

The Impact of Innovation Types on Competitive Advantage in SMEs in Jordan

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Abstract. This study analyzed the influence of product, process, marketing, and organizational innovation on the competitive advantage of SMEs in Jordan. A survey questionnaire was administered to 491 SMEs. The results of multiple regression analysis showed that process and product innovation had the most significant impact. All four innovation types positively affected competitive advantage, supporting the study's hypotheses. The findings provide empirical evidence that adopting innovation enhances SMEs' competitiveness in Jordan. Further research should investigate potential mediators and moderators to uncover more complex effects. This study contributes to scholarship on innovation-based competitive strategies for SMEs in developing economies.

Keywords: Competitive Advantage of SME, Product Innovation, Process Innovation , Marketing Innovation , Organization Innovation, Jordan

1. Introduction

Small and medium-sized enterprises (SMEs) are essential to a country's social and economic development. Due to their numerous contributions to the economy, SMEs are seen as important forces for socioeconomic development and competitiveness (Heru, & Sri, 2020). The industry provides chances for the development and use of relevant technology, creates a sizable amount of income and jobs, and is a significant source of inventions (Sulistyo, & Siyamtinah, 2016). Additionally, SMEs are essential for entering new markets and promoting an economy's expansion (Abbas et al., 2020). SMEs, which are at the forefront of innovation techniques, are seen as crucial to a country's competitiveness and growth (Baierle, 2020).

Furthermore, in order to improve the efficiency and competitive advantages of goods, operations, marketing, structure, human resources, and networking in both local and international markets, innovation is essential. Currently, innovation is the primary tool used to face competition. The key to businesses facing strong competition, according to Aksoy (2017), is to innovate so they may get a competitive edge. According to Yuleva, (2019), a company's capacity to develop a program superiority or strength that sets it apart from its rivals constitutes a competitive advantage. Any company must adapt to the increased competition in order to gain the advantages necessary to survive.

Despite the vital role that SMEs have played in economic progress, the businesses confront significant obstacles that limit their potential and ability to contribute to development. Therefore, in order to compete successfully and take advantage of opportunities in the environment, SMEs must enhance their level of personal competitiveness (Alzuod & Othman, 2017). SMEs' main competitive edge has been linked to their capacity for innovation and their adaptability to quickly change to meet market needs (Dorson, 2018). A typical SME views innovation as being essential to its continued existence.

On the other hand, SMEs businesses make up the majority of entrepreneurship both in Jordan and around the world. Also, SMEs businesses make up about 98% of the manufacturing industry as well as service providers (Alshamayleh et al., 2021). The statistics department estimates that over 100,000 SMEs make up the majority of businesses in Jordan, or about 96% of all businesses. Furthermore, the Organization for Economic Cooperation and Development (OECD) estimates that these businesses constitute the backbone of the country's economy, contributing up to 50% or more of the GDP, employing up to 60% of Jordan's labor force, generating up to 70% of new job opportunities, and producing roughly 45% of exports (Alshamayleh et al., 2021). As was briefly indicated above, while all forms of innovation are widely recognized as sources of competitive advantage for businesses, their combined exploitation and the benefits they provide to those businesses are not thoroughly studied. There are very few studies in Jordan that connect innovation and competitiveness (ALkufahy et al., 2023). More specifically, the few studies that have been done are too narrow in scope and too inconclusive. Therefore, the goal of this study was to close the information gap by offering some actual data on the impact between innovation and competitiveness in Manufacturing SMEs in Jordan.

Therefore, this study is important because, this research advances knowledge on innovation practices in Jordanian Manufacturing SMEs and how they impact business competitiveness. SME practitioners, government organizations, and other researchers should take note of this. In particular, the research findings validate the contribution of innovation to business competitiveness, thereby establishing a relationship between innovation and competitiveness. The research conclusions offer a foundation for using innovation strategy to boost a company's competitiveness. Finally, the results of the study may spur additional research to close any knowledge gaps or broaden the focus in the areas of innovation and SME competitiveness. In addition, the research makes a helpful context-specific contribution by focusing on SME innovation in Jordan. However, the implications to theory, practice, and policy could be expanded further in the discussion.

