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The Impact of Innovation on Products Quality at Jordanian Small and Medium-Sized Enterprises (SMEs)

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Abstract

This study explored the impact of Innovation on Products Quality at Small and medium-sized enterprises (SMEs). A stratified random sample of one hundred managers from the senior and middle management levels was obtained using a questionnaire. Testing the hypotheses with SPSS. The study results shows that there is a significant impact of Innovation (Product Innovation and Process Innovation) on Products Quality (Product Features & Serviceability, Product Durability, Product Reliability, Product Performance, and Product Perceived Quality). One of the most important recommendations made to Jordanian small and medium-sized firms (SMEs) by the current study is that they recognize the value of innovation in enhancing the quality of their products.

Keywords: Innovation, Products Quality, Jordanian Small and Medium-Sized Enterprises (SMEs).

Introduction

Business organizations today face unprecedented environmental events, swift technological advancements, and a vast body of knowledge. These challenges, which range from opportunities to threats, force organizations to adapt and keep looking for new ideas. Innovations to launch new goods and services will serve as the foundation for these organizations' continued development and improvement.

Innovation is a crucial strategic instrument that helps business owners to generate market possibilities and competitive advantages to grow their companies faster, these developments enable them to set their companies apart from other rivals. Therefore, innovation is crucial to enhancing the performance of SMEs, particularly in intricate and unstable business contexts with a high degree of unpredictability (Gutiérrez-Broncano et al., 2024).

Since public policy, economic institutions, human creativity, the level of knowledge, and societal norms are only a few of the numerous variables that affect innovation, it stands to reason that "bright ideas are the riskiest and least successful sources of innovative opportunities." Thus, innovation and creativity are critical to a company's success (Medase & Savin, 2023).

The industrial structure's ongoing modernization and transformation, together with the intensifying urbanization process, have all contributed to the manufacturing and business sectors' explosive expansion (Li et al., 2023). Technological innovation, a new face of quality performance that aids in building an infrastructure for economic growth and organizational development as well as in measuring the caliber of management for its execution, is therefore necessary for companies to adapt in order to deal with new ideas and rapid growth; there is an exceptional harmony between technological innovation and management in its execution; Effective technology implementation takes into account modernism from a variety of perspectives, including as appropriate leadership, corporate culture, people management, and managerial competences (Ramachandran et al., 2019).

Because of this, having an innovative business model, which in turn spurs innovation within the company, gives it the chance to respond fastly and appropriately by taking environmental concerns and the kind and intensity of pressure into consideration (Ershadi et al., 2019). Product quality now influences the creation of process and product designs as well as the selection of features and alternatives for the different products, making it a strategic question for enterprises. Prominent executives are associating quality with profitability and incorporating quality into process of strategic planning. Quality recognized as strategy for gaining market share, increasing sales, and avoiding barriers to entry since it is the link between engineering, production, and marketing. Numerous research have focused on how process management may ensure quality performance (Forker et al., 1996).

Businesses must both foster innovation and improve quality in today's fiercely competitive global market in order to build and maintain a sustainable competitive advantage. Nonetheless, a conventional perspective holds that firms must choose one over the other since there is a trade-off between quality and innovation, with an increase in one resulting in a decline in the other, the concept of quality is multifaceted, and quality management (QM) is an all-encompassing management philosophy that incorporates several principles associated with various facets of quality. Thus, quality is really about being able to adjust to a complicated and ever-changing environment (El Manzani et al, 2019).

In Jordan, small and medium-sized businesses are the cornerstone and core of both social and economic development. They are regarded as the first step toward boosting a country's economic productivity and are highly capable of addressing issues such as unemployment and poverty, advancing the idea of equitable income distribution, fostering the growth of underprivileged communities, and many other issues. Other contributions. Small and medium enterprises constitute approximately 99.5% of the total economic establishments operating in Jordan, also it employs approximately 60% of the total workforce. Perhaps the most prominent feature that distinguishes small and medium enterprises as a source of providing job opportunities is their contribution to providing more than half of the employment

opportunities. Jobs created annually in the Jordanian economy, according to what was reported in the job opportunities surveys created and published by the Department of Statistics.

Literature Review

Innovation

Innovation activities in an organization positively contribute to the long-term success and growth of the organization. Innovation is defined as new ideas that benefit the organization (Khan & Naeem, 2018). Innovation is the degree to which a company supports the creative process of introducing new ideas, experiments, new products and services that differ from existing technologies and practices, while proactivity is the anticipation of environmental changes and opportunities that foster competitive advantage. Such activities include changes in practices and processes as well as technological improvements (Santa et al, 2023).

The other type of innovation is the ecosystems innovation, The rise of innovation ecosystems has intensified competition, shifting away from traditional process and product evaluations to swiftly translating customer needs into innovative product service bundles through product–service innovation (PSI) (Bustinza et al., 2024). On the other hand the organization must apply speed innovations to cope with different environments, So Innovation speed refers to the capability to minimize the time interval between the conception and initial development of products or services (Wang et al., 2023). There is many types of innovations, but the most important of them in the field of industry is (Product/Process) innovations; So Schumpeter (One of the leaders in Innovations) defined product innovation as “introducing the new goods” and process innovation as “introducing the new production tools and methods” (Tian, 2024).

Drucker (2002), indicates that Innovation is the specific function of entrepreneurship, whether in an existing business, a public service institution. It is the means by which the entrepreneur either creates new wealth producing resources or endows existing resources with enhanced potential for creating wealth, Also he indicates that Innovation requires knowledge, ingenuity, and, above all else, focus.

Innovation relates to products, services, and production process technology; it relates to basic work activities; and it relates to either products or processes; the adoption rates of product and process innovations are different during the stages of development of a business. Firms also differentiate in their product or process innovation for providing competitive advantages (Damanpour, 1991).

Innovation relates to both products and processes. Innovation can be classified as either incremental or radical innovation, depending on the nature of the change it brings to the enterprise. Incremental innovation involves improving old products or processes within the existing corporate structure. Radical innovation represents the creation of new business possibilities, new corporate strategies and structures, and the basic identity of the firm is likely to change during this radical transformation, although the change may be slower (Smeds, 1994).

Rossi (2002), distinguishes between product innovation and process innovation. The former defines the design, introduction and diffusion of a new products, the latter the development, introduction and diffusion of a new production processes.

Product Innovation

El Manzani et al (2019), indicates that the Product innovation refers to new products or services developed to satisfy the external customers or the market need; According to the Oslo manual "A product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses; This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics"; Therefore, Product innovation can be associated with either the amelioration of existing products or the creation new market.

