and also it is important to identify costs in to bad costs, good costs and best costs (T M Ghazal et al., 2023a). In the company the good costs is for the company's growth and they are aligned with the customers and to fulfill their needs (Muhammad Turki Alshurideh et al., 2023d; Kasseem and Martinez, 2022). Bad costs do not match with the company's strategies and their resources and when the bad cost are minimize then those can free up resources that will be used in way of productive capacity (Nuseir, 2021). Best costs is that kind of cost which is associated with whatever make a company unique, and how this company is different from their competitors (Khatib et al., 2022a; Sakkthivel et al., 2022). Producing their true value to the customers. Also reducing the operations cost don't necessarily mean that it will completely cut a cost (Muhammad Turki Alshurideh et al., 2023b). It could be refer to the just reducing some cost and the efficiency, also optimizing productivity means reduce the cost and it is very necessary to measure the productivity (Nuseir and Elrefae, 2022).

### 2.2. Supply Chain Capabilities / Management

Supply chain capabilities can be improve and get better by checking and understanding what the suppliers are producing, which part. Supply chain

capability can be measured in a different ways (Ahmed et al., 2022; Al-Kassem et al., 2022; M Alshurideh et al., 2023a; Farrukh et al., 2023). For example what kind level of the redundancy do we have? Is there any suppliers that will become a bottleneck for our productions strategy should the outputs decrease substantially? And if so? Then our supply chain capabilities risk could be very higher and the highest number of redundant suppliers we have then there will be very less risk of disruption. Supply chain management is a management where manufacturing companies transform the raw materials goods in to the final products and sell it forward (R. S. Al-Marroof et al., 2021b). They are responsible in the business supply activities and to maximize their customer's value, so where they can gain a competitive advantage from the competitors in the market (Al-Marroof et al., 2022a) (El Khatib and Ahmed, 2020; Nuseir, 2020).

Supply chain capabilities are managed by the management and they tries to develop and implement supply chains strategies which are economical and efficient as much as possible (T M Ghazal et al., 2023b; Khatib and Oplencia, 2015). Supply chain does everything from their production to the final product development and then to their information systems which are needed to direct these final undertakings (I. A. Akour et al., 2022; Ahmad Ibrahim Aljumah et al., 2022b; Muhammad Turki Alshurideh et al., 2022b; El Khatib, 2015). Supply chain management have to control the productions, shipments and the final distribution and by controlling the supply chain, the companies can reduce the excess costs and give the product to their customer faster (Al-Marroof et al., 2022b; Amiri et al., 2020; Lee et al., 2023; Mubeen et al., 2022). So this all process is done by keep the control of their interval inventories, productions, sales, distribution and such other inventories of their company vendors (Nuseir et al., 2020).

### 2.3. Agile Operations

The concept of agile operations is helpful for providing the idea of understanding the responsiveness, management (Muhammad Turki Alshurideh et al., 2022d), flexible competences, and rapid involvement of several supply chain operations (Al-Awamleh et al., 2022; T M Ghazal et al., 2023c). The primary goal of the agile supply chain is defined with preferring three points such

as the capability for providing the fast responses towards the opportunities, defining the cost-efficient methods that can manage the growth, and identification of the strategies that are used for expressing the competitive advantages in the services (Al-Kassem, 2017; H. M. Alzoubi et al., 2022a; Nuseir and Aljumah, 2022). The consideration of an agile supply chain involves in the level of consumer satisfaction that can introduce the quality of the product (El Khatib et al., 2021; Varma et al., 2023). The definition can measure the agility of the supply chain with defining the speed overreactions, actions, and response for mitigating the negative changes and identifying the use of agile supply chain as well (M T Nuseir et al., 2022b).

### 2.4. Product Quality

The term product quality defines the incorporate difference that is providing the features and abilities for meeting the demands and goals of the customers (Abudaqa et al., 2021; A. Al-Marroof et al., 2021). It is based on determining the excellent quality of the product that is involved with the capacity and performing the increase of the satisfaction level for the consumer (H. M. Alzoubi et al., 2022e; Arshad et al., 2023; Hani Al-Kassem, 2021; M T Nuseir et al., 2022a). It seems in adopting the strategy that can reduce the deficiencies and ineffectiveness within the products (Ahmed and Nabeel Al Amiri, 2022). The evaluation of the quality of products seems in providing an excellent value proposition that helps in managing the real challenges efficiently and defining superior performances (Muhammad Turki Alshurideh et al., 2022c). Therefore, the concept of agility in the supply chain helps in building strong responsiveness that defines the uncertainty methods of direct positive impact within the product and management of the quality (AlHamad et al., 2021; Nuseir et al., 2021). It seems to lead to a higher level of consumer satisfaction and control.

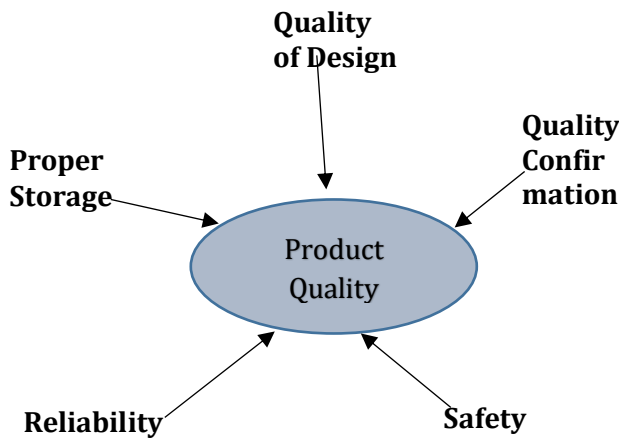


Figure 1: Product Quality

### 2.5. Impact of Agile operations on Product Quality

The impact of agile operations on defining the quality of products is dependent on business performances (Aljumah et al., 2021a; Yasir et al., 2022). It seems that the performance of the supply chain in managing the accounts of the organization helps in providing the hidden resource that can enhance the services in the industry (Akour et al., 2021; Blooshi et al., 2023). The process helps in improving the level of satisfaction of the customers by implementing strategies and providing a higher quality of products (El Khatib et al., 2019). The agility helps in managing the supply chain in delivering an optimistic influence within the industry and providing the situation for the companies (Alzoubi et al., 2019). It defines the level of services with providing the higher quality of products, lower retail services, and delivering the values according to the demands and desires of the consumers in business management (Taher M. Ghazal et al., 2023). Therefore, the services aim to provide in producing higher quality products at the right time where the consumers are provided with several different choices (Abudaqa et al., 2022; A I Aljumah et al., 2022a).

