

# The Role of Product Innovation and Flexibility as Competitive Priorities in Gaining Market Share: Empirical Evidences from Jordanian Manufacturing SMEs

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## Abstract

This study aims at exploring the effect of product innovation and product flexibility as competitive priorities on increasing market share in Jordanian manufacturing SMEs. The study employs the quantitative design using hypotheses testing approach; Self administrated questionnaire is developed as data collection instrument. 270 questionnaires were distributed personally by hand to CEOs and Managers of SMEs in King Abdullah II Industrial City using stratified random sample. Statistical analysis such as frequencies analysis, simple regression, multiple regression, and ANOVA are calculated using SPSS to test the study hypotheses. The study concludes that there are positive effects of competitive priorities with its dimensions (product innovation and flexibility) on increasing marketing share. However, the effects are limited due to lack of employees' skill, shortages of funds, lack of research and development, and poor marketing activities.

The study recommends that manufacturing SMEs should focus on product innovation and flexibility as competitive priorities to enhance market share and confirm the edge needed for competition. To activate the role of product innovation and flexibility, management support and commitment is needed. Moreover, market research is a driver of new product introductions to adapt our SMEs products with changing environment. This is the first study that examines the role of product innovation and flexibility as competitive priorities in gaining market share in the Jordanian manufacturing SMEs.

*Keywords:* Product innovation, Product flexibility, Market share, Competitive priorities, Manufacturing SMEs, Jordan.

## 1. Introduction

Manufacturing SMEs have to consider different competitive priorities of their manufacturing activities that support business units to become more competitive to increase market share. Krajewski et al. (2013) divided manufacturing strategy into two dimensions such as order winners and order qualifiers; the order winners refer to core issues that are used by customers to select different products to meet market demand. Whereas, the

order qualifiers refer to the complementary issues by customers such as time, flexibility, and warranty. The order qualifiers do not improve a competitive position for a company; it will just enable the business to survive in the market. Ibidunni et al. (2014) stated that product innovation is one of the essential strategies of growth that enables companies to enter and penetrate to new market segments. Product innovation can be used to gain the market share over competitors, and to improve a competitive position of the business.

Butt (2009) stated that manufacturing strategy dimensions have been developed through time and innovation. Moreover, product flexibility can be considered as a competitive weapon to adapt businesses with flux markets, dynamic environments, and fluctuating product life cycles. Awwad et al. (2013) stated that flexibility is a construct with different dimensions and it can be considered as a competitive weapon in any manufacturing or service business, especially in demand and productive capacity management to meet changes in customer needs, preferences, and expectations. In developing economies, they have come to realize the value of small and medium sized businesses. The contribution of SMEs is important in Jordan economy, due to the strategic role of SMEs in reducing unemployment ratios, and supporting market growth and demand size. However, in developing countries such as Jordan, there are many challenges for small businesses (Al-Weshah et al., 2011; Obeidat et al., 2017; ALManaseer et al., 2019). Therefore, the current study focuses on two major dimensions in manufacturing strategy. More specifically, product innovation and product flexibility as competitive priorities in increasing market share in Jordanian manufacturing SMEs

There are many competitive priorities for manufacturing SMEs. However, the current study investigates two main priorities; namely, product innovation and flexibility. Innovation is a critical dimension that creates opportunities to develop new products, improve current products, and penetrate new customer segments (Kuhn and Marisck, 2010; Altamony et al., 2012). Innovation helps firms in identifying their business problems, responding to unforeseen conditions, creating potential solutions of problems, and improving new ways to reach outputs, by using experience, skills, motivation and the organizational knowledge. These accumulated issues are converted into production of an innovative product or service (Miettinen et al., 2009). Ibidunni et al. (2014) stated that product innovation is one of the essential strategies of growth that used adopted by companies to serve new market segments, to gain the market share, and improve a competitive position of the business. Rosenbusch et al. (2011) identified several factors that affect the relationship between innovation and SMEs performance. They stated that new SMEs make more innovation than the mature organizations mainly due to their flexibility to accept change in their environment or industry. Moreover, Ibidunni et al. (2014) concluded that changes in customer's tastes and preference require product innovation, thus, product innovation increases sales

volume of SMEs. Alam et al. (2016) stated that as SMEs face tremendous competition, innovation represents solutions to achieve many issues for businesses such as low cost and high quality; hence, innovation is a business strategy than can be used by SMEs to sustain and grow.