Product innovation includes the creation of different new products or the development in all or some of its specifications either for existing products or services. Products and processes innovation can both fall under technological innovation (Khan & Naeem, 2018). Product innovations are new products that introduced to meet market needs (Damanpour, 1991). Also the Product innovation refers to the new or to improved product, equipment or services that is successful on the market (Neely & Hii, 1998). Therefore, product innovation involves bringing new products to market, which requires identifying new customer needs in advance and improving product quality. (Gutiérrez-Broncano et al., 2024).
The other type of innovation is the process innovation:

Process Innovation

Process innovations usually classified as incremental innovations, and major strategic changes in enterprises are seen as a results of the radical product innovations (Smeds, 1994). Process innovation is related to the development of all different production processes (Khan & Naeem, 2018). Process innovation involves removing non-value-adding activities, cutting costs, and increasing business competitiveness. It also increases business efficiency and effectiveness from an internal perspective (Gutiérrez-Broncano et al., 2024), also Process innovation may have a more substantial and direct impact on the sustainability, as it focuses on improving manufacturing processes rather than introducing new products (Alinda et al., 2024).

Process innovation refers to new elements introduced into an organization's production operations; input materials, work and information flow mechanisms, and equipment used to produce a product (Damanpour, 1991). Also it involves the adoption of a new manufacturing process. So, focused on Process innovation for instance may lead on to product innovation. Similarly product innovation may lead to innovation in processes (Neely & Hii, 1998).

Products Quality

Quality is often referred to as a relative concept, there are two senses in which quality is relative. First of all, quality is relative to the user of the term, second is the benchmark relativism of quality (Harvey & Green, 1993), Also Product quality refers to the characteristics

of the product that meet customers' requirements, including performance, reliability, and appearance (Wang et al., 2021).

The product-based approach defines quality as the sum of the quantity of desirable attributes in a product (Forker et al., 1996), so the value-based approach; and Performance and features are the most important for the technological advantages of a product which the product-based approach to quality emphasizes (Curkovic et al., 2000). Also the term of Quality indicates to a multidimensional concept and depends on the perception of individuals on what they see can satisfy customer requirements (Khan & Naeem, 2018).

Product quality, as a variable relating marketer's action to consumer's response has been applied to a variety of marketing decisions, including product-price mix, competitive positioning. Quality, which has been defined in a variety of ways, Can be categorized into two perspectives. One is the marketer's perspective, usually product-based or manufacturing-based, and the other is the consumer's perspective, usually user-based or value-based. Product quality from the marketer's perspective relates to product specifications, features, functions, and performance; Also Product quality from the consumer's perspective is associated with the capacity of a product to satisfy consumer needs (Yoon & Kijewski, 1997); So, quality means produce products to give the customer what he wants (Santa et al, 2023), also its derived from economics, and defines quality as a sum of amounts of desired attributes in a product (Curkovic et al., 2000). The term of Quality management indicates to that term which helps technological innovation in enhancing employee's contribution in whole process successfully (Ramachandran et al., 2019).
There is five dimensions of Products quality as follows:

Product Features & Serviceability

Historically Maintenance and repair has always been an important aspects of customer support. Maintenance is necessary to replace parts of equipment. If equipment fails, fast and efficient repair is very important in markets because ``down-time costs run typically at anywhere from 100 to 10,000 times the price of spare parts or service'' (New, 2001). Sebastianelli and Tamimi (2002), indicates that Product serviceability refers to The ease, speed, and competence of repair How the product looks, feels, sounds, a matter of personal preferences. Product features is one of basic product quality elements, So Consumers often attribute products quality on the basis of price, brand reputation, market share, product features, and country of manufacture; as well as for services, and reliability (Yoon & Kijewski, 1997).

The quality production process is another key idea. It refers mainly to the field of operations and engineering researchers and managers who set standards before producing goods, allowing the success of the attribute production process to be measured by the quality of the final product. When offerings are created and consumed concurrently, or when offerings do not alter over time, produced qualities will coincide with delivered attributes (e.g., many durable items) (Golder et al., 2012). Sebastianelli and Tamimi (2002) indicates that Product features are refers to the operating specifications of a product that supplement its basic functioning; Also the term of Serviceability as a dimension of products quality,

concerned with repairs operations, also Serviceability evaluates a product's performance (Owlia & Aspinwall, 1996; Curkovic et al., 2000).

Product Durability

Durability is concerned with a product's lifespan and functionality. The business concept of durability is creating a thoughtful product that assures users of their total gain or benefit from the time of purchase until the product completely deteriorates or needs to be replaced. Customers evaluate products based on their perceived economic value, which is determined by how much they are willing to spend over the course of the product's lifetime. Understanding the durability dimension of quality also involves analyzing the level of benefit units obtained from unitary sacrifices, which is accomplished through customer value perception (money and time). Durability is a user-based methodology that explores happiness and delight by concentrating on the perceived product quality of an enterprise. Customers typically make the best use of a product before it starts to deteriorate. Maximizing the utility for the customer (Dubey et al., 2020). Cao et al. (2023) feel that the quantity of remanufactured products, profit margins, and product recycling rates will all have an impact on the products' longevity when (Original Equipment Manufacturers, or OEMs) choose to lease and remanufacture their goods.

Product Reliability

Today's industries must constantly contend with increased consumer expectations for product quality and dependability, stark cost constraints, and demands for faster product cycle times (Braglia et al., 2007). The likelihood that a product will function as anticipated over a specific period of time under the specified operating conditions is known as reliability (Wang et al., 2021). Forker et al (1996), indicates that product reliability represents the length of use a product can provide to consumers before it deteriorates and the probability that the product will fail within a certain period of time. So the function of the product as it performs over a predetermined amount of time is what reliability is all about. Thus, while quality is defined as meeting requirements, reliability is defined as nonevent or flawless performance in all products supplied to the client (Ahmed, 1996).

Moreover Tiku et al (2007), indicates that the ability of a system or product to function as intended that is, without malfunctioning and within predefined performance criteria for a certain amount of time--in its life cycle application environment is known as its reliability. Also Ahmed (1996), shows that developing reliability assurance is a crucial component of raising the manufactured goods' dependability performance, but there are many other elements that also encourage this performance, including:

- The reliability function's general administration.
- The level of assessment and evaluation of dependability throughout the design and development stage.
- Making use of field failure data and the breadth of the technical and statistical analysis that followed.
- Maintaining consistency in assembly and manufacturing.
- Skillful oversight and management of engineering modifications.

Product Performance

Forker et al (1996), indicates that product performance represents the product's primary operating characteristics. Phau et al (2009), indicates also that when consumers intentionally acquire counterfeit goods, they receive a different set of benefits from the actual item. It follows that customers will only purchase counterfeit goods when they believe the performance risks are minimal. When consumers purposefully buy counterfeit goods, they are more focused on the product's outward look than its long-term dependability. Most importantly, the buyer wants to use the product with the benefits to their image without having to pay full price. It is predicted that customers will be more inclined to buy the counterfeit rather than the real if the benefits connected with both are the same. Forker et al. (1996) suggests that a product's reputation, image, or other conclusions about its qualities are reflected in its performance.