In summary, the following are the research goals of this study:

1. To determine the impact of product innovation on competitive advantage of SMEs in Jordan
2. To examine the impact of process innovation on the competitive advantage of SMEs in Jordan
3. To evaluate the effect of Marketing innovation on the competitive advantage of SMEs in Jordan
4. To investigate the impact of organizational innovation on the competitive advantage of SMEs in Jordan

2. Literature Review and Hypotheses

Many nations have different ideas about what SMEs are, and classification is based on factors like activity, size, and revenue (Chong & Ali, 2022). Small and medium-sized businesses and entrepreneurship are strongly related. There are significant disparities in the definitions of small and medium-sized enterprises (SMEs) between industrialized countries with a western culture and the Middle East, as well as differences in the metrics that specialists use to gauge the size of the business. Small and medium-sized enterprises, are typically classified according to a range of criteria, such as the quantity of workers, assets, sales, credit, and/or investment worth. However, due to the ever-changing environment, intense competition in the market, and need for customer personalization, innovation is becoming a more important factor in an organization's survival and expansion (Sulistyo, & Ayunix, 2020). Moreover, a significant factor affecting the effectiveness of an innovation is the management style, market climate, organizational structure, and culture (Moses et al., 2018). Innovation, as defined by Lekoric and Maric (2016), is the process of successfully developing and implementing new ideas, products, technologies, or processes to enhance the productivity and performance of organizations. Pioneers in the field, such as Lawrence (2022) and Rizos (2016), have classified innovation in different ways. According to Shafique et al. (2022), innovation is the use of an already-existing product or service or a significant improvement over it while taking into consideration the marketing strategy, internal business processes, and relationships with both internal and external parties. For the organization as a whole, the innovation must be wholly original or very distinct from what is already in place. There are four types of innovation. The first is Innovation in Products. 2. Process Innovation 3. Innovation in Organizations, 4. Brand Innovation (Alosani et al., 2019; Abbas et al., 2020).). As a result, this research integrated Chatzoglou and Chatzoudes (2018) principles and assessed the inventive potentiality of four components.

2.1. Innovation types

2.1.1. Product innovation

Product innovation is the introduction of fresh ideas to solve problems for consumers, whether through the creation of brand-new products or the improvement of already-existing ones' features (Negulesco, 2020). Indeed, research suggests that a company's performance is enhanced by product innovation in numerous financial and competitiveness criteria (Philipson, 2020). In addition, innovations are becoming more and more reliant on a variety of specialized innovation inputs and capabilities as a result of increased competition (Latifa et al., 2020), even if internal competence is a crucial and indispensable factor in defining the capacity to innovate (Haryati, 2021). More specifically, Efrata et al., (219), said that product innovation is defined as focusing on the features, design, and development of products and services. It has been underlined that product innovation is link to organizational success and enables businesses to take the lead in a cutthroat market (Nuryakin, 2018). Finally, the current research describes product innovation as the process by which businesses manufacture and develop new products that can result in organizational success, which is consistent with Farida, and Setiawan (2022). Based on earlier research performed by Ann, (2020), innovation management impacts on firms performance product innovation was one of these factors in Greek aluminum industry . The study's conclusions demonstrated that product innovation can improve business performance Product. The first hypothesis that needs to be assessed in light of these empirical findings is

H1: Product innovation significantly affects Jordanian manufacturing SMEs' ability to compete.

2.1.2. Marketing innovation

Over the past fifteen years, a lot of talk has focused on the use of creative marketing techniques to gain a competitive edge. Due to the ability of competitors to quickly contact potential customers around the world thanks to cutting-edge marketing techniques, particularly the internet, a company must constantly innovate the market. Market innovation, according to Rodriguez Cano and his colleagues, is essential to meeting consumer demands and seizing market opportunities (Rathod et al., 2022). In addition, every market innovation must, therefore, be focused on satisfying customer needs and desires. As a result, customers can be seen as the source of innovation because their desire for unique qualities prompts producers to include them in finished goods (Bamfo, & Kraa, 2019). However, changes in product packaging, product placement and significant changes in product design that are a result of new marketing concepts are all examples of marketing innovations (Ganzer et al., 2017). Based on that, innovative businesses in Jordan modify and focus their operations to fully exploit the market's conditions (Quaye & Mensah, 2018). Shima and Gada (2022) investigation of how Egypt's commercial airlines might gain a competitive edge through innovation. The study's findings demonstrated the strong relationship between marketing innovation and competitive advantage. Finally, in order to increase a company's sales, marketing innovations concentrate on more effectively meeting customer requirements, expanding into new markets, and strategically positioning a company's product (Aziz et al., 2022). Thus, we hypothesize that:

H2: Marketing innovation has a significant impact on Jordanian manufacturing SMEs' competitive edge.