Flexibility is the products adaptation to customer needs and requirements of different changes. Flexibility also is the business ability to adapt to changing and dynamic business environment globally and locally in terms of time flexibility and customization flexibility; time flexibility is responding quickly to meet market needs through the induction of new products and services. Customization flexibility is to produce or provide services according to changing customer needs (Naqshbandi and Idris, 2012; Aldaas et al., 2019). Therefore, flexibility of products is the ability of a firm to launch new parts and products into the market to meet the changing customer environment.

In Jordan, SMEs play an important contribution in improving economic conditions, due to its strategic role in reducing unemployment rates and supporting market growth. More than 69% of the employees work in small and medium enterprises in the Jordanian private sector, with more than 90% of manufacturing firms is considered as SMEs, on the other hand, all retail and agricultural are SMEs. In developing countries such as Jordan, there are many barriers and challenges for investing and marketing in small businesses (Al-Weshah et al., 2011), such as cost of capital, inflation rates, government regulations and policy financing, global competition, and energy costs. In addition, Al-Weshah et al. (2013) stated that small and medium-sized enterprises (SMEs) have shown a greater uncertainty of the benefits of long-term relationships with customers that are essential in acquiring and maintaining a competitive edge in different organizations.

SMEs cannot only rely on their past success of existing products; they have to assess potential changes in customer's taste and preference, which are fundamental requirements for improving competitive positions. SMEs and lack of healthy competition in the sector lead to many problems such as decline in sales volume, market share, and inability to achieve marketing and corporate goals (Ibidunni et al., 2014; Aldaas et al., 2019). The Jordanian government recognized the importance of SMEs for many reasons such as reduction in unemployment rate, jobs creation, and development of rural areas, and thus, the government can develop regulations to reduce challenges and problems which are encountered by Jordanian SMEs. Therefore, the current

study investigates the role of product innovation and flexibility in increasing performance especially market share in Jordanian manufacturing SMEs. The paper structure will be as follows; the study outlines are highlighted. Critical review of relevant literature is conducted through previous studies. The methodology is developed using quantitative analysis. The study findings, implication, and recommendations are presented. Limitations are highlighted. As a result, this study has conducted to answer the following question:

*Q1. What is the role of product innovation and flexibility in increasing market share in Jordanian manufacturing SMEs?*

Therefore, the study aims and objectives is to identify the current status of product innovation and flexibility from management perspectives in Jordanian manufacturing SMEs, measuring the effect of product innovation on gaining market share in Jordanian manufacturing SMEs, measuring the effect of product flexibility on gaining market share in Jordanian manufacturing SMEs, and provide recommendations and practical implications to SMEs managers.

## 2. Literature review

### 2.1 SMEs in Jordan as a research context

Al-Weshah et al. (2013) stated that smaller firms are more entrepreneurial, which enhances adoption and improves the learning process. In Jordan like other developing countries, SMEs often have limited resources, leaving them at a relative disadvantage compared with a higher perceived risk than larger companies. Al-Hyari et al. (2012) stated that Jordanian manufacturing SMEs are forced to go beyond the Jordan local market to survive. More and more companies are facing challenges of globalization with the accompanying open borders

SMEs make an extremely important contribution to an economy, especially to the rapid growth in developing countries (Al-Weshah, 2019a). Like other countries, the private sector in Jordan is consisted of large, medium and small firms that employ 628,554 employees as total size of employees in Jordanian private sector. Only 31% of employees work in large firms and the rest employees work in SMEs. 82% of SMEs employees are male and only 18% are female. The density of SMEs is lower than other low-income countries (JHDR 2011, P15, and P20). The Jordanian economy depends entirely on small and medium-sized companies to drive its growth. About 98%

of businesses in Jordan are considered as SME's, 67% of Jordanian SMEs have less than (19) employees. SMEs employ about 60% of the total workforce in Jordan. SMEs contribution to Jordanian GDP is 50%, and manufacturing enterprises form 14% of total Jordanian SMEs (Share, 2014).