Product Perceived Quality

A customer's mental assessment of a certain good or service is represented by its perceived value. This concept is frequently explained in terms of the equity theory, which defines perceived value as what is thought to be reasonable, right, or deserving in respect to the offering's perceived cost, while also taking into account competitive alternatives that are suitable (Beneke et al., 2013). Perceived value of the product is important for the determination of purchase intentions. Indeed, research shows that when the value of the product is relatively high, the probability of purchase will increase (Modig & Rosengren, 2014).

The "superiority" or "excellence" of a product's performance is used to define quality. Higher quality can be attained from a technical and manufacturing perspective by adhering to manufacturing or service standards and by including characteristics or ingredients that are unique to the product. Whether or not it is possible for consumers to perceive and assess intrinsic attributes at the time of purchase determines their capacity to judge quality based on those attributes (Agarwal & Teas, 2002).

By perceived quality, Garvin argued that in the lack of complete information about a product, the consumer will evaluate quality less on objective criteria, and more on their perceptions of a brand established through extrinsic factors (Garvin 1984 as cited in Grigg 2021). Also Grigg (2021) indicates that perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given.

Hypothesis Development

Based on the main question of the study and the sub-questions, the hypotheses can be determined as follows:

The First Main Hypothesis

Ho1: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of Innovation in terms of its dimensions (Product Innovation, Process Innovation) on Products Quality (Features & Serviceability, Durability, Reliability, Performance, Perceived Quality) at Jordanian Small and medium-sized enterprises (SMEs).

The first main hypothesis stems from the following sub-hypotheses:

The First Sub Hypothesis

Ho_{1-1}: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of Innovation in terms of its dimensions (Product Innovation, Process Innovation) on Features & Serviceability at Jordanian Small and medium-sized enterprises (SMEs).

The second sub-hypothesis

Ho_{1-2}: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of Innovation in terms of its dimensions (Product Innovation, Process Innovation) on Product Durability at Jordanian Small and medium-sized enterprises (SMEs).

The Third Sub-Hypothesis

Ho_{1-3}: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of Innovation in terms of its dimensions (Product Innovation, Process Innovation) on Product Reliability at Jordanian Small and medium-sized enterprises (SMEs).

The Fourth Sub-Hypothesis

Ho_{1-4}: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of Innovation in terms of its dimensions (Product Innovation, Process Innovation) on Product Performance at Jordanian Small and medium-sized enterprises (SMEs).

The Fifth Sub-Hypothesis

Ho_{1-5}: There is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) of Innovation in terms of its dimensions (Product Innovation, Process Innovation) on Product Perceived Quality at Jordanian Small and medium-sized enterprises (SMEs).

Methodology

Problem Statement

This study aims to address the problem of products quality in Jordanian SMEs, which are now operating in a difficult context marked by fierce rivalry and increasing environmental unpredictability. Organizations are now competing against each other's innovations rather than being the basis of competition. Due to the consequences of the Covid-19 epidemic, the SMEs companies sector had a fall in the number of new companies registered with in the previous three years (Central Bank of Jordan, 2020). This decline was caused by the decline in innovations of new products and processes at SMEs, which highlights the importance of innovation without the application of contemporary management techniques to foster new ideas, businesses will not be able to meet these challenges in lessening the effects of crises and extraordinary events.

Despite the numerous studies done on innovation and products quality, there is still a research gap on the relationship between the two variables. This study attempts to fill this gap, which itself is the underlying motivation for its creation, and thus the aim of this study is to examine the impact of innovation on products quality. Figure 1 shows the proposed research model and the hypotheses to be tested.

Study Model

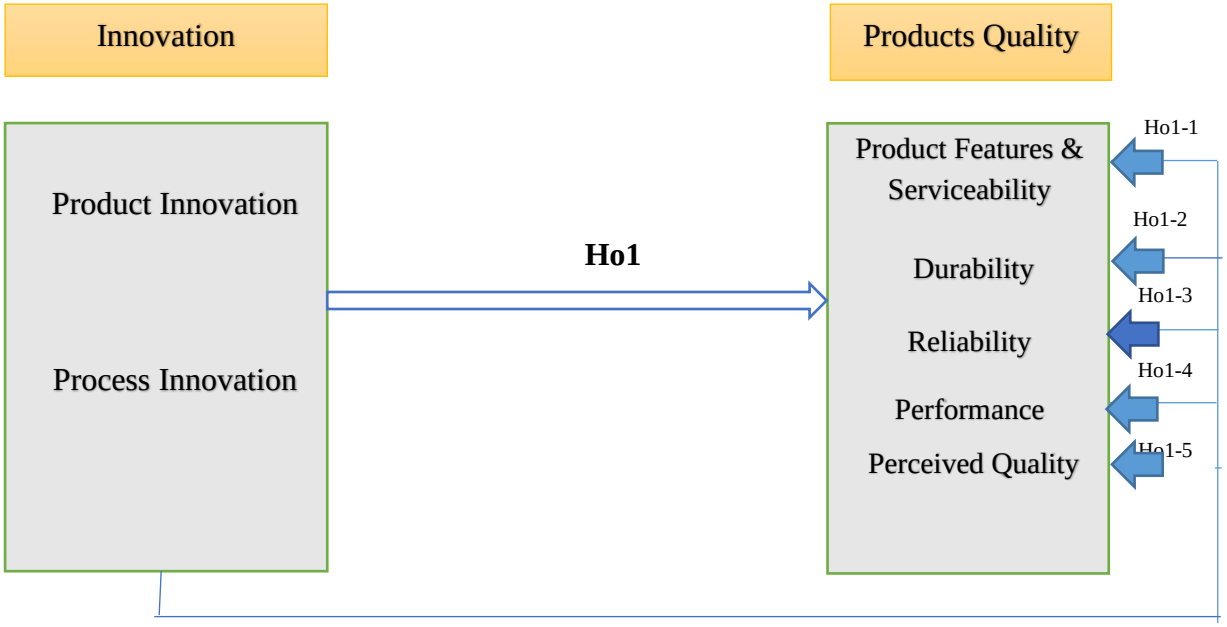

Figure 1 Study model

Study Population and Sample

The study's population consisted of Jordanian small and medium SMEs enterprise which were (913). While the study's sample consisted of small projects which were operating in Amman since (10) years or more which were (31), the targeted group is the middle and senior management personnel. 100 questionnaires were distributed; 90 returned complete data, and 90 were statistically valid. Table 1 shows the demographic characteristics of the respondents.

Study Instrument

The questionnaire consisted of two parts. The first part contained the information of the respondents (gender and age as well as education and experience). The second part dealt with the measurement independent variable called innovation, which consisted of 10 items. Products quality was the dependent variable, which consisted of 25 items. The scale of the responses was based on Likert's (5-point scale) from 1 (strongly disagree) to 5 (strongly agree).