2.1.3. Process innovation

Process innovation is thought to shorten production times, lower operational costs, increase productivity, and simplify daily tasks (Baierle et al., 2020, Daniel, 2020). In this way, process innovation puts a strong emphasis on effectiveness, making it simpler for organizations to implement cost leadership methods (Setyawati et al., 2017). By utilizing this kind of innovation, businesses can create "new" items while improving their performance by implementing novel methods and techniques and enhancing the quality and "clearness" of manufacturing (Al-kalouti, et al., 2020). Additionally, organizations can benefit from the technological transformations brought about by innovation by adopting novel strategies, developing them, and gaining new knowledge as a result—knowledge that is the key to success for an innovator (Shimaa, & Gada, 2022). In particular, process innovation is crucial to the manufacturing industry and ought to be emphasized by a business as its primary differentiator for gaining a competitive edge (Guzan et al., 2018). Also, new products and processes have a favorable and significant impact on competitive advantage, as empirical research has confirmed (Nguyen et al., 2019). Process innovation has a crucial role in the competitive advantage, according to a previous study by Thi et al., (2023) that looked at its impact on the sustainable competitive advantage of young firms. Finally, the current study makes the case that process innovation also entails the creation of new instruments and apparatus. Consequently, we hypothesize that:

H3: Process innovation has a significant impact on Jordan's manufacturing SMEs' competitive edge

2.1.4. Organization innovation

Due to the increased competitiveness in this era of globalization and the information economy, the role of organizational innovation (OI) in creating sustainable competitive advantage (SCA) has become crucial for the survival and sustained growth of enterprises in both developed and developing countries (Titus et al., 2016). According to this research's findings, which are consistent with those of other recent academics, organizational innovation that is based on a changing environment and a fiercely competitive market creates competitive advantages (Okello, 2022). Previous research studies by Hanayshe et al., (2022), organizational innovation greatly affects small and medium firms' competitive advantage. According to Qiu et al., (2020), the current study defines organizational innovation as a technique of improving organizational performance through innovative working practices, a better work environment, and external relations (Shimaa, & Gada, 2022). On the other hand, organizational

innovation is the application of new ideas to the business in order to produce benefits for the company and/or its customers indirectly. This definition applies regardless of whether the new ideas and value-added are embodied in products, services, work organization, management, or marketing systems (Al-kalouti, et al., 2020, & Denousse, 2020). Although this innovation type has been mentioned in pertinent literature alongside other types of innovation or has been linked to other business measures, the effect of organizational innovation on competitive advantage is currently understudied. Therefore, the fourth hypothesis follows

H4: Organizational innovation has a significant effect on Jordan's manufacturing SMEs' competitive edge.

2.1.5. Competitive Advantage

It is important to remember that small and medium-sized enterprises (SMEs) are currently facing a highly competitive and dynamic business environment, with the development and acquisition of competitive advantage being viewed as the primary challenge. In addition, firms can maintain its competitive edge when its competitors are unable to match the organization's resources or when it is challenging the competitors to replicate the organization's processes or methods of conducting business (Shafiqe et al., 2022). Competitiveness is essential for a firm's survival, expansion, and success in the current dynamic economic climate (Dorson, 2018). Moreover, for businesses to survive there must be severe competition. In order to succeed, small and medium-sized businesses in emerging nations must increase their level of competition by overcoming obstacles in their local marketplaces (Yuleva, 2019). According to Cherroun (2014) and Hidayatullah et al. (2019), a business can gain a competitive advantage by offering its customers a benefit-driven differentiation between its services and those of its rivals. Being able to accomplish something that competitors cannot, or having a resource that competitors want but do not yet have, are examples of having a competitive edge. Theoretically, small and medium-sized businesses have an edge over their competitors when they are able to produce greater economic value. Competitive advantage is the main factor ensuring an organization's continuity, existence, and growth in a highly competitive environment (Jenifer, 2022). However, new research on Jordanian manufacturing enterprises indicates that innovation is necessary to obtain a competitive advantage (Chatzoglou & Chatzoudes, 2018). In today's competitive market, innovation is essential to both long-term success and competitive advantage since companies that prioritize innovation will be better equipped to handle environmental issues than those that don't (Asksoy, 2017).

2.1.6. The importance of innovation

By creating new products and making enhancements to organizational structures, marketing strategies, and processes, a company can expand faster and more effectively than its rivals (Thi et al., 2023). Because of this, establishing and preserving a sustainable competitive edge depends heavily on innovation. Due to the growing dynamics of globalization and increased worldwide competition, innovation is becoming more and more important for firms' long-term survival, growth, and profitability. Indeed, others have suggested that an organization's ability to innovate is a core competency that fosters profitability, increased market shares, and long-term growth (Okello 2022). Furthermore, it has been argued that innovation has a critical role in enhancing and maintaining business performance during recessions (Efrata et al., 2019). Since innovation is seen as an essential element of any firm, research has concentrated on the different types of innovation that businesses employ. According to Kiptoo and Koech (2019), innovation can be categorized into four types: process, marketing, organizational, and product innovation. This research also uses this classification, although it should be emphasized that in many corporate sectors, innovation usually happens simultaneously, with each form of invention frequently being spurred by the other.