The definition and classification of SMEs varies from one governmental agency to another, for example, according to Jordan Human development report in 2019 (JHDR, 2019), Small businesses that employ (1-19) employees are further classified into two classes, (1-4, and 5-19). Whereas, medium businesses that employ (20-99) employees are further classified into two classes, (20-49, 50-99). The Jordanian Ministry of Industry and Trade classifies SME's based on the number of employees as in the following "Table 1" (MIT, 2019).

**Table 1.** Classification of SMEs according to Ministry of industry and Trade in Jordan

Classification	No of employees
Micro	1-9
Small	10-49
Medium	50-249
Large	250 +

There are many definitions by UNIDO and the Arab labour associations according to the (JHDR, 2019), where micro enterprises are ranged from 1-4 employees, number of employees in small enterprises are ranged from 5-19 employees, and medium enterprises are ranged from 20-100 employees. Najjar (2004) also classified MSMEs as small enterprises that employ 5-19 employees, and medium enterprises that employ 20-100 employees. According to the Jordanian SMEs Association, SMEs are considered as one classification, they consider that SMEs employ between 10-249 employees. Therefore, in the current study, SMEs classification will be based on number of employees, the most useful definition of SMEs is that enterprises of 5-19 employees are small and enterprises of 20-100 employees are medium.

### 2.2 Innovation and flexibility in manufacturing strategy

Innovation is one of major competitive priorities that can be considered by manufacturing businesses in to maintain and increase their market share and extend or create long products life cycles. Boyer, et al. (2005)

confirmed that a competitive advantage can be created by low cost products. By using this approach, the industrialized countries can make remarkable progress in their competitive capabilities through employing different types of innovations. Butt (2009) concluded that the major dimensions of manufacturing strategy are time efficiency and innovation processes.

Valery (1999) confirmed that innovation is a core issue in this economic era. Local governments and businesses adopt innovation when they are trying to flourish the economic environment. Innovation can provide new technologies for different industries. Dobni (2010) stated that the innovation capacity of manufacturing firms can motivate businesses growth and profitability. More studies were conducted to investigate the high importance of innovation such as (Zhao et al., 2002; Zakaria et al., 2012) who stated that many scholars propose different dimensions to the four basic dimensions of innovation (cost, quality, delivery and flexibility).

Previous studies stated that flexibility is a strategic driver of manufacturing, hence, flexibility is classified into different categories such as product flexibility, new product flexibility, market flexibility, machine flexibility, labor flexibility, process flexibility, volume flexibility, and expansion flexibility (Narasimhan and Das, 2000). Product flexibility can be considered as a competitive weapon to adapt businesses with flux markets, dynamic environments, and fluctuating product life cycles (Sethi and Sethi, 1990). The goal of flexibility is to deal with uncertain conditions to respond effectively to changing environments. New product flexibility (NPF) is an essential and strategic tool in manufacturing flexibility (Narasimhan and Das, 2000). Awwad (2007) recommended that product flexibility is the fundamental link between marketing strategies and manufacturing strategies

### 2.3 Product innovation

Innovation is the ability of a business to develop or improve its products, services, and different manufacturing processes. It is also the continuous capability to develop business products that match changes in customer demand (Naqshbandi and Idris, 2012; Abuhasshesh et al., 2019a, b). Thompson (1965) defined innovation as the generation, screening, acceptance, and implementation of new ideas, products, services, and processes. Innovation is the core issue in the late 20th Century; businesses consider innovation as the key tool to increase profits, growth, and market share

(Al-Nsour and Al-Weshah, 2011). Governments can automatically reach for innovation level when they are trying to improve the economic conditions that lead to economic welfare (Valery, 1999, (Al-Weshah, 2019b).

Zhao et al. (2002) concluded that product innovation is not only limited to physical products but also included their applications on intellectual products. Traditionally, innovation is used to create new production processes, however, innovation can be considered as a high priority in developing new markets for the business products. Innovation is defined by many scholars as process or product development for a business. Specifically, it is introducing innovative products and new processes to adapt with new environments (Russell and Millar, 2014; Hassan et al., 2013).