Research Objectives

The objective of this study is to investigate the role of innovation on product quality in Jordanian Small and Medium Enterprises (SMEs). In addition, the sub-objectives are as follows:

1) To study the impact of innovation on products quality.
2) To provide some recommendations to decision makers based on the findings.

Data Analysis

Table 1

Cronbach's Alpha Coefficient Values for Study Dimension

No.	Dimension	Cronbach's Alpha Coefficient	No. of Items	
	Independent Variable: Innovation			**10**
1	Product Innovation	0.882	5	
2	Process Innovation	0.831	5	
	Dependent Variable: Product Quality			**25**
1	Features & Serviceability	0.850	5	
2	Durability	0.857	5	
3	Reliability	0.857	5	
4	Performance	0.811	5	
5	Perceived Quality	0.918	5	

Source: Prepared by the researcher based on the results of the statistical analysis

Table (1) shows the results of Cronbach's Alpha, where the table shows that the alpha values for all dimensions of the study variables are higher than (0.70), and this percentage is considered acceptable in administrative and human sciences research, as the closer the alpha value is to (1), the more it confirms the existence of a high degree of stability of the study tool (Sekran & Bougie, 2016, 329); This indicates that the questionnaire paragraphs with their dimensions distinguished by internal consistency. To ensure that there is no phenomenon of high multicollinearity between the dimensions of the independent variable, the Variance Inflation Factor (VIF) and the permissible variance (Tolerance) were measured for the sub-dimensions of the independent variable. Table (2) shows the results of the Variance Inflation Factor (VIF) and the permissible variance (Tolerance) tests.

Table 2

Variance Inflation Factor (VIF) and the permissible variance (Tolerance)

Independent Variable Dimensions	VIF	Tolerance
Product Innovation	3.234	.309
Process Innovation	3.234	.309

Source: Prepared by the researcher based on the results of the statistical analysis

The results in Table (2) show that all values of the variance inflation factor were greater than (1) correct and less than (10). In addition, it is noted from the table that all values of the permissible variance were greater than (0.1) and less than (1), and we can infer from these results that there is no high linear correlation between the dimensions of the independent variable (Sekaran & Bougie, 2016, 351).

Description of the Characteristics of the Study Sample

This section addresses frequencies and percentages of demographic and functional characteristics of the survey sample, including gender, age, education, years of experience, and career level.

Table 3
Demographic characteristics

Description	Characteristics	Amount	Percentage
Gender	Male	53	58.9%
	Female	37	41.1%
Age (Years)	Less than 30	32	35.6%
	30 – Less than 40	25	27.8%
	40 – Less than 50	20	22.2%
	50 and above	13	14.4%
Academic Qualification	Diploma or less	12	13.3%
	Bachelor	45	50%
	Master	23	25.6%
	PHD	10	11.1%
Experience (in years)	Less than 5	20	22.2%
	5 – Less than 10	24	26.7%
	10 – Less than 15	22	24.4%
	15 and above	24	26.7%
Career Level	Manager	20	22.2%
	General Manager	9	10%
	Department Head	38	42.2%
	Assistant Manager	23	25.6%
Total		**90**	**100%**

Table (3) shows the distribution of the participating category by gender, where the percentage of male participation was high compared to females, as the number of male participants was (53) individuals, at a rate of (58.9%), while the number of females was (37) individuals, which constitutes (41.1%) of the total sample; the researcher attributes this high percentage of males to the fact that Jordanian small and medium-sized companies target males more than females for senior and middle management positions, given that senior and middle management positions in these companies require long working hours and double the effort to ensure the continuity of work, especially during periods of pressure and difficult circumstances, so it may be difficult for females to adapt to and endure these conditions.

Table (3) shows the distribution of the participants' age groups, where the age group (less than 30 years) ranked first with (32) individuals and (35.6%) of the total sample, while the age group (50 years and older) ranked last with (13) individuals and (14.4%) of the total sample; This indicates the interest of Jordanian small and medium-sized companies in the youth category as a driving force for innovation and progress and that they have an important role in the trends of research, development and innovation. This interest supports the principle of equality of opportunity and recognition of the capabilities of individuals regardless of their age groups. The reason for the decline of the age group in last place (50

years and older) may be related to the strategic, economic and social orientations of the companies surveyed, which reflect their preference for youth in recruitment processes.

Table (3) shows the distribution of academic qualifications, where the results showed that the majority of the sample were bachelor's degree holders, with their number reaching (45) individuals, representing (50%), while in the last place, the number of PhD holders was (10) individuals, representing (11.1%); This is attributed to professional preferences, as individuals with a PhD choose to pursue career paths that differ from working in Jordanian small and medium-sized enterprises, and the percentage of graduates in Jordanian society with a bachelor's degree is much greater than postgraduate studies. This diversity in academic qualifications helps companies enhance their ability to adapt to rapid developments and the ability to compete highly in their sector, and improve the level of innovation and performance in general.

Table (3) shows the distribution of the number of years of experience of the study participants, where the results showed that the category with (10 years - less than 15 years) and the category with (15 years or more) were the highest ranked, with a percentage of (26.7%), and the lowest ranked category was the category with (less than 5 years) with a percentage of (22.2%); This is attributed to the interest of Jordanian small and medium-sized companies in practical experience and extensive knowledge to fill positions in upper and middle management, given the sensitivity of the work therein.

Table (3) shows that the highest percentage at the job level is (Department Head) with a percentage of (42.2%), and their number was (38) individuals out of the total sample; which indicates the presence of a number of specialized departments and sections in the organizational structures of Jordanian small and medium-sized companies, and that the hierarchical organization of the structure of these companies requires a large number of department heads and units who are more specialized in specific fields such as production operations, development, or quality assurance, which makes them closer and more accurate to important technical details. The category of (General Manager) had the lowest percentage, which amounted to (10%), and their number was (9) individuals, as the organizational structure was limited to the presence of one job title (General Manager), at the top of the job pyramid. There was also another reason for their low percentage, which is the difficulty of reaching them to fill out the questionnaire due to their busy schedules and frequent meetings. It was easier to reach department heads who are in their offices most of the time.

Results of Descriptive Statistics Analysis of the Study Paragraphs

This section describes the questionnaire items and the study variables, the independent variable (innovation), and the dependent variable (products quality). The arithmetic mean, standard deviation, and relative importance of each item were presented, as the following averages were used to interpret the data: (1-less than 2.34): low, (2.34-less than 3.67): medium, and (3.67-5): high. The following tables also show the results that were reached.