2.1.7. Background of SMEs in Jordan

One of the most competitive leading sectors of the national economy and global marketplaces is Jordan's

SME sector. The goal of Jordan Vision 2030 is for the nation to become a newly industrialized nation with middle-class income levels and an average annual GDP growth rate of 10%. As a result, one of the main productive areas highlighted in Vision 2030 to promote economic growth and achieve the 10% annual growth is the manufacturing sector. Furthermore, SME businesses make up the majority of entrepreneurship in Jordan, as they do everywhere else in the world. In addition, Small and medium-sized businesses make up around 98% of the manufacturing industry as well as service providers (Dajah, & Alshora, 2022). Similar to how they made up 98.5% of all registered businesses and 60% of all formal jobs in 2022, SMEs also helped the unemployed by contributing 50% of the nation's GDP (Shgair, & Altarazi, 2022). Approximately 97% of all businesses in Jordan are SMEs, according to statistics department estimates, which total over 100,000 (Alshamayleh et al., 2021, Al-Hunaiti & Al-qaid, 2019). Thus, it is anticipate that the industry would be crucial in putting the nation on a path of sustainable growth and achieving Vision 2030. More specifically, a number of obstacles impair SMEs' ability to compete in the manufacturing industry, preventing them from reaching their full potential and, as a result, reducing their ability to contribute to socioeconomic growth. Among the difficulties, include intense rivalry from bigger businesses and international corporations; restricted access to resources and markets; crowded, saturated markets; inadequate technology; and unfavorable regulatory regulations (Al-Jobor et al., 2020). However, Globalization, shortened product lifecycles, quick technological advancements, tighter standards, and shifting customer preferences and needs have all contributed to these (Alharafsheh, , & Ezmigna, 2023).

2.1.8. Conceptual Framework of the Study

According to Hair et al. (2010), a theoretical framework is made up of theories and models that have been established in the literature and assist the research investigation. A framework for research based on the analysis of literature relevant to important areas of innovation management and the competitive advantage of small and medium-sized businesses is suggested after a thorough literature assessment. It is possible to characterize the conceptual framework using a diagrammatical representation that shows the relationship between the independent and dependent variables. Additionally, the research classifies organizational innovation, process innovation, marketing innovation, and product innovation as independent factors, whereas competitive advantage is classified as a dependent variable. In summary, the conceptual framework for this study attempts to give Jordanian small- and medium-sized business leaders strategic guidelines and a comprehensive explanation of how innovation management, including product, marketing, process, and organizational innovation, affects competitive advantage. Hence, Figure 1 conceptual framework is illustrated.