Innovation is considered as issue to help firms in identifying their problems, responding to unexpected conditions, creating potential solutions for problems, and developing new ways to manage different businesses using experience, skills, motivation and the organizational knowledge. These issues are converted into production of an innovative product or service (Miettinen et al. 2009). Wierdsma (2004) stated that innovation is the process of new outcome development by adopting new ways and tools of product and service development. Crossan and Apaydin (2010) concluded that innovation refers to create or accept, adapt, and utilize value-added novelty in service and manufacturing areas such as re-generation products, adopting new ways of product development, and offering new services. Al-Weshah (2018) also stated that e-marketing practices can be used to enhance product innovation and development.

According to the Organisation for Economic Co-operation and Development (OECD, 2019), there are four classifications of innovation namely, organizational innovation, marketing innovation, process innovation, and product innovation. More specifically, organizational innovation is improving new business practices by an organization, in addition to updating work environment, and building external interfaces and relations. Marketing innovation is adopting new improvements in different issues such as product promotion, packaging, and new pricing plans. Process innovation is executing an improved process that can be used to support production and efficiency. Finally, product innovation is producing or introducing new products and services that are practically improved over their predecessors.

Brunswick and Ehrenmann (2013), stated that innovation in SMEs is not well established concept, where innovation is limited to internal environment of organization such organizational structure Brunswick and Ehrenmann (2013) addressed that the concept of open innovation includes inbound and outbound innovation; inbound innovation is where ideas and thoughts are coming from external environment to an organizational environment, while outbound innovation is where new technologies and creative ideas are available for organizations in an industry. Moreover, Nybakk and Jenssen (2012) examined the innovation strategy and its effect on financial performance in Norwegian wooden manufacturing businesses. They concluded that innovation has a positive effect on financial performance of manufacturing businesses. Innovation was ranked as first dimension in manufacturing strategy comparing with other dimensions in manufacturing firms (Zhao et al., 2002). Cheng and Wang (2011) investigated the relationship between strategies of governmental regulations and manufacturing performance in SMEs, they confirmed that innovation in SMEs has a positive effect on both financial and non-financial performance.

Thrassou et al. (2012) suggested that value is the core issue in the innovation; innovation can meet potential changes in consumer behavior, it can also enhance the strategic orientation of marketing. Accordingly, practices of new product development (NPD) can be developed to meet potential changes that are related to the product life cycle stages. Al-Weshah (2013) also considered that innovation in the market is one of the major aspects of new product development (NPD). Hassan et al. (2013) investigated the effect of different categories of innovation (product, process, marketing, and organizational innovation) on businesses performance in 250 manufacturing companies in Pakistan. They concluded that all innovation types have positive impact on firm performance. Leitner (2016) concluded that product innovation in SMEs leads to an important development in different industries which were also supported by business press, consultancy firms, and governmental innovation policies.

In this study, innovation is defined in product and process as producing new product, reducing new product development time, improving production processes, and increasing the breadth of new products. Innovation is measured in the study by enterprise continuous ability to introduce new products and services, time reduction of product improvement, technology utilization, and a firm

ability to maintain the process of product development. Based on the previous literature, the following hypothesis was developed:

*H01: There is no significant effect of product innovation on market share in Jordanian manufacturing SMEs.*

#### 2.4 Flexibility of manufacturing products

Awwad et al. (2013) stated that is a construct with different dimensions and it can be considered as a competitive tool in any manufacturing or service business, especially in managing demand to meet changes in customer needs, preferences, and expectations. Naqshbandi and Idris (2012) stated that flexibility can be used as an approach of product adaptation to customer needs and requirements to absorb changes in global and local business environments. Generally, product flexibility has two classifications; time flexibility and customization flexibility. Time flexibility represents how to respond quickly to changes in market through the offering new products and services, whereas, customization flexibility is how to produce a product or serve a customer according to changes in customer needs.

Previous studies stated that flexibility is a strategic driver of manufacturing and it was classified into different categories such as product flexibility, new product flexibility, market flexibility, machine flexibility, labor flexibility, process flexibility, expansion flexibility, and volume flexibility (Sethi and Sethi, 1990; Narasimhan and Das, 2000). Khademolomoom and Emeagwali (2015) also focused on the dimensions that are most frequently used in approaching flexibility. The study divided flexibility into five critical and fundamental types, namely, new product flexibility (NPF), sourcing flexibility (SOF), product flexibility (PRF), delivery flexibility (DLF), and information systems flexibility (ISF).