Descriptive Statistics Results for the Independent Variable (Innovation)

First: Answering the first study question which states: What is the relative importance of innovation in its dimensions (product innovation and process innovation) in Jordanian small and medium enterprises? The results of the arithmetic means and standard deviations were calculated to analyze the answers of the respondents in Jordanian small and medium enterprises about the relative importance of the dimensions of the independent variable innovation, and the results were as follows:

Product Innovation

Table 4

Means, standard deviations, rank and relative importance of the (product innovation) items

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
1	The company provides the necessary support to innovative employees	3.72	0.936	2	High
2	The company applies new ideas submitted by employees	3.77	0.995	1	High
3	The company implements training programs to develop innovation	3.68	0.992	3	High
4	The company uses innovative mechanisms to market its products	3.67	0.983	4	High
5	The company offers additional innovative products that distinguish it from competitors	3.57	1.010	5	Intermediate
	Overall Average	**3.682**			**High**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (4) shows the relative importance of the product innovation paragraphs, where most of them were of a high degree, with an arithmetic mean of (3.682), as the values of the arithmetic means ranged between (3.77) and (3.57). Paragraph 2 came in first place, which states: “The company applies new ideas presented by employees”, while paragraph 5 came in last place, which states: “The company offers additional innovative products that distinguish it from competitors”, with an arithmetic mean of (3.57), a standard deviation of (1.010), and an Intermediate relative importance.

Process Innovation

Table 5

Means, standard deviations, rank and relative importance of the (Process innovation) items

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
6	The company sets effective policies to provide a suitable environment for practicing innovation.	3.63	0.988	2	Intermediate
7	The company operates in a team-based approach to encourage research and development.	3.60	0.922	4	Intermediate
8	The company provides the equipment and training plans necessary to improve operations.	3.63	0.930	3	Intermediate
9	The company has the ability to reorganize its organizational structure to achieve the desired goals.	3.59	1.037	5	Intermediate
10	The company encourages its employees to submit creative ideas.	3.65	0.893	1	Intermediate
	Overall Average	**3.62**			**Intermediate**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (5) shows that the relative importance of the process innovation paragraphs was all Intermediate, with an arithmetic mean of (3.62), as the values of the arithmetic means ranged between (3.65) and (3.59), where paragraph 10, which states: “The company encourages its employees to present creative ideas,” came in first place among the paragraphs, as its arithmetic mean was (3.65), with a standard deviation of (0.893), and with Intermediate relative importance, while paragraph 9, which states: “The company has the ability to reorganize its organizational structure to achieve the desired goals,” came in last place, with an arithmetic mean of (3.59), a standard deviation of (1.037), and with Intermediate relative importance.

To compare the dimensions of the independent variable (innovation), Table (6) was prepared:

Table 6

Means, rank and relative importance of the dimensions of (innovation)

No.	Dimension	Mean	Rank	Importance
1	Product Innovation	3.6822	1	High
2	Process Innovation	3.6206	2	Intermediate
	Overall Average	**3.6514**		**Intermediate**

Source: Prepared by the researcher based on the results of the statistical analysis

From Table (6), it is clear that the relative importance of innovation in Jordanian small and medium enterprises was average, as the general arithmetic mean was (3.6514). The results

also showed that the dimension (product innovation) came in first place, with an arithmetic mean (3.6822), and with a high relative importance, followed in second place by the dimension (process innovation), with an arithmetic mean (3.6206), and with an Intermediate relative importance.

Descriptive Statistics Results for the Dependent Variable (Product Quality)

Second: Answering the second question which states: What is the relative importance of products quality in its dimensions (product features and serviceability, product durability, product reliability, product performance, and perceived product quality) at Jordanian small and medium enterprises? The results of the arithmetic means and standard deviations were calculated to analyze the respondents' answers in the surveyed companies about the relative importance of the dimensions of the dependent variable product quality, and the results were as follows:

Process Features & Serviceability

Table 7

Means, standard deviations, rank and relative importance of the (Process innovation) item

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
11	The company's product is easy to use.	3.97	0.710	1	High
12	Maintenance of the product is simple and uncomplicated.	3.68	0.819	5	High
13	The product fulfills the customer's desires.	3.97	0.771	2	High
14	The product design is flexible.	3.82	0.787	3	High
15	The product serves a shelf life that suits customers' desires.	3.69	0.920	4	High
	Overall Average	**3.826**			**High**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (7) shows the relative importance of the paragraphs of product features and serviceability, all of them came in a high relative importance, with an arithmetic mean of (3.826), as the values of the arithmetic means ranged between (3.97) and (3.68). Paragraph 11 came in first place, which states: "The company's product is easy to use," and paragraph 13, which states: "The product fulfills the customer's desires," with an arithmetic mean of (3.97), and with a high relative importance, while paragraph 12, which states: "Maintenance of the product is simple and uncomplicated" came in last place among the paragraphs, with an arithmetic mean of (3.68), a standard deviation of (0.819), and a high relative importance.

Product Durability

Table 8

Means, standard deviations, rank and relative importance of the (Product Durability) item

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
16	The product is used for a long time before its performance is felt to decrease.	3.78	0.780	1	High
17	The product is used several times on the same day with the same efficiency.	3.67	0.936	5	High
18	Using the product achieves the desired satisfaction while using it.	3.77	0.808	2	High
19	Customers accept the product and use it smoothly.	3.71	0.877	4	High
20	Customer feedback regarding product performance is constantly monitored.	3.76	0.891	3	High
	Overall Average	**3.738**			**High**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (8) shows the relative importance of the product durability paragraphs, as they all came in a high degree, with an arithmetic mean of (3.738), as the values of the arithmetic means ranged between (3.78) and (3.67). Paragraph 16 came in first place, which states: “The product is used for a long time before its performance is felt to decrease” with an arithmetic mean of (3.78), a standard deviation of (0.780), and a high relative importance, while paragraph 17 came in last place, which states: “The product is used several times on the same day with the same efficiency”, with an arithmetic mean of (3.67), a standard deviation of (0.936), and a high relative importance.

Product Reliability

Table 9

Means, standard deviations, rank and relative importance of the (Product Reliability) item

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
21	The product experiences few malfunctions during use.	3.70	0.867	1	High
22	The product does not require maintenance outside the planned maintenance plan.	3.57	0.937	2	Intermediate
23	The product is easy to repair in the event of sudden malfunctions.	3.51	1.019	4	Intermediate
24	Product spare parts are available at reasonable prices.	3.40	1.030	5	Intermediate
25	There is a warranty for the product against manufacturing defects.	3.52	0.931	3	Intermediate
	Overall Average	**3.54**			**Intermediate**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (9) shows the relative importance of the product reliability paragraphs, as most of them came in at an Intermediate level, with an arithmetic mean of (3.54), as the values of the arithmetic means ranged between (3.70) and (3.40). Paragraph 21 came in first place, which states: “The product faces few malfunctions during use” with an arithmetic mean of (3.70), a standard deviation of (0.867), and a high relative importance. In contrast, paragraph 24, which states: “The product’s spare parts are available at reasonable prices” came in last place among the paragraphs, with an arithmetic mean of (3.40), a standard deviation of (1.030), and an Intermediate relative importance.

Product Performance

Table 10

Means, standard deviations, rank and relative importance of the (Product Performance) item.