The use of the concept of agility helps in managing the higher speed (R. S. Al-Marouf et al., 2021a), flexibility maintenance, effectiveness and responsiveness in the services that are considered to implement benefits in the business and improving the quality of products as well (Alzoubi and Ahmed, 2019; Khatib et al., 2016). It leads to provide a direct impact on the level of satisfaction

of the consumers (Gulseven and Ahmed, 2022). The model helps in understanding the concept of agility for supply chain by defining the responsiveness and innovation within the products that can help the consumer in satisfying their needs towards the management of higher quality of products (Al-Dmour et al., 2023; El Khatib et al., 2020a; Kurdi et al., 2022b).

It represents the responsive services for bringing innovation within the products and helping the customers to get happy (AlDhaheri et al., 2023; Aljumah et al., 2021b; Nadzri et al., 2023; Tariq et al., 2022b). Therefore, the design is used for managing the products and grabbing the consumer with providing the sufficient agility of supply chain activities for the consumers in delivering flexible and responsiveness management that can increase the products' quality (Almasaeid et al., 2022).

The process defines the idea of implementing continuous improvement and limiting the supply chain management for the increase in the level of the products (Al-Kassem, 2014; Aljumah et al., 2020; Gaytan et al., 2023). It establishes the improvement in the level of satisfaction for the consumers (Haitham M. Alzoubi et al., 2020). The strategy of agile is used in managing the supply chain that is revolved around the idea of the quick responsive nature within the company (Aityassine et al., 2022; Aziz et al., 2023; E. Khatib et al., 2021). It implements the change management towards the demand or supply of the products (H. M. Alzoubi et al., 2022d; Nuseira and Aljumahb, 2020). There is a flexible nature for the company that is used for applying the changes in the strategies and bringing differentiation in the works.

It seems in managing the rapid changes where the company can manage the process of the supply chain as their daily activities (Alshawabkeh et al., 2021). Therefore, the agile operations provide an optimistic effect for implementing the excellence level in the products (Al-Kassem et al., 2013; H. M. Alzoubi et al., 2022f). However, the skill in the supply chain is used for representing the rapid growth of the supply chain in the business management and defining the changes in the environment as well (I. Akour et al., 2022; Nuseir and Aljumah, 2020). It describes the variation of customer preferences and considering the competitive forces within the industry (El Khatib and Ahmed, 2018).

## 2.6. Relationship between Agile Operations and Product Quality

The goal establishes the management of agile supply chain in the manufacturing industry that is providing quick manners and illustrating the changes for the demand and supply in the services (A I Aljumah et al., 2022b; Khan et al., 2022; Tariq et al., 2022a). The flexible management of new products is defining the higher quality management in the services (El Khatib and Ahmed, 2019). Therefore, it represents the effective supply chain for becoming problematic and implementing the changes for the customer expectation and providing the increase in the requirements (Haitham Alzoubi et al., 2020; Khatib, 2022; Mat Som and Kassem, 2013; Mohammed T. Nuseir et al., 2022). Thus, the organizations need an adaptation of the agile-based process for managing the structural and operational activities and implementing the supply chain services and product quality for an effective manner (Akour et al., 2023; M. Alshurideh et al., 2022).

The agility of the supply chain is helpful for managing the characteristic to get faster responses to the shorter product lifecycle (H. M. Alzoubi et al., 2022b). Moreover, it seems in managing the complexities in the products with providing the moving needs of the consumer and identifying the higher quality products as well (Ahmad Ibrahim Aljumah et al., 2022a; Kurdi et al., 2022a). The process is beneficial for developing the agile supply chain by implementing the response and defining the changes in the environment of business.

It describes the alignment of the strategy in the services of providing competitive performance in the industry (Aljumah et al., 2023; Bawaneh et al., 2023). The results in previous studies represent the agility of the supply chain as improving the quality with implementing the product and services, cost management and reduction processes, and increment in the speed (M T Alshurideh et al., 2022). It defines the strong relationship between the agility of the supply chain and determining the higher quality of products (Muhammad Turki

Alshurideh et al., 2022a). The agile system helps the customer in providing the delight of delivering and defining the processes.

The manufacturing sector helps in defining innovation and providing rapid responses to the change management and defining the actions within the industry (H. Alzoubi et al., 2022; M. El Khatib et al., 2021). It revolves around the concept that describes the relationship and processes of agile supply chain and using the competitive advantages of the manufacturing industry that can increase the quality of the products (Louzi et al., 2022a).

Moreover the evidence helps in managing the increase in defining the product demand and implementing the customer requirements that have created the challenges and identifying the stand in the industry (H. M. Alzoubi et al., 2022c). For managing the marketplace, the companies need rapid involvement with the increase in the level of volatility and demands of the customers (El Khatib et al., 2020b). Additionally, the process is helpful for understanding the improvement in the business performance with defining the agile operations and providing better solutions to get the changes in the trend and demand (Al-Kassem et al., 2012; Muhammad Alshurideh et al., 2023; Louzi et al., 2022b). There is a positive relationship noted that is used for implementing the agile operations and considering the customer satisfaction level by using the higher quality of products. (M. Alzoubi et al., 2021) has presented the differentiation technique used for identifying the best practices and improving the level of satisfaction of consumer with defining the effectiveness in the business performances.

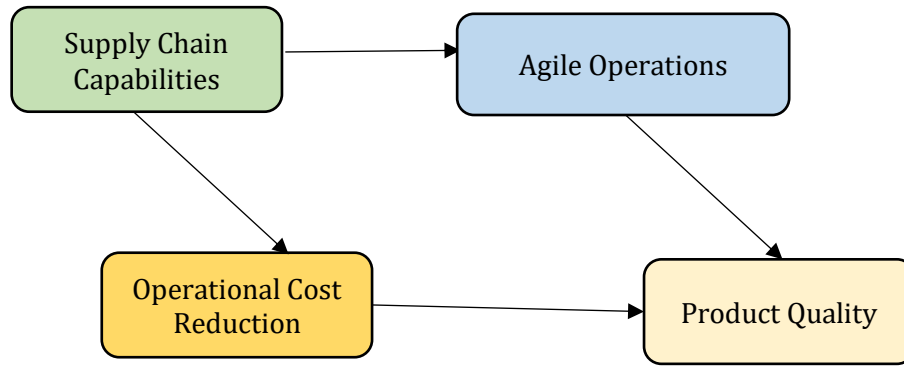


Figure 2: Theoretical Model

### 3. EMPIRICAL ANALYSIS

#### 3.1. Supply Chain Capabilities Strategies of Reducing Cost through Agile Operations

Reducing operation’s cost strategies in the supply chain capabilities focuses on finding the most effective and affordable ways in which to produce and store the new products, transfer them from point A to point B, and to make sure of their customer’s satisfaction. So reducing of supply chain management costs involve more than choosing their cheap materials and the carriers. Also each aspect from the order fulfillment processes costs money and it can be beneficial from their reducing operation’s cost strategies.