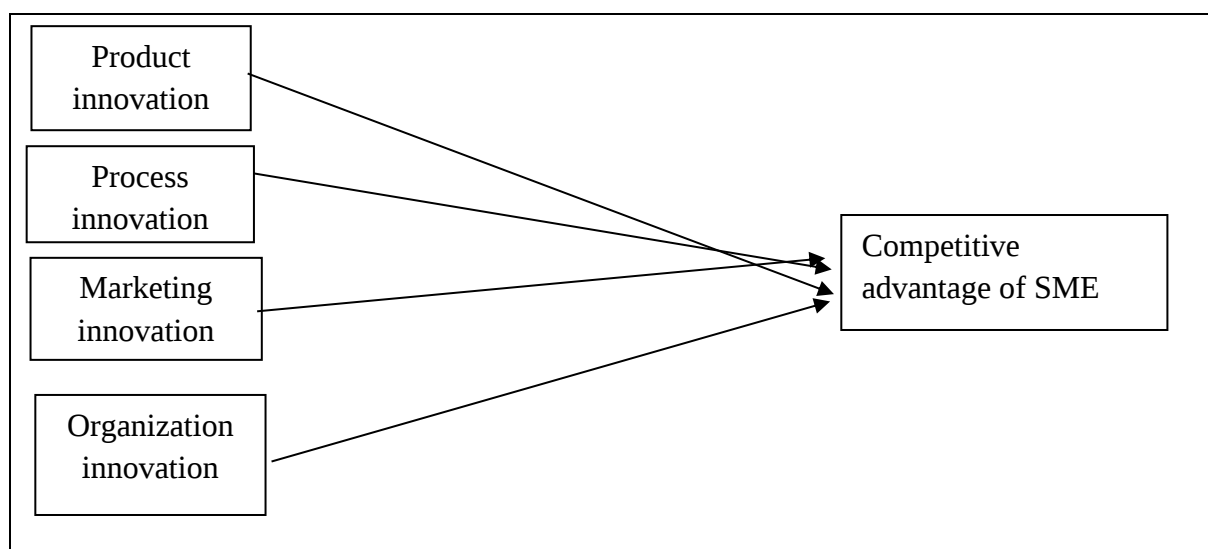


Fig.1: Theoretical Framework (Independent variables and Dependent variables)

3. Resrach Methodology

Each research methodology has the potential to offer a unique approach to carrying out a research process. In addition, research is the logical, systematic search for current, practical knowledge on a certain topic (Saunders et al., 2012). Furthermore, the purpose of the research is to apply the scientific process to answer problems and uncover hidden information that has not yet been uncovered (Pandey & Pandey, 2015:9). The techniques researchers employ to conduct a study are called research methods. It outlines the steps involved in gathering, organizing, and evaluating data in order to draw conclusions (Walliman, 2011:7). Finally, this study used a quantitative approach, collecting data through the using of a questionnaire. Hair (2012) pointed out that the best way to collect data that fairly represents the opinions of the target group as a whole is deem to be through questionnaires. As it is determined that the measures are appropriate, this research adopts and modifies the instruments and measures in full or in part from earlier studies.

3.1 Questionnaire design

In order to identify and formulate Innovation factors and to develop questions related to each influence in order to quantify them, the literature review was the foundation for these efforts. As a result, a questionnaire was create to ask respondents to rate their opinions of four effects by providing answers to twenty questions about innovation-related topics. The survey utilized a 5-point Likert scale. Saunders et al., (2012) notes that Likert scales have several advantages as a research instrument, which is why it was chosen as the instrument to collect respondents' perceptions. First, the questions are typically simple to comprehend and provide answers that are consistent (Hair et al., 2006, Pallant, 2010). Second, a useful, consistent image is created when statements or questions are combined. Lastly, it is simple to gather, examine, and assess the responses (Sekaran, & Bougie, 2016).

3.2 Target Population and Sample Size

All SMEs in Jordan make up the population for this study. Despite the lack of a widely accepted definition, small and medium-sized businesses typically exhibit certain qualities, such as the restriction on the number of employees that can be present in a single corporation. According to Alshamayleh et al., (2021), small businesses are those with fewer than twenty employees, while medium businesses are those with between twenty and ninety-nine people. The method used by the study to get the necessary data from respondents was non-probability convenience sampling. The table provided by Sekaran and Bougie (2013) was used to calculate the sample size for this study. In order to represent the total population of Jordan's 20000 SMEs, which is based on this data, a sample of 384 SMEs must be chosen. Data were gathered using online survey via the Google Docs application. The SMEs owners and managers received survey questionnaires. SMEs often possess a reasonably small number of important products and technology. Therefore, it is expected that managers or owners will have a positive impression of their firms, which enhances the response's accuracy (Mugenda & Mugenda, 2012). Additionally, the responders received the follow-up emails. The data was gathered over a three-month period (May to August 2023). The questionnaire was originally developed in English, but because the study's targeted respondents (SMEs owners and managers), who speak Arabic as their native tongue, did so as advised in the literature (Hair et al., 2012,), it was translated into Arabic. To ensure the wordings' correctness and dependability, the back-translation technique was used. Out of the 633 total questionnaires collected, 491 were usable and sent via email to the respondents. The response rate was 77.6%, which is respectably good for the survey questionnaire approach. The study's data are analyzed with SPSS version 23.