Awwad et al. (2013) classified flexibility into three categories; namely, necessary flexibility, sufficient flexibility, and competitive flexibility. The necessary flexibility includes (machine flexibility, product flexibility, labour flexibility, materials handling flexibility, routing flexibility, volume flexibility); the sufficient flexibility includes (process flexibility, operational flexibility, programme flexibility, materials flexibility); and the competitive flexibility includes (production flexibility, expansion flexibility, market flexibility. Tracey et al. (1999) investigated the flexibility of product line breadth in American manufacturing firms; they confirmed that flexibility of

product line breadth has higher level of performance, in terms of customers and market performance. Awwad et al. (2013) concluded that flexibility provides a firm with the ability to handle variations in many issues such as establishing customer delivery schedule, introducing new parts or new products quickly, adjusting capacity rapidly, and customizing products to handle changes in the product mix. Product flexibility was adopted to create and develop the production facility than can be used for flexible products (Sethi and Sethi, 1990); product flexibility can be considered as a competitive weapon to adapt businesses with flux markets, dynamic environments, and fluctuating product life cycles (Sethi and Sethi, 1990). The goal of flexibility is to deal with uncertain conditions to respond effectively to changing environments. New product flexibility (NPF) is an essential and strategic tool in manufacturing flexibility (Narasimhan and Das, 2000).

Product flexibility plays a major role in linking operations strategy to marketing strategy that provides an organization with the ability to introduce new products, adjust capacity rapidly, and customize products to customer needs (Awwad, 2007). Product flexibility is employed to introduce creative products and to create awareness of customers in target markets. More specifically, product flexibility is the ability of business to deal with non-standard orders that meet special customer requirements. It may used to produce varieties of products that are characterized by different features such as options, sizes, or colors (Vickery and Calantone, 1999). Product flexibility enables a business to meet the market needs through developing newly designed products in quick ways (Kara et al., 2002). Kara et al. (2002) argued that new product flexibility provides a business with the ability to develop new products in quick ways. Awwad (2007) confirmed that new product flexibility can be used to meet customer needs and expectations.

In this study, flexibility is defined as the ability of a manufacturing business to manage resources that respond to variation in contractual needs, change in design, change in volumes, and change in plans. Flexibility is measured in the study by the business ability to reduce setup time of production lines, develop production lines, meet changes in demand variations, produce wide range of products, and respond to time changes of customer demand. Based on the previous literature, the following hypothesis was developed:

*H02: There is no significant effect of product flexibility on market share in Jordanian manufacturing SMEs.*

## 2.5 Market share: concepts and measurements

Market share was defined initially by Cooper and Nakanishi (1998) as share of the market commanded by a business product (or a brand). Researchers also argued that the concept of market share is not defined accurately; hence, an established definition of market share is needed for further studies (Al-Weshah, 2011). Market share can be considered as group of consumers or business users who are potential and current buyers of a firm's product. Therefore, market share is defined by (Cooper and Nakanishi, 1998) as shares of potential consumers. Most studies considered market share as a dimension to measure business performance such as Anderson (1994) and Al-Weshah et al. (2011) who defined market share as the percentage of the total market that is dominated by firm's product or variety of products, or the number of customers or percentage of a service offered to customers.

Al-Weshah et al. (2011) stated that the market share term has different perspectives and there is no one definition for the term of market share. Previous studies use market share as an indicator for "sales volume" and they consider that the two terms are synonymous. However, many studies stated that market share is represented as the ratio of a firm's sales to the total sales of its industry. Haider (2009) proposed that there are fundamental guidelines for a firm to increase its market share such as customer relationships, promotional schemes, product differentiation, focused advertising, and post-sale services. Al-Weshah (2017) stated that customer relationship is an important to maintain current customers and capture new customers, hence, increasing market share.