Also supply chain capabilities have many ways which are helpful for the manufacturing sectors in terms of reducing cost and also they have a big impact on the low cost. Through supply chain capabilities the manufacturing industries develop new strategies to increase the profit and including sales revenue. Supply chain capabilities help the manufacturing industries to use new opportunities to showcase the talent and new innovative products in the market.

So according to the West Monroe, we have to perform a cost to perform analysis that checks in costs related to our business's overhead, customer services, planning’s and logistics and other more factors for the betterment of the manufacturing industries for reducing the operation’s cost. So then we can effectively track the success of our effort and work in the industry. Regardless of carefully following current costs, we ought to in like way follow data points identified with advancing toward transports, dynamic shipments, and courses of action. Also looks for trends after

some time before reducing operation’s cost. For instance, is there any specific time that when will the sales increase unquestionably? Does warehouse developments will all things considered get delayed during many months or in remorseless environment? We need to know the information for the forecasting purposes and also to help to identify many inefficient process of our operations by the supply chain capabilities.

#### 3.2. Three areas for supply chain capabilities of reducing operation’s cost

Supply chain capabilities of costs reducing can be end up on being applied bottom up, and the starting must to be top down. That will help keeping their big picture in the mind and also as well as having more chances which we would scrutinize every right areas or departments, elements and categories.

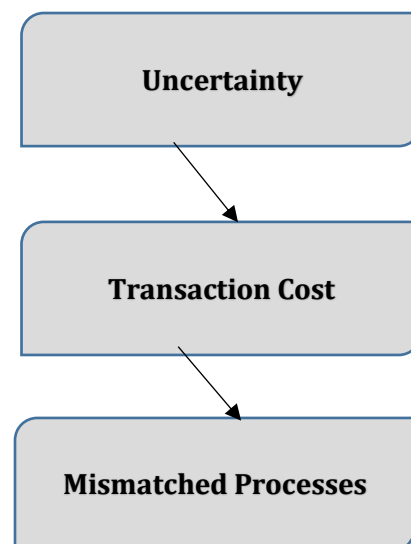


Figure 3: Three areas of supply chain capabilities

- *Transaction costs:* The process of submitting or accepting the order could be amazingly expensive. Right when the activity of giving and regulating sales, figuring out transports, answering to customer questions and observing progress all add to the total cost. So following a work cycle, for instance, arriving of an order through to the transport and the invoicing process, is a way to deal with evaluates the costs, regardless of the way that problems in the work cycle may even now be hiding more expenses. Also a part of the cost of trades starts from overly complicated process, and some of it begins from poor information technologies on account of a reluctance to cooperate. As a result, technology, for example e-commerce platforms will solve many problems and other part of reducing cost can only happen if people work better together.
- *Mismatched processes:* So in the overall process, for example order supplies and the production of finished goods, there are many other different kinds of processes, such as own process of suppliers for delivering of reception and also stocking processes in the clients enterprises and many more. So if the end of any process don't dovetail from the starting of the next one, then there can be some kind of interruptions and the duplication of work and these both of which will increases the cost. For example, if any distributor products codes or pallet sizes can't match which are used by the enterprise then the goods would have to be reorganized and recorded. In the customer's packaged goods sector, that problem is enough of having prompted of using of the different collaborative planning's, forecasting's and the replenishment (CPFR) among retailers and manufacturers. This same technique can also be applied in many other different sectors also.
- *Uncertainty:* People that don't know of what will happen should take out the insurance. Because when uncertainty is there in the products demands and supplies, then the insurance will be the stockpiling on the inventories "just in case". It will effect both producers who don't know that which order will they get and resellers and the end customers that stockpile because of the problem of produce abilities to the supply which is needed.

The safety stocks could grow in every of the juncture of the supply chain and from having the raw materials to the work in the progress, also from the finish of the goods to their regional distributions centers and many more. Also having inventory costs money in more than one ways.

#### 4. DISCUSSION

While contributing the various aspects to reduce operational cost through agile operations and SC capabilities various key elements are outlined to contribute in this study. As a result, it has observed that continuous improvement processes are of paramount importance for organizations in today's dynamic and competitive business environment. They provide numerous benefits that contribute to the overall success and sustainability of an organization. Here are some key reasons why continuous improvement processes are important:

1. *Enhanced Efficiency and Productivity:* Continuous improvement processes focus on identifying and eliminating waste, inefficiencies, and bottlenecks in operational processes. By regularly evaluating and improving processes, organizations can streamline operations, reduce unnecessary steps, and optimize resource allocation. This leads to enhanced efficiency, increased productivity, and cost savings.
2. *Quality Improvement:* Continuous improvement processes are closely linked to quality management. By continuously evaluating and refining processes, organizations can identify areas for improvement, reduce defects, minimize errors, and enhance overall product or service quality. This, in turn, leads to higher customer satisfaction, increased customer loyalty, and a positive reputation in the marketplace.
3. *Innovation and Adaptability:* Continuous improvement fosters a culture of innovation and adaptability within an organization. It encourages employees to identify opportunities for improvement, suggest innovative ideas, and experiment with new approaches. By embracing change and continuously seeking better ways of doing things, organizations can stay ahead of competitors, respond to

market demands, and capitalize on emerging trends and technologies.

4. *Employee Engagement and Empowerment:* Continuous improvement processes involve employees at all levels of the organization. Employees are encouraged to contribute their ideas, provide feedback, and participate in problem-solving initiatives. This engagement and empowerment not only lead to a sense of ownership and pride but also tap into the collective knowledge and creativity of the workforce. Employees become motivated to actively contribute to the success of the organization and feel valued for their contributions.
5. *Cost Reduction and Waste Elimination:* Continuous improvement processes emphasize the identification and elimination of waste, which can result in significant cost savings. By streamlining processes, reducing unnecessary steps, optimizing resource allocation, and minimizing defects and errors, organizations can achieve cost reduction throughout their operations. This cost savings can be reinvested in other strategic initiatives or passed on to customers, leading to a competitive advantage in the market.
6. *Sustainable Growth and Adaptation:* Continuous improvement processes enable organizations to adapt and thrive in a rapidly changing business landscape. By continuously monitoring internal and external factors, organizations can identify emerging challenges, seize opportunities, and adjust their strategies and operations accordingly. This ability to adapt and evolve is essential for long-term sustainability and growth.

However, continuous improvement processes play a critical role in enhancing efficiency, quality, innovation, employee engagement, cost reduction, and overall organizational success. By embracing a culture of continuous improvement, organizations can proactively address challenges, capitalize on opportunities, and continuously strive for excellence in all aspects of their operations.