3.3. Sampling Design

Due to the lack of a complete sample frame, a sampling frame was created from one source, namely the list of SMEs registered with the Jordanian companies' registration. Based on location, the sample was chosen from three distinct industrial clusters. Manufacturing SMEs in Cluster one were located in the

Industrial District of Amman City, Cluster two were in the Industrial District of Zarqa City, and Cluster three were located in the Industrial District of Irbid City. In order to accurately represent both small and medium-sized businesses at the ratio appropriate to the intended market for the businesses, care was taken during the sampling process. The researcher used a non-probability sampling method that included convenience sampling. Due to the fact that the majority of manufacturing SMEs are situated in industrial clusters, this sampling approach was deemed appropriate

3.4. Data Analysis

To analyze the data, both descriptive and inferential statistics were applied. Prior to data analysis, the acquired data was cleaned and any issues were identified and resolved. Data coding is the process of converting various data types into numerical codes in order to facilitate analysis and assure quick data entering. Descriptive statistics were utilized to understand the data and to clarify, condense, and portray the facts. Descriptive analysis was used to identify the types and characteristics of innovation found in Jordanian Manufacturing SMEs. The study used sample averages and standard deviation as well as frequencies, percentages, and measures of dispersion to accomplish this purpose. The data was analyzed using the Statistical Package for Social Sciences (SPSS). Multiple linear regression was used to assess the effect of innovation on business competitiveness. Prior to starting the regression analysis, the researcher employed a number of diagnostic tests to verify the underlying statistical assumptions for the linear and multiple regressions (Field, 2012, saunders et al., 2012).

4. Results and Implications

4.1. Response Rate

A total of 633 questionnaires were distributed to SMEs; 491 of those were completely filled out and returned, representing a 77.6% response rate. According to Hair et al. (2012), a response rate of 50% is considered suitable for statistical analysis. Babbie (2010) states that for analysis and reporting, a response rate of 50% is adequate, 60% is good, and 70% or higher is considered very good. As a result, a 77.6% response rate was deemed sufficient for statistical analysis in this research.

4.2 . Respondent's Profile

The demographic data of manufacturing SMEs' owner-managers, executives, and business managers is shown in Table 1 below. 70.3% of the respondents were from small SMEs, while 29.7% were from medium-sized SMEs. The fact that over 59.3% of SME managers were between the ages of 31 and 45 suggested that they belonged to a younger generation. The results showed that 44.8% of respondents were women and 55.2% of respondents were men. Based on the educational backgrounds of the participants, approximately 53.6% had bachelor's degrees, 30.5% held master's degrees, and 15.9% held doctoral degrees. Based on the results of their educational backgrounds, about 53.6% of respondents held bachelor's degrees, while 30.5% held master's degrees and 15.9% held doctorates. The average values of each component varied from 3.64 to 4.02. Consequently, the majority of respondents concurred with the survey's items

Table 1. Respondent's Profile

Variable	Category	Frequency	Percentage %
Gender	Male	271	55.2
	Female	220	44.8
Total		491	100
Age			
	18- 30years old	29	5.9
	31- 45 years old	291	59.3
	Above 46 years old	171	34.8
Total		491	100

Education	Bachelor	263	53.6
	Master	150	30.5
	Phd	78	15.9
Total		100	100
Size	small	345	70.3
	medium	146	29.7
Total		491	100

4.3 Validity

Validity is the degree to which a data collecting method or procedures accurately measure what they are intended to measure and the degree to which research findings are truly reflective of what they significance to be, according to Saunders et al. (2012). In addition to, the degree to which the research instrument measures what it is intended to measure is referred to as its validity. Content validity of an instrument is determined by whether or not it includes a representative sample of the universe of relevant subject matter (Cooper & Schindler, 2012; Kothari, 2009). By matching the instrument's questions with the goals and research topics, the validity of the instrument as a whole was increased. The study made use of both construct and content validity. A small- and medium-sized enterprises sector specialist examined the questionnaire to guarantee content validity. By making sure that the questionnaire addresses every research variable, the construct was maintained.

4.4. Reliability Analysis

The degree of reliability of the results is determined by how well they hold up over time and appropriately represent the population under study. This implies that applying the same methodology and instruments will allow the study's conclusions to be confirmed (Saunders et al., 2012; Rizos, 2016). Instrument, observer, or responder mistake are all possible sources of reliability threats (Anna, 2020). Daniel (2020) has identified several other areas of reliability assessments, including as stability over time, representativeness across subgroups, and equivalency among indicators. This study applies Daniel (2020)'s four suggestions for improving reliability: carefully defining the components, employing a precise degree of measurement, utilizing a number of indications, and carrying out a pilot test.. The Cronbach's alpha coefficient (Lee et al., 2019), which assesses the internal consistency within a collection of items, was used to determine the questionnaire's reliability. Internal consistency refers to how consistently the same group of respondents reply to comparable questions. Finally, an established social science cut-off threshold of 0.70 and above was used for this research measurement (Sekaran, & Bougie, 2016, 2018; Hair et al., 2006). Also in Table 5, every Cronbach's Alpha Coefficient value was within acceptable bounds.