Moghaddam and Foroughi (2012) examined the effect of marketing strategy on firm performance, specifically market share in industrial firms in Iran. They confirmed that marketing strategy elements and marketing mix elements can increase market share. Moreover, there are many sub-elements in the strategy can be used to increase market share such as post-sale services, pricing, period of payment, offers of discounts, practicing direct marketing, educated sale staff, and on-time delivery Vlachvei and Oustapassidis (1997) identified the determinants of market share in the food industry.. They stated that market share determinants were intensive advertising, number of brand names, industry and market size, and economics of scale. Minov (2014) investigated competitive levels in the telecommunication sector in Austria. The researcher confirmed that enterprise size and customer loyalty of

brands are the main parameters and indicators for market share. Benkovskis and Wörz (2013) identified the critical factors of price and non-price that affect change in market share variations among the seven major advanced economics (G7). The study confirmed that non-price factors of export performance have a significant effect on market share variations.

### 3. Research methodology

This section indicates the methodology applied in the study in hand. It consists of research model, research hypotheses besides, data collection tools, population and sampling.

#### 3.1 Research approach

The elements of this research are established based on preceding literature review either theoretically or empirically. The quantitative approach generally and hypotheses testing method particularly are employed in the current study, more specifically, frequencies analysis, correlation analysis, simple regression, and multiple regression analysis are considered using SPSS (Statistical Packages for Social Sciences).

#### 3.2 Population and sampling

The targeted population of this study consisted of Jordanian manufacturing enterprises in the King Abdullah II Industrial Estate. The Industrial city includes 472 manufacturing enterprises. Self-administered questionnaire was used as the most appropriate method of data collection. After developing the final copy of the questionnaire, 270 questionnaires were distributed personally to CEOs and managers of SMEs in the King Abdullah II Industrial City. 236 questionnaires are returned and collected by hand from these enterprises after one week with response rate is %87. A probability sample, more specifically, stratified random sample, representing both small and medium enterprises- is employed by the current study.

### 4. Data analysis and results

To examine the impact of Product Innovation and Flexibility as Competitive Priorities in Gaining Market Share, in which these variables have been measured using five-point Likert scale that varies between strongly disagree =1 and strongly agree =5. Also, reliability and validity analyses were conducted; descriptive analysis was used to describe the characteristic of the sample and the respondents to the questionnaires along with the

independent and dependent variables. In addition, Statistical analysis such as frequencies analysis, simple regression, multiple regression, and ANOVA are calculated using SPSS to test the study hypotheses.

#### 4.1 Validity and reliability

Validity and reliability are two key measures that are used to determine the quality and usefulness of the primary data. Validity is about accuracy and whether the instrument is useful, while reliability is about precision; it is used to check the consistency and stability of the questionnaire. Indeed, the researchers depend on scales and items that were previously developed and used by other researchers with similar interest. In addition, a draft of the questionnaire was formulated, for validity purposes, the questionnaire is pre-tested by many academic professors and experts from manufacturing SMEs to ensure that each item is effective and avoid the ambiguity and complexity in the phrasing of questions. To measure the instrument reliability, the Coefficient of Cronbach's Alpha is considered for all study variables as shown in "Table 2". Cronbach's Alpha for all variables are above 70% and accepted in these types of studies.

**Table 2.** Reliability coefficients of the Questionnaire

Variable of the study	Cronbach's Alpha Coefficient	No of Questions
Product innovation	0.814	5
Product flexibility	0.783	5
Market share	0.810	8
All Variables	0.771	18

The collected data represent 115 small enterprises and 121 medium enterprises. The participated enterprises in this study are classified into sub-sectors as in **table 3**.

**Table 3.** SMEs classification according to number of employees for selected enterprises in the study

Number of Employees	Frequency	Percentage
5 employees - less than 20 employees	115	49.13
20 employees - less than 100 Employees	121	50.87

Total	236	100
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As shown in the “**Table 3**”, the number of participated small enterprises in the study is almost equal to the number of medium enterprises.

As shown in the “**Table 4**”, the plastics industries have the largest share of enterprises that represent (19.06%) of selected enterprises. Whereas, the lowest share of enterprises are medical materials industries that represent (5.50%) of the selected enterprises.