#### 4. CONCLUSION

The overall study findings highlight the critical role of these factors play in achieving cost efficiencies and operational excellence. By adopting agile operation principles and practices, organizations can enhance product quality, optimize supply chain operations, and ultimately reduce their overall operational costs. Moreover, the study underscores the importance of product quality improvement and agile supply chain capabilities in reducing operational costs. By embracing agile operation principles, organizations can enhance product quality, optimize supply chain operations, and achieve cost efficiencies. The continuous pursuit of operational excellence, coupled with a customer-centric approach, will enable businesses to thrive in today's competitive marketplace, deliver superior value to customers, and secure long-term success.

Additionally, product quality augmentation through agile operation, supported by robust supply chain capabilities, holds promise for organizations aiming to reduce operational costs while improving product quality. However, a critical perspective highlights potential challenges and limitations that need to be addressed. Organizations must carefully navigate cultural barriers, balance speed with thorough quality assurance practices, foster strong supplier relationships, and adopt a holistic approach to quality improvement. By critically examining the interplay between agile operations, supply chain capabilities, and operational cost reduction, organizations can gain valuable insights to inform their strategies and maximize the potential benefits of these approaches

- *Practical Implications*

The integration of product quality improvement and agile supply chain capabilities creates a synergistic effect that drives down operational costs. By concurrently focusing on enhancing product quality and optimizing supply chain operations, organizations can streamline processes, reduce waste, and eliminate inefficiencies. This results in lower costs associated with defects, rework, inventory carrying, transportation, and production delays. Furthermore, agile operations foster a culture of continuous improvement and responsiveness, enabling businesses to adapt quickly to changing



market conditions and customer demands, thus increasing their competitive advantage.

To achieve these benefits, organizations should invest in developing their employees' skills and knowledge in quality management methodologies and supply chain optimization techniques. Training and development programs can equip employees with the necessary tools to identify and address quality issues, improve supply chain processes, and make data-driven decisions. Additionally, fostering collaboration and communication between different departments and stakeholders within the organization, as well as with external suppliers and partners, is crucial for successful implementation of agile operation practices.

## REFERENCES

- Abudaqa, A., Alzahmi, R.A., Almujaiani, H., Ahmed, G., 2022. Does innovation moderate the relationship between digital facilitators, digital transformation strategies and overall performance of SMEs of UAE? *Int. J. Entrep. Ventur.* 14, 330–350.
- Abudaqa, A., Hilmi, M.F., Almujaiani, H., Alzahmi, R.A., Ahmed, G., 2021. Students' perception of e-Learning during the Covid Pandemic: a fresh evidence from United Arab Emirates (UAE). *J. E-Learning Knowl. Soc.* 17, 110–118.
- Afonso, P., Nunes, M., Paisana, A., Braga, A., 2008. The influence of time-to-market and target costing in the new product development success. *Int. J. Prod. Econ.* 115, 559–568.
- Ahmed, G., Abudaqa, A., Jayachandran, C., Limbu, Y., Alzahmi, R., 2022. Nation Branding as a Strategic Approach for Emerging Economies: The Case of UAE, in: *Marketing Communications and Brand Development in Emerging Economies*. Springer, pp. 41–57.
- Ahmed, G., Nabeel Al Amiri, 2022. the Transformational Leadership of the Founding Leaders of the United Arab Emirates: Sheikh Zayed Bin Sultan Al Nahyan and Sheikh Rashid Bin Saeed Al Maktoum. *Int. J. Technol. Innov. Manag.* 2, 1.
- Ahmed, W., Huma, S., 2021. Impact of lean and agile strategies on supply chain risk management. *Total Qual. Manag. Bus. Excell.* 32, 33–56.
- Aityassine, F.L.Y., Soumadi, M.M., Aldiabat, B.F., Al-Shorman, H.M., Akour, I., Alshurideh, M.T., Al-Hawary, S.I.S., 2022. The effect of supply chain resilience on supply chain performance of chemical industrial companies. *Uncertain Supply Chain Manag.* 10, 1271–1278.
- Akour, I., Alnazzawi, N., Alshurideh, M., Almaiah, M.A., Al Kurdi, B., Alfaisal, R.M., Salloum, S., 2022. A Conceptual Model for Investigating the Effect of Privacy Concerns on E-Commerce Adoption: A Study on United Arab Emirates Consumers. *Electron.* 11, 3648.
- Akour, I., Alshurideh, M., Al Kurdi, B., Al Ali, A., Salloum, S., 2021. Using Machine Learning Algorithms to Predict People's Intention to Use Mobile Learning Platforms During the COVID-19 Pandemic: Machine Learning Approach. *JMIR Med. Educ.* 7, 1–17.
- Akour, I., Rahamneh, A.A.L., Al Kurdi, B., Alhamad, A., Al-Makhariz, I., Alshurideh, M., Al-Hawary, S., 2023. Using the Canonical Correlation Analysis Method to Study Students' Levels in Face-to-Face and Online Education in Jordan. *Inf. Sci. Lett.* 12, 901–910.
- Akour, I.A., Al-Marouf, R.S., Alfaisal, R., Salloum, S.A., 2022. A conceptual framework for determining metaverse adoption in higher institutions of gulf area: An empirical study using hybrid SEM-ANN approach. *Comput. Educ. Artif. Intell.* 3, 2.
- Al-Awamleh, H.K., Alhalalmeh, M.I., Alatyat, Z.A., Saraireh, S., Akour, I., Alneimat, S., Alathamneh, F.F., Abu-Farha, Y.S., Al-Hawary, S.I.S., 2022. The effect of green supply chain on sustainability: Evidence from the pharmaceutical industry. *Uncertain Supply Chain Manag.* 10, 1261–1270.
- Al-Dmour, N.A., Ali, L., Salahat, M., Alshurideh, M., Alzoubi, H.M., Ghazal, T.M., Chabani, Z., 2023. Information Systems Solutions for the Database Problems. *Stud. Comput. Intell.* 2023, 703–715.
- Al-Kassem, A., Bakri, A., In'airat, M., 2013. Evaluation Tools of Total Quality Management in Business Organizations. *Eur. J. Bus. Manag.* 5, 41–51.
- Al-Kassem, A.H., 2017. Recruitment and Selection Practices in Business Process Outsourcing Industry. *Arch. Bus. Res.* 5, 40–52.
- Al-Kassem, A.H., Aguenza, B.B., Alghurabli, Z.E., 2022. Accreditation of Academic Programs: Implications on Quality Governance and Administration of Taguig City University. *J. Posit. Sch. Psychol.* 6, 3908–3923.
- Al-Kassem, Aguenza, B.B., Hami, A., Som, A.P.M., 2012. Social Media and Productivity in the Workplace: Challenges and Constraints. *Interdiscip. J. Res. Bus.* 2, 22–26.
- Al-Kassem, H., 2014. Determinants of employee's overall satisfaction toward training and development programs. *Int. J. Econ. Financ. Manag.* 3, 129–135.
- Al-Marouf, A., Salloum, A., Al-Marouf, R.S., Akour, I., Aljanada, R., Alfaisal, A.M., Alfaisal, R.M., Aburayya, A., Salloum, S.A., 2021. Acceptance determinants of 5G services Title Acceptance determinants of 5G services *International Journal of Data and Network Science* Acceptance determinants of 5G services. *Canada. Int. J. Data Netw. Sci.* 5, 613–628.
- Al-Marouf, R.S., Alahbabi, N.M.N., Akour, I., Alhumaid, K., Ayoubi, K., Alnaimi, M., Thabit, S., Alfaisal, R., Aburayya, A., Salloum, S., 2022a. Students' perception towards behavioral intention of audio and video teaching styles: An acceptance study. *Int. J. Data Netw. Sci.* 6, 603–618.
- Al-Marouf, R.S., Alhumaid, K., Akour, I., Salloum, S., 2021a. Factors that affect e-learning platforms after the spread of covid-19: Post acceptance study. *Data* 6, 49.
- Al-Marouf, R.S., Alnazzawi, N., Akour, I., Ayoubi, K., Alhumaid, K., Nasser, N.M., Alaraimi, S., Al-Bulushi, A.A., Thabit, S., Alfaisal, R., Aburayya, A., Salloum, S., 2022b. Students' perception towards using electronic feedback after the pandemic: Post-acceptance study. *Int. J. Data Netw. Sci.* 6, 1233–1248.
- Al-Marouf, R.S., Alnazzawi, N., Akour, I.A., Ayoubi, K., Alhumaid, K., Alahbabi, N.M., Alnaimi, M., Thabit, S., Alfaisal, R., Aburayya, A., Salloum, S., 2021b. The effectiveness of online platforms after the pandemic: Will face-to-face classes affect students' perception of their behavioural intention (BIU) to use online platforms? *Informatics* 8, 4.