Table 2. Reliability Analysis

Variables	Number of items	Cronbach's Alpha
Product innovation	4	.835
Process innovation	4	.790
marketing innovation	4	.840
organization innovation	4	.825
Competitive advantage	4	.850s

4.5. Descriptive Statistics

In the study, a 5-likert scale questionnaire was employed. The acquired data was analyzed using summaries, means, and standard deviations. The results were presented using tables in line with the study's themes. Table 3 below demonstrates that companies use a high level of product innovation practices ($M=3.85$, $SD=0.824$). More exactly, the corporations are more interested in the firm expands the range of products it offers, while are less interested in the firm's products are distinctive

Table 3. Means score and standard deviations among respondents on product innovation

Product Innovation	Mean	SD	Rank
The firm introduces a new product	3.88	.783	2
The firm's products are distinctive	3.80	.865	
The firm expands the range of products it offers	3.89	.819	1
The firm is concentrating on developing new methods of giving information on product	3.83	.829	3
	3.85	.824	4

Additionally, the organizations implement process innovation approaches to a fairly high degree ($M=3.88$, $SD=0.716$). In instance, all of the associated statements had mean Likert scores of higher than 3.80 on a scale of 1 to 5.

Table 4. Means score and standard deviations among respondents on process innovation

Process Innovation	Mean	SD	Rank
The business implements a policy of cutting-edge technology to manage the production process	3.86	.722	2
In comparison to other businesses, the corporation modifies its production methods frequently.	3.98	.629	1
Unlike other businesses, the company makes changes to the way that production is offered quickly	3.85	.710	3
The business has set up cutting-edge automated applications that will simplify production processes	3.83	.806	4
	3.88	.716	

Furthermore, the study sample companies use a lot of marketing innovation techniques ($M=3.89$, $SD=0.698$). The degree of is slightly higher. The company uses innovative marketing strategies to target markets, whereas slightly higher is the company uses new technology that focuses on innovative manufacturing cost in components and materials of existing products to attract more customers ponents and materials of current products

Table 5. Means score and standard deviations among respondents on marketing innovation

Marketing Innovation	Mean	SD	Rank
To reach markets, the firm relies on cutting-edge distribution techniques.	3.90	.591	2
The firm is always extending its prospective markets	4.04	.667	1
To reach markets, the firm relies on cutting-edge marketing techniques	3.83	.718	3
To draw in more customers, the business employs new technology that is focused on innovation	3.82	.818	4
	3.89	.698	

As seen in Table 6, To reach markets, the firm relies on cutting-edge distribution techniques, ($M=3.90$, $SD=0.591$), it constantly expands its potential markets ($M=4.04$, $SD=0.667$), and it uses new,

innovative technology to attract more customers ($M=3.82$, $SD=0.818$). These values are all relatively high, while higher values are also possible. Modern marketing strategies are used by the company to reach markets ($M=3.83$, $SD=0.718$).

Table 6. Means score and standard deviations among respondents on organization innovation

Organization Innovation	Mean	SD	Rank
The firm uses cutting-edge employee reward programs	3.89	.784	3
The firm uses creative work designs	3.85	.713	4
To increase operational effectiveness, the corporation conducts organizational reconstruction	3.92	.768	2
The firm implements a strategy to support creative management	4.03	.705	1
	3.92	.742	

Lastly, 491 valid data were examined based on Table 7 below. Each item's mean value was computed. As mentioned previously; competitive advantage is represented by four items. Table 7 indicates that this item's mean score ($M=4.03$, $SD=0.779$) is regarded as extremely high, while the mean scores of the other items were high (3.90 and above).

Table 7: Means score and standard deviations among respondents on competitive advantage

competitive advantage	Mean	SD	Rank
The firm provides affordable product costs	3.94	.775	3
When compared to rival companies, the company is more adaptable with product changes.	4.1	.660	2
Superior quality can be produced by the firm	4.03	.779	1
In the market, the company enjoys an advantage over competitors in terms of punctuality	3.90	.765	4
	3.99	.744	

By comparing the innovation practices variables used by the study sample's Small and Medium Enterprises in Jordan, it can be seen that every Pearson correlation coefficient corresponding to these factors is positive and statistically significant ($p<0.001$). Because of this, the companies' innovation process can be described as an integrating business strategy that permeates all aspects of their business operations. Put differently, it might be assumed that companies often innovate concurrently at several strategic levels.