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
26	The product provides the required performance according to the customer's desire.	3.77	0.735	1	High
27	The product is characterized by a low rate of malfunctions during use.	3.59	0.886	4	Intermediate
28	The product works in different environments and different temperatures.	3.43	0.987	5	Intermediate
29	The product is easy to use.	3.68	0.819	3	High
30	The product is characterized by high performance compared to competitors' products from the same sector.	3.72	0.839	2	High
	Overall Average	**3.634**			**Intermediate**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (10) shows the relative importance of the product performance paragraphs, where most of them came in a high degree, with an arithmetic mean of (3.634), as the values of the arithmetic means ranged between (3.77) and (3.43), and paragraph 26, which states: "The product provides the required performance according to the customer's desire", came in first place, with an arithmetic mean of (3.77), a standard deviation of (0.735), and a high relative importance. In contrast, paragraph 28, which states: "The product operates in different environments and at different temperatures" came in last place among the paragraphs, with an arithmetic mean of (3.43), a standard deviation of (0.987), and an Intermediate relative importance.

Product Perceived Quality

Table 11

*Means, standard deviations, rank and relative importance of the (*Product Perceived Quality*) item.*

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
31	The product reflects the mental image of the manufacturer.	3.88	0.819	1	High
32	The product represents high quality value to the customer.	3.76	0.853	3	High
33	The product reflects the characteristics required by the customer.	3.68	0.832	4	High

No.	Paragraph	Mean	*standard deviations*	Rank	Importance
34	The product achieves the performance desired by the customer.	3.68	0.846	5	High
35	The product's features and appearance are tailored to what customers prefer.	3.80	0.864	2	High
	Overall Average	**3.76**			**High**

Source: Prepared by the researcher based on the results of the statistical analysis

Table (11) shows the relative importance of the paragraphs of perceived product quality, as they all came in a high degree, with an arithmetic mean of (3.76), as the values of the arithmetic means ranged between (3.88) and (3.68), and paragraph 31, which states: "The product reflects the mental image of the manufacturer", came in first place, with an arithmetic mean of (3.88), a standard deviation of (0.819), and a high relative importance. In contrast, paragraph 33, which states: "The product reflects the characteristics required by the customer", and paragraph 34, which states: "The product achieves the performance desired by the customer" came in last place among the paragraphs, with an arithmetic mean of(3.68) . To compare the dimensions of product quality, the following table was prepared:

Table 12
Means, rank and relative importance of the dimensions of (Products Quality)

No.	Dimension	Mean	Rank	Importance
1	Features & Serviceability	3.8244	1	High
2	Durability	3.7350	3	High
3	Reliability	3.5378	5	Intermediate
4	Performance	3.6378	4	Intermediate
5	Perceived Quality	3.7600	2	High
	Overall Average	**3.699**		**High**

Source: Prepared by the researcher based on the results of the statistical analysis

From Table (12), it is clear that the relative importance of product quality in Jordanian small and medium enterprises performed highly, as the general arithmetic mean was (3.699). The results also showed that the dimension (product Features & Serviceability) came in first place, with an arithmetic mean (3.8244), and with a high relative importance, followed in second place by the dimension (product perceived quality), with an arithmetic mean (3.7600), and with a high relative importance, while the dimension (product durability) came in third place, with an arithmetic mean (3.7350), and with a high relative importance, while the dimension (product performance) came in fourth place, with an arithmetic mean (3.6378), and with an Intermediate relative importance; while the dimension (product reliability) came in last place, with an arithmetic mean (3.5378), and with an Intermediate relative importance, as the researcher attributes the high importance of product quality dimensions in Jordanian small and medium enterprises to their excellence in implementing their internal operations with high efficiency, and their excellence in managing basic operations.

Testing the Study Hypotheses

The first main hypothesis:

Ho1: "There is no statistically significant effect at a significance level (α ≤ 0.05) of innovation in terms of its dimensions (product innovation, process innovation) on product quality in its combined dimensions (product Features & Serviceability, product durability, product reliability, product performance, and perceived product quality) in Jordanian small and medium enterprises**"**.

Standard multiple linear regression analysis was used to test the first main hypothesis and the sub-hypotheses emanating from it, and the results were as follows:

Table 13

Model summary results, ANOVA and coefficients for the first main hypothesis

Model Summary		ANOVA				Coefficient				
R	R^2	F	df	Sig.	Dimension	B	St.Dev	Beta/ β	t	Sig.
.837	.701	102.093	2	.000						
					Product Inv.	0.293	.079	.393	3.727	.000
					Process Inv.	0.395	.086	.482	4.573	.000

Source: Prepared by the researcher based on the results of the statistical analysis

It is clear from Table (13) and in the model summary that the value of the correlation coefficient (R=0.837), which indicates the existence of a high correlation between innovation in its dimensions and product quality (Zikmund, 2000, 513), and the value of the coefficient of determination reached (R^2=0.701) at (2) degrees of freedom, and the value of (F=102.093) at a significance level (sig=0.000), which confirms the significance of the regression at a significance level (α ≤ 0.05); and proves the validity and stability of the model, and it is also indicated that innovation in its dimensions explained (70.1%) of the variance in product quality. As shown in the coefficient table, the value of (Beta/β) for the dimension of "product innovation" reached (0.393) with a standard error of (0.079) and the value of B was equal to (0.293) for this dimension and the value of (t) reached (3.727) with a significance level of (sig. =0.000), indicating that this dimension is significant in the quality of products. As for the dimension of "process innovation", the value of (Beta/β) reached (.4820) with a standard error of (.0860) and the value of B was equal to (0.395) for this dimension, and the value of (t) reached (4.573) with a significance level of (sig. =0.000); indicating that this dimension is significant in the quality of products.

Based on the above, the first main null hypothesis cannot be accepted and the alternative hypothesis that states: “There is a statistically significant effect at a significance level (α ≤ 0.05) of innovation in terms of its dimensions (product innovation, process innovation) on product quality in its combined dimensions (product Features & Serviceability, product durability, product reliability, product performance, and perceived product quality) in Jordanian small and medium enterprises” can be accepted.

The first sub-hypothesis

Ho_{1-1}: "There is no statistically significant effect at a significance level ($\alpha \leq 0.05$) of innovation in terms of its dimensions (product innovation and process innovation) on the Features & Serviceability of the product in Jordanian small and medium enterprises.