- Al-Zu'bi, Z.M.F., Al-Lozi, M., Dahiyat, S.E., Alshurideh, M., Al Majali, A., 2012. Examining the effects of quality management practices on product variety. *Eur. J. Econ. Financ. Adm. Sci.* 10–19.
- AlDhaheer, H., Hilmi, M.F., Abudaqa, A., Alzahrani, R.A., Ahmed, G., 2023. The relationship between HRM practices, innovation, and employee productivity in UAE public sector: a structural equation modelling approach. *Int. J. Process Manag. Benchmarking* 13, 157–176.
- AlHamad, M., Akour, I., Alshurideh, M., Al-Hamad, A., Kurdi, B., Alzoubi, H., 2021. Predicting the intention to use google glass: A comparative approach using machine learning models and PLS-SEM. *Int. J. Data Netw. Sci.* 5, 311–320.
- Aljumah, A., Nuseir, M., Refae, G., 2023. Examining the effect of social media interaction, E-WOM, and public relations: Assessing the mediating role of brand awareness. *Int. J. Data Netw. Sci.* 7, 467–476.
- Aljumah, A., Nuseir, M.T., Islam, A., 2020. Impacts of service quality, satisfaction and trust on the loyalty of foreign patients in Malaysian medical tourism. *International journal of innovation. Creat. Chang.* 11, 451–467.
- Aljumah, A.I., Nuseir, M.T., Alam, M.M., 2021a. Organizational performance and capabilities to analyze big data: do the ambidexterity and business value of big data analytics matter? *Bus. Process Manag. J.* 27, 1088–1107.
- Aljumah, A.I., Nuseir, M.T., Alam, M.M., 2021b. Traditional marketing analytics, big data analytics and big data system quality and the success of new product development. *Bus. Process Manag. J.* 27, 1108–1125.
- Aljumah, A I, Nuseir, M.T., El Refae, G.A., 2022a. Business Analytics and Competitive Advantage for SMEs in UAE: A Mediating Role of Technology Assets, in: *In 2022 International Arab Conference on Information Technology (ACIT)*. IEEE, pp. 1–9.
- Aljumah, A I, Nuseir, M.T., El Refae, G.A., 2022b. Exploring the Effect of Social Media Marketing and Destination image on Destination Loyalty in Covid-19 Times: Sequential Mediating Role of Brand Love and Brand Loyalty, in: *In 2022 International Arab Conference on Information Technology (ACIT)*. IEEE, pp. 1–8.
- Aljumah, Ahmad Ibrahim, Nuseir, M.T., El Refae, G.A., 2022a. The effect of sensory marketing factors on customer loyalty during Covid 19: Exploring the mediating role of customer satisfaction. *Int. J. Data Netw. Sci.* 6, 1359–1368.
- Aljumah, Ahmad Ibrahim, Shahroor, H., Nuseir, M.T., El Refae, G.A., 2022b. The effects of employee commitment and environment uncertainty on product quality: The mediating role of supply chain integration. *Uncertain Supply Chain Manag.* 10, 1379–1386.
- Almasaeid, T., Alzoubi, H., El Khatib, M., Ghazal, T., Alshurideh, M., Al-Dmour, N., Sattar, O., Ae, 2022. Futuristic Design & Development of Learning Management System including Psychological Factors Resolution. *J. Reatt. Ther. Dev. Divers.* 5, 176–188.
- Alshawabkeh, A., Nuseir, M.T., Aljumah, A., 2021. Impacts of social media on the buying intention of the consumers in Edinburgh, UK. *Int. J. Procure. Manag.* 14, 470–486.
- Alshurideh, Muhammad, Al Kurdi, B.H., Alzoubi, H.M., Salloum, S., 2023. The Effect of Information Technology on Business and Marketing Intelligence Systems. Springer Nature.
- Alshurideh, M., Almasaeid, T., El Khatib, M., Alzoubi, H., Ghazal, T., Hamadneh, S., Al-Dmour, N., Sattar, O., 2022. Components Determining the Behavior and Psychological impact of Entrepreneurship among Higher Vocational Students. *J. Reatt. Ther. Dev. Divers.* 5, 189–200.
- Alshurideh, M., Kurdi, B., AlHamad, A., Hamadneh, S., Alzoubi, H., Ahmad, A., 2023a. Does social customer relationship management (SCRM) affect customers' happiness and retention? A service perspective. *Uncertain Supply Chain Manag.* 11, 277–288.
- Alshurideh, Muhammad Turki, Al-Hadrami, A., Alquqa, E.K., Alzoubi, H.M., Hamadneh, S., Al Kurdi, B., 2023b. The effect of lean and agile operations strategy on improving order-winners: Empirical evidence from the UAE food service industry. *Uncertain Supply Chain Manag.* 11, 87–94.
- Alshurideh, Muhammad Turki, Al Kurdi, B., Alzoubi, H.M., Ghazal, T.M., Said, R.A., AlHamad, A.Q., Hamadneh, S., Sahawneh, N., Al-kassem, A.H., 2022a. Fuzzy assisted human resource management for supply chain management issues. *Ann. Oper. Res.* 1–19.
- Alshurideh, Muhammad Turki, Al Kurdi, B., Alzoubi, H.M., Obeidat, B., Hamadneh, S., Ahmad, A., 2022b. The influence of supply chain partners' integrations on organizational performance: The moderating role of trust. *Uncertain Supply Chain Manag.* 10, 1191–1202.
- Alshurideh, Muhammad Turki, Alquqa, E.K., Alzoubi, H.M., Al Kurdi, B., Alhamad, A., 2023c. The impact of cyber resilience and robustness on supply chain performance: Evidence from the UAE chemical industry. *Uncertain Supply Chain Manag.* 11, 187–194.
- Alshurideh, Muhammad Turki, Alquqa, E.K., Alzoubi, H.M., Al Kurdi, B., Hamadneh, S., 2023d. The effect of information security on e-supply chain in the UAE logistics and distribution industry. *Uncertain Supply Chain Manag.* 11, 145–152.
- Alshurideh, Muhammad Turki, Alzoubi, H.M., El khatib, M., Ghazal, T.M., Al-Dmour, N.A., Sattar, O., Kukunuru, S., 2022c. An Experimental Evaluation on Resource Attribute, Internal Risks and Regime Structure of R&D Association- Including Exploration of Moderating Effect of Association Management Capability, *Psychological. J. Reatt. Ther. Dev. Divers.* 5, 201–215.
- Alshurideh, M T, Alzoubi, H.M., Ghazal, T.M., Alami, R., Al Masaeid, T., 2022. Risk Management Model for Telecom Enterprises Based on Variables (RM, SO, RC, SI) with Nature, Sense and Positive Psychology Hypothesis. *J. Reatt. Ther. Dev. Divers.* 2022, 5.
- Alshurideh, Muhammad Turki, Obeidat, B.Y., Victoria, V., Alzoubi, H.M., Fatima, A., Ilyas, A., Rustam, I., 2022d. A Systematic Literature Review of Security in 5G based Social Networks, in: *International Conference on Cyber Resilience, ICCR 2022*. ICCR 2022, 2022.
- Alzoubi, H., Ahmed, G., 2019. Do TQM practices improve organisational success? A case study of electronics industry in the UAE. *Int. J. Econ. Bus. Res.* 17, 459–472.
- Alzoubi, Haitham, Alshurideh, M., Gasaymeh, A., Ahmed, G., Kurdi, B. Al, 2020. Loyalty program effectiveness: Theoretical reviews and practical proofs. *Uncertain Supply Chain Manag.* 8, 599–612.
- Alzoubi, H., Alshurideh, M., Kurdi, B. Al, Akour, I., Aziz, R., 2022. Does BLE technology contribute towards improving marketing strategies, customers' satisfaction and loyalty? The role of open innovation. *Int. J. Data Netw. Sci.* 6, 449–460.
- Alzoubi, Haitham M., Ahmed, G., Al-Gasaymeh, A., Al Kurdi, B., 2020. Empirical study on sustainable supply chain strategies