Table 8. Innovation dimensions correlation matrix

	Competitive advantage	Product innovation	process innovation	marketing innovation	Organization innovation
Competitive advantage	1				
Product innovation	.808 (**)	1			
Process innovation	.748 (**)	.825 (**)	1		
marketing innovation	.471(**)	.510 (**)	.511 (**)	1	
organization innovation	.723 (**)	.755 (**)	.723 (**)	.513 (**)	1

** Correlation is significant at the 0.01 level (2-tailed)

Table 9. Result of multiple regression and Hypotheses Analyses

Path Hypotheses		Dependent variable: competitive advantage			
	Independent variable	B	Beta	Sig	Decision
H1	product Innovation→ competitive advantage outcomes	.408	.255	.000	Supported
H1	process Innovation → competitive advantage outcomes	.453	.303	.000	Supported
H1	marketing Innovation → competitive advantage outcomes	.297	.218	.000	Supported
H1	organization Innovation → competitive advantage outcomes	.186	.128	.000	Supported
	R Square for competitive advantage outcomes	.637			
	R	.798 ^a			

Table (9) above illustrated how innovation contributed to the creation of a competitive advantage in Jordan's small and medium-sized enterprises by including a regression analysis for the innovation and competitive advantage aspects. According to the table, innovation significantly contributed to the explanation of competitive advantage ($R^2=0.637, F=213.017^*, p0.001^*$). Additionally, the table showed that the strongest category of innovation in terms of its relationship to competitive advantage is process innovation (Beta= 0. 303). Product Innovation was the second most effective type ($B=0.255$), then Marketing Innovation ($B= 0.218$), and Organization Innovation ($B=0. 128$). This finding shows that innovation is increasing, which ultimately leads to a competitive edge. Stated differently, the most inventive types that provide firms with a competitive advantage are process and product innovation. If Jordanian small and medium-sized enterprises are unable to consistently adopt new ideas, they face the back of falling back and losing the initiative to other companies. Because of this, small and medium-sized businesses nowadays thrive in a competitive environment that emphasizes existence them rather than increasing their sources of income or outputs. Previous research supported the validity of hypothesis a, b, c, and d.

5. Discussion and Implication

Based on the research mentioned above, it can be concluded that the impact of different types of innovation on competitive advantage in Jordanian SMEs. This implies that successful innovation will have an impact on a SMEs competitive advantage. Given the results, it is obvious that any company hoping to outperform its rivals and gain a competitive advantage over them must ensure that it uses effective innovation, as this has been shown to be a reliable means of satisfying customer needs and raising customer satisfaction levels. More specifically, The results demonstrated that all facets of

innovation types have a significant positive impact on the competitive advantage of small and medium-sized businesses in Jordan, supporting the relevant literature that validated these variables. These findings also align with relevant literature that has previously supported the notion that firms can obtain a competitive advantage through innovation types (e.g., Nimfa et al., 2021, Alkufahy et al., 2023, Hidayatullah et al., 2021, Stephen et al., 2019, Aftab et al., 2021, Nuryakin, 2018, Jennifer, 2022). Furthermore, the findings indicated that the competitive advantage of small and medium-sized businesses is significantly impacted by each of the following: process innovation ($B = .453$), marketing innovation ($B = .297$), organizational innovation ($B = .186$), and product innovation ($B = .408$). The findings provided support for all four research hypotheses (H1, H2, H3, and H4) and demonstrated the significant influence of innovation management strategies on the competitive edge of small and medium-sized businesses in Jordan, leading to favorable business outcomes. The study's conclusions indicate that Jordan's SMEs significantly rely on modern marketing innovation strategies to accomplish their objectives and maintain their position as industry leaders. In addition, this confirms the literature's findings, which also claimed that those SMEs were using a growing number of diverse marketing strategies. On the other hand, the results supported the literature regarding the growing influence of product innovation on customer interaction and the formation of close relationships that lead to the creation of extra benefits like the customization of new products and services. The competitive advantage required to boost the performance of SMEs in Jordan was shown to be mostly dependent on process innovation (Khaskheli et al., 2022, Shgair, & Atarazi, 2022).

6. Conclusion

This study revealed that innovation significantly enhances competitive advantage for SMEs in Jordan, consistent with expectations. The findings confirm the vital role of innovation, especially process and product, for SME competitiveness within a developing country context. The results imply that Jordanian SMEs should focus efforts on introducing new processes and products as a strategy to gain advantages over rivals. However, more work is needed to uncover potential mediating and contingent factors that may affect the innovation-competitiveness relationship. Although the context was limited to Jordan, the findings contribute to theoretical knowledge on how developing economy SMEs can leverage innovation amidst constraints. Future research can build upon this study by investigating innovation types with larger samples, different sectors, longitudinal data, and other analytical techniques.

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