Table 14

Model summary results, ANOVA and coefficients for the first sub-hypothesis

Model Summary		ANOVA				Coefficient				
R	R^2	F	df	Sig.	Dimension	B	St.Dev	Beta/ β	t	Sig.
.779	.607	67.076	2	.000						
					Product Inv.	0.272	0.095	0.346	2.862	0.005
					Process Inv.	0.403	0.104	0.467	3.862	0.000

Source: Prepared by the researcher based on the results of the statistical analysis

It is clear from Table (14) and in the model summary that the value of the correlation coefficient ((R=0.779, which indicates a high correlation between innovation in its dimensions and the Features & Serviceability of the product. It also appeared that the value of the coefficient of determination reached (R^2=0.607) at (2) degrees of freedom, and the value of (F=67.076) at a significance level (sig=0.000). This confirms the significance of the regression at a significance level ($\alpha \leq 0.05$); and proves the validity and stability of the model. It is also indicated that innovation in terms of its dimensions explained 60.7% of the variance in the Features & Serviceability of the product. It is also clear from the coefficient table (Coefficient), that the value of (Beta/ β) at the dimension of "product innovation" reached ((0.346, with a standard error of (0.095), and the value of (B) was equal to (0.272) for this dimension, and the value of (t) reached (2.862) at a level of Significance ((sig. = 0.005; indicating that this dimension is significant in the service and characteristics of the product.

As for the dimension of "process innovation", the value of (Beta/ β) reached (0.467), with a standard error of (0.104), and the value of (B) was equal to (0.403) for this dimension, and the value of (t) reached (3.862), with a significance level of (sig. = 0.000); this indicates that this dimension is significant in the Features & Serviceability of the product.

Based on the above, the first sub-null hypothesis cannot be accepted and the alternative hypothesis that states: "There is a statistically significant effect at a significance level ($\alpha \leq 0.05$) for innovation in terms of its dimensions (product innovation, process innovation) in the Features & Serviceability of the product in Jordanian small and medium enterprises" can be accepted.

Second Sub-Hypothesis

Ho_{1-2}: "There is no statistically significant effect at a significance level ($\alpha \leq 0.05$) of innovation in terms of its dimensions (product innovation and process innovation) on product durability in Jordanian small and medium enterprises."

Table 15
Model summary results, ANOVA and coefficients for the Second sub-hypothesis

Model Summary		ANOVA			Coefficient				
R	R^2	F	df	Sig.	Dimension	B	St.Dev	Beta/ β	t	Sig.
.746	.557	54.643	2	.000						
					Product Inv.	0.357	0.109	0.423	3.292	0.001
					Process Inv.	0.332	0.119	0.357	2.781	0.007

Source: Prepared by the researcher based on the results of the statistical analysis

It is clear from Table (15) and in the model summary that the value of the correlation coefficient ((R=0.746, which indicates a high correlation between innovation in its dimensions and product durability. It also appeared that the value of the coefficient of determination reached (R^2=0.557) at (2) degrees of freedom, and the value of (F=54.643) at a significance level (sig=0.000). This confirms the significance of the regression at a significance level (α ≤ 0.05); and proves the validity and stability of the model. It is also indicated that innovation in terms of its dimensions explained 55.7% of the variance in product durability. It is also clear from the coefficient table (Coefficient), that the value of (Beta/ β) at the dimension of "product innovation" reached ((0.423, with a standard error of (0.109), and the value of (B) was equal to (0.357) for this dimension, and the value of (t) reached (3.292) at a level of Significance ((sig. = 0.001; indicating that this dimension is significant in the service and characteristics of the product.

As for the dimension of "process innovation", the value of (Beta/ β) reached (0.357), with a standard error of (0.119), and the value of (B) was equal to (0.332) for this dimension, and the value of (t) reached (2.781), with a significance level of (sig. = 0.007); this indicates that this dimension is significant in the durability of the product.

Based on the above, the second sub-null hypothesis cannot be accepted and the alternative hypothesis that states: "There is a statistically significant effect at a significance level (α ≤ 0.05) for innovation in terms of its dimensions (product innovation, process innovation) in the durability of the product in Jordanian small and medium enterprises" can be accepted.

Third Sub-Hypothesis

Ho_{1-3}: "There is no statistically significant effect at a significance level (α ≤ 0.05) of innovation in terms of its dimensions (product innovation and process innovation) on product reliability in Jordanian small and medium enterprises."

Table 16
Model summary results, ANOVA and coefficients for the third sub-hypothesis

Model Summary		ANOVA				Coefficient				
R	R^2	F	df	Sig.	Dimension	B	St.Dev	Beta/ β	t	Sig.
.656	.430	32.794	2	.000						
					Product Inv.	.082	.137	.087	.595	.553
					Process Inv.	.602	.151	.582	3.996	.000

Source: Prepared by the researcher based on the results of the statistical analysis

It is clear from Table (16) and in the model summary that the value of the correlation coefficient ((R=0.656, which indicates a high correlation between innovation in its dimensions and product reliability. It also appeared that the value of the coefficient of determination reached (R^2=0.430) at (2) degrees of freedom, and the value of (F=32.794) at a significance level (sig=0.000). This confirms the significance of the regression at a significance level (α ≤ 0.05); and proves the validity and stability of the model. It is also indicated that innovation in terms of its dimensions explained 43% of the variance in product reliability. It is also clear from the coefficient table (Coefficient), that the value of (Beta/ β) at the dimension of "product innovation" reached ((0.087, with a standard error of (0.137), and the value of (B) was equal to (0.082) for this dimension, and the value of (t) reached (0.595) at a significance level ((sig. = 0.553; indicating that this dimension is significant in product reliability.

As for the dimension of "process innovation", the value of (Beta/ β) reached (0.582), with a standard error of (0.151), and the value of (B) was equal to (0.602) for this dimension, and the value of (t) reached (3.996), with a significance level of (sig. = 0.000); this indicates that this dimension is significant in product reliability.

Based on the above, the third sub-null hypothesis cannot be accepted and the alternative hypothesis that states: "There is a statistically significant effect at a significance level (α ≤ 0.05) for innovation in terms of its dimensions (product innovation, process innovation) in product reliability in Jordanian small and medium enterprises" can be accepted.

Fourth Sub-Hypothesis

Ho_{1-4}: There is no statistically significant effect at a significance level (α ≤ 0.05) of innovation in terms of its dimensions (product innovation and process innovation) on product performance in Jordanian small and medium enterprises.

Table 17
Model summary results, ANOVA and coefficients for the Fourth sub-hypothesis

Model Summary		ANOVA				Coefficient				
R	R^2	F	df	Sig.	Dimension	B	St.Dev	Beta/ β	t	Sig.
.818	.668	87.674	2	.000						

Product Inv.	.276	.089	.346	3.115	.002
Process Inv.	.445	.097	.507	4.567	.000

Source: Prepared by the researcher based on the results of the statistical analysis

It is clear from Table (17) and in the model summary that the value of the correlation coefficient ((R=0.818, which indicates a high correlation between innovation in its dimensions and product performance. It also appeared that the value of the coefficient of determination reached (R2=0.668) at (2) degrees of freedom, and the value of (F=87.674) at a significance level (sig=0.000). This confirms the significance of the regression at a significance level (α ≤ 0.05); and proves the validity and stability of the model. It is also indicated that innovation in terms of its dimensions explained 66.8% of the variance in product performance. It is also clear from the coefficient table (Coefficient), that the value of (Beta/ β) at the dimension of "product innovation" reached ((0.346, with a standard error of (0.089), and the value of (B) was equal to (.276) for this dimension, and the value of (t) reached (3.115) at a significance level ((sig = 0.002; indicating that this dimension is significant in product performance.