- and its impact on competitive priorities: The mediating role of supply chain collaboration. *Manag. Sci. Lett.* 10, 703–708.
- Alzoubi, H.M., Ahmed, G., Alshurideh, M., 2022a. An empirical investigation into the impact of product quality dimensions on improving the order-winners and customer satisfaction. *Int. J. Product. Qual. Manag.* 36, 169–186.
- Alzoubi, H.M., El Khatib, M.M., Ahmed, G., Kazim, H.H., Falasi, S.A.A. Al, Mohammed, F., Mulla, M. Al, 2022b. Digital Transformation and SMART-The Analytics factor, in: 2022 International Conference on Business Analytics for Technology and Security, ICBATS 2022. pp. 1–11.
- Alzoubi, H.M., Ghazal, T.M., El khatib, M., Alshurideh, M.T., Alami, R., Al Masaeid, T., 2022c. Creation of Indicator System for Quality Estimation of Safety Management of Personnel and it's Psychological impact on Industrial Enterprises. *J. Reatt. Ther. Dev. Divers.* 5, 143–151.
- Alzoubi, H.M., In'airat, M., Ahmed, G., 2022d. Investigating the impact of total quality management practices and Six Sigma processes to enhance the quality and reduce the cost of quality: the case of Dubai. *Int. J. Bus. Excell.* 27, 94–109.
- Alzoubi, H.M., Kurdi, B. Al, Akour, I., Alshurideh, M.T., 2022e. The effect of blockchain and smart inventory system on supply chain performance: Empirical evidence from retail industry. *Uncertain Supply Chain Manag.* 10, 1111–1116.
- Alzoubi, H.M., Mehmood, T., Alshurideh, M., Al-Gasaymeh, A., Ahmed, G., 2019. Schumpeterian entrepreneurship theory: Evolution and relevance. *Acad. Entrep. J.* 25, 1–10.
- Alzoubi, H.M., Sahawneh, N., Alhamad, A.Q., Malik, U., Majid, A., Atta, A., 2022f. Analysis Of Cost Prediction In Medical Insurance Using Modern Regression Models, in: International Conference on Cyber Resilience, ICCR 2022. ICCR 2022, 2022.
- Amiri, N. Al, Rahim, R.E.A., Ahmed, G., 2020. Leadership styles and organizational knowledge management activities: A systematic review. *Gadjah Mada Int. J. Bus.* 22, 250–275.
- Arshad, M., Brohi, M., Soomro, T., Ghazal, T., Alzoubi, H., Alshurideh, M., 2023. NoSQL: Future of BigData Analytics Characteristics and Comparison with RDBMS. pp. 1927–1951.
- Aziz, A., Brohi, M.N., Soomro, T.R., Alzoubi, H.M., Ghazal, T.M., Alshurideh, M., 2023. Aircraft Turnaround Manager (ATM): A Solution to Airport Operations. *Stud. Comput. Intell.* 2023, 679–702.
- Bawaneh, A., Massadeh, D., Akour, I., Abu hajja, A., Alshurideh, M., 2023. The Impact of Green Auditing on Organizational Performance in Jordan: the Moderating Effect of the Auditor's Opinion. *Inf. Sci. Lett.* 12, 1505–1512.
- Blooshi, I., Alamim, A., Said, R., Taleb, N., Ghazal, T., Ahmad, M., Alzoubi, H., Alshurideh, M., 2023. IT Governance and Control: Mitigation and Disaster Preparedness of Organizations in the UAE. pp. 661–677.
- El Khatib, D.M.M., 2015. Integrating Project Risk Management and Value Engineering in Tendering Processes. *Int. J. Eng. Res.* 4, 442–445.
- El Khatib, M., Alabdooli, K., AlKaabi, A., Al Harmoodi, S., 2020a. Sustainable Project Management: Trends and Alignment. *Theor. Econ. Lett.* 10, 1276–1291.
- El Khatib, M., Hammerschmidt, M., Al Junaibi, M., 2021. Leveraging innovation input on enhancing smart service quality. Cases from Abu Dhabi Emirate. *Int. J. Manag. Cases* 23, 46–62.
- El Khatib, M., Nakand, L., Almarzooqi, S., Almarzooqi, A., 2020b. E-Governance in Project Management: Impact and Risks of Implementation. *Am. J. Ind. Bus. Manag.* 10, 1785–1811.
- El Khatib, M.M., Ahmed, G., 2020. Robotic pharmacies potential and limitations of artificial intelligence: A case study. *Int. J. Bus. Innov. Res.* 23, 298–312.
- El Khatib, M.M., Ahmed, G., 2019. Management of artificial intelligence enabled smart wearable devices for early diagnosis and continuous monitoring of CVDS. *Int. J. Innov. Technol. Explor. Eng.* 9, 1211–1215.
- El Khatib, M.M., Ahmed, G., 2018. Improving Efficiency in IBM Asset Management Software System “Maximo”: A Case Study of Dubai Airports and Abu Dhabi National Energy Company. *Theor. Econ. Lett.* 08, 1816–1829.
- El Khatib, M.M., Al-Nakeeb, A., Ahmed, G., 2019. Integration of Cloud Computing with Artificial Intelligence and Its Impact on Telecom Sector—A Case Study. *iBusiness* 11, 1–10.
- Farrukh, M., Soomro, T.R., Ghazal, T.M., Alzoubi, H.M., Alshurideh, M., 2023. Perspectives of Online Education in Pakistan: Post-covid Scenario, in: The Effect of Information Technology on Business and Marketing Intelligence Systems. Springer, pp. 519–550.
- Gaytan, J.C.T., Rafiuddin, A., Sisodia, G.S., Ahmed, G., Paramaiah, C., 2023. Pass-through Effects of Oil Prices on LATAM Emerging Stocks before and during COVID-19: An Evidence from a Wavelet -VAR Analysis. *Int. J. Energy Econ. Policy* 13, 529–543.
- Ghazal, T M, Al-Dmour, N.A., Said, R.A., Moubayed, A., Ali, L., Alzoubi, H.M., Alshurideh, M., 2023a. DDoS Intrusion Detection with Ensemble Stream Mining for IoT Smart Sensing Devices. *Stud. Comput. Intell.* 2023, 1987–2012.
- Ghazal, T M, Hasan, M.K., Abdullah, S.N.H.S., Alzoubi, H.M., Alshurideh, M., 2023b. An Integrated Cloud and Blockchain Enabled Platforms for Biomedical Research. *Stud. Comput. Intell.* 2023, 2037–2053.
- Ghazal, Taher M., Hasan, M.K., Ahmad, M., Alzoubi, H.M., Alshurideh, M., 2023. Machine Learning Approaches for Sustainable Cities Using Internet of Things. *Stud. Comput. Intell.* 2023, 1969–1986.
- Ghazal, T M, Hasan, M.K., Alzoubi, H.M., Alshurideh, M., Ahmad, M., Akbar, S.S., 2023c. Internet of Things Connected Wireless Sensor Networks for Smart Cities. *Stud. Comput. Intell.* 2023, 1953–1968.
- Gulseven, O., Ahmed, G., 2022. The State of Life on Land (SDG 15) in the United Arab Emirates. *Int. J. Soc. Ecol. Sustain. Dev.* 13, 1–15.
- Hani Al-Kassem, A., 2021. Significance of Human Resources Training and Development on Organizational Achievement. *PalArch's J. Archaeol. Egypt / Egyptol.* 18, 693–707.
- Ivanov, D., Dolgui, A., 2021. A digital supply chain twin for managing the disruption risks and resilience in the era of Industry 4.0. *Prod. Plan. Control* 32, 775–788.
- Kassem, A., Martinez, E.B., 2022. Operationalization of Negosyo Center as an Entrepreneurial Strategy to Selected Micro, Small, and Medium Enterprises in Taguig City. *Glob. Bus. Manag. Res.* 14, 88–104.
- Khan, A., Hasana, M.K., Ghazal, T.M., Islam, S., Alzoubi, H.M., Mokhtar, U.A., Alam, R., Ahmad, M., 2022. Collaborative Learning Assessment via Information and Communication Technology, in: Proceedings - 2022 RIVF International Conference on Computing and Communication Technologies, RIVF 2022. RIVF 2022, 2022, pp. 311–316.
- Khataie, A.H., Bulgak, A.A., 2013. A cost of quality decision support model for lean manufacturing: Activity-based

- costing application. *Int. J. Qual. Reliab. Manag.* 30, 751–764.
- Khatib, E., M., Z., A., R., Al-Nakeeb, A., 2021. The effect of AI on project and risk management in health care industry projects in the United Arab Emirates (UAE). *Int. J. Appl. Eng. Res.* 6, 1.
- Khatib, M. El, 2022. BIM as a tool to optimize and manage project risk management. *Int. J. Mech. Eng.* 7, 6307–6323.
- Khatib, M. El, Alzoubi, H.M., Mulla, A. Al, Ketbi, W. Al, 2022a. The Role of Blockchain in E-Governance and Decision-Making in Project and Program Management. *Adv. Internet Things* 12, 88–109.
- Khatib, M. El, Beshwari, F., Beshwari, M., Beshwari, A., 2021. The impact of blockchain on project management. *ICIC Express Lett.* 15, 467–474.
- Khatib, M. El, Blooshi, S. Al, Al-habeeb, A., 2016. The Challenge and Potential Solutions of Reading Voluminous Electronic Medical Records (EMR): A Case Study from UAE. *IOSR J. Bus. Manag. (IOSR-JBM)* 18, 38–46.
- Khatib, M. El, Hamidi, S., Ameeri, I. Al, Zaabi, H. Al, Marqab, R. Al, 2022b. Digital Disruption and Big Data in Healthcare- Opportunities and Challenges. *Clin. Outcomes Res.* 14, 563–574.
- Khatib, M.M. El, Opulencia, M.J.C., 2015. The Effects of Cloud Computing (IaaS) on E- Libraries in United Arab Emirates. *Procedia Econ. Financ.* 23, 1354–1357.
- Koval, O., Nabareseh, S., Chromjaková, F., 2019. Standardization in services: Assessing the impact on customer satisfaction. *E a M Ekon. a Manag.* 22, 186–203.
- Kurdi, B. Al, Alshurideh, M., Akour, I., Alzoubi, H.M., Obeidat, B., Alhamad, A., 2022a. The role of digital marketing channels on consumer buying decisions through eWOM in the Jordanian markets. *Int. J. Data Netw. Sci.* 6, 1175–1185.
- Kurdi, B. Al, Alshurideh, M., Akour, I., Tariq, E., Alhamad, A., Alzoubi, H.M., 2022b. The effect of social media influencers' characteristics on consumer intention and attitude toward Keto products purchase intention. *Int. J. Data Netw. Sci.* 6, 1135–1146.
- Lee, K.L., Nawanir, G., Cheng, J., Alzoubi, H., Alshurideh, M., 2023. Educational Supply Chain Management: A View on Professional Development Success in Malaysia. pp. 2473–2490.
- Louzi, N., Alzoubi, H.M., Alshurideh, M.T., El khatib, M., Ghazal, T.M., Kukunuru, S., 2022a. Psychological & Prototypical Model of Execution Management evaluation for the framework Development. *J. Reatt. Ther. Dev. Divers.* 5, 216–223.
- Louzi, N., Alzoubi, H.M., El Khatib, M., Ghazal, T.M., Alshurideh, M., Kukunuru, S., 2022b. Psychological Health and Environmental Effect of using Green Recycled Amassed Concrete on Construction. *J. Reatt. Ther. Dev. Divers.* 5, 163–175.
- M. Alzoubi, H., Ghazal, T., Hasan, M., Alshurideh, M., Ahmad, M., Akbar, S., Al Kurdi, B., Akour, I., 2021. IoT for Smart Cities: Machine Learning Approaches in Smart Healthcare- A Review. *Futur. Internet* 13, 218.
- Mat Som, A.P., Kassem, H. Al, 2013. Domestic Tourism Development in Asir Region, Saudi Arabia. *J. Tour. Hosp.* 02.
- Morash, E.A., 2001. Supply Chain Strategies, Capabilities, and Performance. *Transp. J.* 41, 37–54.
- Morgan, L.O., Morgan, R.M., Moore, W.L., 2001. Quality and Time-to-Market Trade-offs when There Are Multiple Product Generations. *Manuf. Serv. Oper. Manag.* 3, 89–104.
- Mubeen, S., Shahid, M.H., Sahawneh, N., Al-Kassem, A.H., Ahmad, A., Naseer, I., 2022. Education, Employment and Women Empowerment in an Agrarian Economy: A Case Study. pp. 1–9.
- Nadzri, W., Hashim, A., Majid, M., Jalil, N., Alzoubi, H., Alshurideh, M., 2023. Share Your Beautiful Journey: Investigating User Generated Content (UGC) and Webrooming Among Malaysian Online Shoppers. pp. 2265–2285.