As for the dimension of "process innovation", the value of (Beta/ β) reached (0.507), with a standard error of (.097), and the value of (B) was equal to (.445) for this dimension, and the value of (t) reached (4.567), with a significance level of (sig. = 0.000); this indicates that this dimension is significant in product performance.

Based on the above, the fourth sub-null hypothesis cannot be accepted and the alternative hypothesis that states: "There is a statistically significant effect at a significance level (α ≤ 0.05) for innovation in terms of its dimensions (product innovation, process innovation) in product performance in Jordanian small and medium enterprises can be accepted."

Fifth Sub-Hypothesis

Ho_{1-5}: "There is no statistically significant effect at a significance level (α ≤ 0.05) of innovation in terms of its dimensions (product innovation and process innovation) on perceived product quality in Jordanian small and medium enterprises."

Table 17

Model summary results, ANOVA and coefficients for the Fifth sub-hypothesis

Model Summary		ANOVA				Coefficient				
R	**R^2**	**F**	**df**	**Sig.**	**Dimension**	**B**	**St.Dev**	**Beta/ β**	**t**	**Sig.**
.704	.496	42.831	2	.000						
					Product Inv.	.471	.123	.522	3.815	0.000
					Process Inv.	.206	.136	.208	1.518	.133

Source: Prepared by the researcher based on the results of the statistical analysis

It is clear from Table (17) and in the model summary that the value of the correlation coefficient ((R= 0.704, which indicates the existence of a high correlation between innovation in its dimensions and perceived product quality. It also appeared that the value of the coefficient of determination reached (R^2= 0.496) at (2) degrees of freedom, and the value of (F= 42.831) at a significance level (sig=0.000). This confirms the significance of the regression at a significance level ($\alpha \leq 0.05$); and proves the validity and stability of the model. It is also indicated that innovation in terms of its dimensions explained 49.6% of the variance in perceived product quality. It is also clear from the coefficient table (Coefficient), that the value of (Beta/ β) at the dimension of "product innovation" reached ((0.522, with a standard error of (.1230), and the value of (B) was equal to .471)0) for this dimension, and the value of (t) reached (3.815) and at a significance level of (sig. = 0.000; indicating that this dimension is significant in the perceived product quality.

As for the dimension of "process innovation", the value of (Beta/ β) reached (0.208), with a standard error of (0.136), and the value of (B) was equal to (0.206) for this dimension, and the value of (t) reached (1.518), with a significance level of (sig. = .133); this indicates that this dimension is significant in the perceived product quality.

Based on the above, the fifth sub-null hypothesis cannot be accepted and the alternative hypothesis that states: "There is a statistically significant effect at a significance level ($\alpha \leq 0.05$) for innovation in terms of its dimensions (product innovation, and process innovation) in the perceived product quality in Jordanian small and medium enterprises" can be accepted.

Discussion

The results shows that innovation has a significant and positive impact on products quality. Therefore, our findings are consistent with previous studies (Santos & Berssaneti., 2024; Hanaysha & Abdullah., 2015; McAdam & Armstrong., 2013). Which confirmed the link between innovation and products quality. These findings found that innovation dimensions (product innovation, Process innovation) are effective in enhancing the products quality (Features, Durability, reliability, Performance and perceived quality) at Jordanian medium and small enterprises. This demonstrates that innovation and product quality are causally related, meaning that developing the latter requires an organization's strategic direction that is endorsed by senior management. The business climate of today is dynamic and occasionally unstable. This in and of itself presents difficulties, chances, and dangers. Because of that the top management of Jordanian SMEs must take in consideration to take the right decisions at the right time to cope with different situations to their enterprises in competition with others through enhancing different innovations and talented people to increase the products quality.

According to the survey results, the possession of new ideas by companies, through the utilization and exploration of human resources and process capabilities, leads to increased innovation. Then customer demands and expectations are met, sales increase, market share and profitability improve, and product quality improves in all dimensions (Serviceability, durability, reliability, performance, and perceived quality) at the Jordanian medium and small enterprises.

In this regard the study's results provide a contribution to measure the impact of innovation with its dimensions (Product innovation, and process innovation) on products quality with its dimensions (Product features & Serviceability, Product Durability, Product Reliability, Product Performance, and Product Perceived Quality).

Conclusion

This paper studies the relationship between innovation and products quality in Jordanian small and medium enterprises (SMEs).The empirical results of the model constructed in this study approved the proposed hypotheses and empirically filled the gaps between the variables studied. The present study provides managers with new information on the relationship between innovation and products quality. It is recommended that future studies examine more dimensions of innovation. The study also recommends that firms use products quality measures that take into account both financial and non-financial dimensions.

Study Significance and Contribution

The significance and contribution of the study is embodied in highlighting the impact of innovation on products quality at Jordanian medium and small enterprises (SMEs), which contributes to enhancing prosperity and excellence, and ensuring survival and continuity in the competitive labor market in which these companies operate. The scientific significance of this study lies in the importance of the variables under study (innovation and products quality), and the attempt to discover their impact at Jordanian medium and small enterprises (SMEs). Hence, the study attempted to enrich the theoretical aspect by seeking to provide a theoretical framework that addresses the latest scientific findings in these fields, and in a way that benefits subsequent students and researchers. In addition to opening new horizons for further research and subsequent studies to better understand the relationships between the different dimensions of these variables.

the significance and contribution of the scientific study also stems from what it has done to clarify the dimensions of each of the innovations, which are: product innovation, process innovation, and identifying its effect from a theoretical point of view on the quality of products according to its dimensions addressed by this study, which are: Features & Serviceability, Durability, Reliability, Performance, Perceived Quality.

As for the practical significance and contribution of this study, it stems also from the importance of the researched sector, which is Jordanian medium and small enterprises (SMEs), as these enterprises play a prominent role in the Jordanian economy. The significance and contribution of the practical study also emerges through presenting the results and recommendations that have been reached, which can help support the strategic decisions of decision-makers and seniors and middle management in the researched enterprises, based on accurate data and analyses to be taken into account in focusing on the importance of innovation and how to maintain its sustainability and continuity, and enhance its competitiveness at the local and international levels.

Research Limitations

Some short comings of this study indicate potential for future research. To begin, this study assessed innovation along two main dimensions commonly employed by Jordanian

SMEs. However, different perspectives exist, especially in the context of other countries. Second, the actual application of this study is limited to Jordanian SMEs, limiting its generalizability to other industries. Future research could generalize the model of this study by applying it to other industrial sectors. Finally, in addition, this study was able to obtain data collected by means of a questionnaire prepared in the format of a series of closed questions. It is essential to rely on administrative methods to collect qualitative data, and the use of interviews and focus groups can provide a deeper comprehensive understanding of phenomenon under study.

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