- Nuseir, M., Elrefae, G., 2022. The effects of facilitating conditions. *Cust. Exp. Brand Loyal. Cust. Brand equity through Soc. media Mark.* 6, 875–884.
- Nuseir, M.T., 2021. Assessing the impact of brand equity and customer experience on brand loyalty in the United Arab Emirates' hotel industry. *Int. J. Bus. Excell.* 25, 459–473.
- Nuseir, M.T., 2020. Potential impacts of blockchain technology on business practices of bricks and mortar (B&M) grocery stores. *Bus. Process Manag. J.* 27, 1256–1274.
- Nuseir, M.T., Aljumah, A., 2022. The impact of entrepreneur orientation on sustainable entrepreneurship among SMEs in the UAE: mediating effects of the sustainability orientation and bricolage behaviours of entrepreneurs. *Int. J. Trade Glob. Mark.* 16, 250–264.
- Nuseir, M.T., Aljumah, A., 2020. The role of digital marketing in business performance with the moderating effect of environment factors among SMEs of UAE. *Int. J. Innov. Creat. Chang.* 310–324.
- Nuseir, Mohammed T., Aljumah, A.I., El-Refae, G.A., 2022. Digital marketing and public relations: A way to promote public relations value. *Int. J. Data Netw. Sci.* 6, 1331–1340.
- Nuseir, M T, Aljumah, A.I., El Refae, G.A., 2022a. The Influence of E-learning M-learning, in: And D-Learning on the Student Performance: Moderating Role of Institutional Support. In 2022 International Arab Conference on Information Technology (ACIT) . IEEE, pp. 1–9.
- Nuseir, M T, Aljumah, A.I., El Refae, G.A., 2022b. Trust in Adoption of Internet of Things: Role of Perceived Ease of Use and Security, in: In 2022 International Arab Conference on Information Technology (ACIT). IEEE, pp. 1–7.
- Nuseir, M.T., Basheer, M.F., Aljumah, A., 2020. Antecedents of entrepreneurial intentions in smart city of Neom Saudi Arabia: Does the entrepreneurial education on artificial intelligence matter? *Cogent Bus. Manag.* 7.
- Nuseir, M.T., El-Refae, G.A., Aljumah, A., 2021. The e-Learning of Students and University's Brand Image (Post COVID-19): How Successfully Al-Ain University Have Embraced the Paradigm Shift in Digital Learning, *Studies in Systems, Decision and Control.* Springer International Publishing.
- Nuseira, M.T., Aljumahb, A., 2020. Digital marketing adoption influenced by relative advantage and competitive industry: a UAE tourism case study. *Int. J. Innov. Creat. Chang.* 2020, 617–631.
- Ray Gehani, R., 2013. Innovative strategic leader transforming from a low-cost strategy to product differentiation strategy. *J. Technol. Manag. Innov.* 8, 144–155.
- Sakkthivel, A.M., Ahmed, G., Amponsah, C.T., Muuka, G.N., 2022. The influence of price and brand on the purchasing intentions of Arab women: an empirical study. *Int. J. Bus. Innov. Res.* 28, 141–161.
- Tang, C.S., 2006. Perspectives in supply chain risk management. *Int. J. Prod. Econ.* 103, 451–488.
- Tariq, E., Alshurideh, M., Akour, I., Al-Hawary, S., 2022a. The effect of digital marketing capabilities on organizational

- ambidexterity of the information technology sector. *Int. J. Data Netw. Sci.* 6, 401–408.
- Tariq, E., Alshurideh, M., Akour, I., Al-Hawary, S., Kurdi, B. Al, 2022b. The role of digital marketing, CSR policy and green marketing in brand development. *Int. J. Data Netw. Sci.* 6, 995–1004.
- Varma, A.J., Taleb, N., Said, R.A., Ghazal, T.M., Alzoubi, H.M., Alshurideh, M., 2023. A Roadmap for SMEs to Adopt an AI Based Cyber Threat Intelligence. *Stud. Comput. Intell.* 2023, 1903–1926.
- Yasir, A., Ahmad, A., Abbas, S., Inairat, M., Al-Kassem, A.H., Rasool, A., 2022. How Artificial Intelligence Is Promoting Financial Inclusion? A Study On Barriers Of Financial Inclusion, in: 2022 International Conference on Business Analytics for Technology and Security (ICBATS). pp. 1–6.