**Table 4.** Industrial sub-sectors for the selected enterprises from the King Abdullah II Industrial Estate

Industrial Sector	Frequency	Percentage
Chemical industries	38	16.10
Food and agricultural industries	34	14.41
Papers, cartoons, and packaging	38	16.10
Plastic industries	45	19.06
Medical material industries	13	5.50
Furniture industries	18	7.62
Constructions industries	14	5.93
Leather and tissues materials	17	7.20
Electrical and engineering industries	19	8.05
Total	236	100

## 4.2 Descriptive analysis

This section provides some descriptive statistics such as mean, standard deviation, and importance degree for each variable in the study. To describe the responses and thus the attitude of the respondents toward each question in the survey, the mean and standard deviation were estimated. While the mean shows the central tendency of the data, the standard deviation measures the dispersion which offers an index of the spread or variability in the data (Sekaran and Bougie, 2016)

### 4.2.1 Product innovation statistics

To show the current of product innovation as independent variable in Jordanian manufacturing SMEs, some statistics are calculated using SPSS such as mean

of factors, standard deviations, and ranking importance of each factor.

As shown in the “**Table 5**”, it is apparent that the overall mean of innovation factors is ranked as high importance. Moreover, “continues product development” statement is ranked as the highest mean statement with an average of (4.131) and SD (0.873). On the other hand, “Updated technology adoption” statement is ranked as the lowest mean statement with an average of (3.901) and SD (0.891).

**Table 5.** Innovation statistics, means and standard deviations

Innovation Factors	Mean	Std. Dev	Statement Rank	Importance Degree
Continuous product development.	4.131	0.873	1	High
Time Reduction of product development	4.120	0.899	2	High
Updated technology adoption	3.901	0.891	5	High
Product diversity	4.113	0.726	3	High
New product collections	4.093	0.754	4	High

### 4.2.2 Flexibility of products statistics

To show the current of product flexibility as independent variable in Jordanian manufacturing SMEs, some statistics are calculated using SPSS such as mean of factors, standard deviations, and ranking importance of each factor.

As seen in the “**Table 6**”, the relative importance of all flexibility factors is ranked as high importance. the statement 5, “Ability to meet changes in delivery times” is the highest mean statement with an average of (4.218) and SD (0.801), while the statement “Reduction in procurement times” is ranked as the lowest mean statement with an average of (3.722) and SD (0.819), but still high in importance.



**Table 6.** Flexibility factors means and standard deviations

Flexibility Factors	Mean s	Std. Dev	State ment Rank	Importa nce Degree
Reduction in Delivery times	3.994	0.814	2	High
Reduction in procurement times.	3.722	0.819	5	High
Ability to meet changes in demand size	3.815	0.782	4	High
Ability to develop diversified product mix.	3.898	0.824	3	High
Ability to meet changes in delivery times	4.218	0.801	1	High

### 4.2.3 Market share statistics

To show the current status of the market share as dependent variable in Jordanian manufacturing SMEs, some statistics are calculated using SPSS such as mean, standard deviations, and ranking importance of each factor.

As shown in the “**Table 7**”, the degree of importance of all market share statements are high. Specifically, “Image and reputation of brands affect market share” is ranked as the highest statement with an average of (4.213) and standard deviation of (0.820), while “Number of firms brands reflect market share” is ranked as the lowest statement with a mean of (3.812) and standard deviation of (0.741) with high level of importance.

**Table 7.** Market Share factors means, standard deviations

Market Share	Mean	Std. Dev	Statement Rank	Importance Degree
Promotional efforts enhance market Share.	3.901	0.792	5	High
Number of firms' brands reflect market share.	3.812	0.741	8	High
Firm size affects market share	3.986	0.793	4	High

Customer loyalty can increase market share	4.151	0.811	3	High
Image and reputation of brands affect market share.	4.213	0.820	1	High
Varieties of product lines can increase market share.	4.211	0.753	2	High
Diversity of brands can increase market share.	3.872	0.824	7	High
Geographic coverage of products can increase market share.	3.881	0.751	6	High

### 4.3 Hypotheses testing results

This part shows the hypotheses testing for two main hypotheses based on simple regression, and ANOVA using SPSS (Statistical Package for Social Sciences). The current study includes the following hypotheses:

#### 4.3.1 The effect of competitive priorities on market share

To measure the effect of competitive priorities with its dimensions (product innovation and flexibility) product on market shares in Jordanian manufacturing SMEs. Using multiple regression model, the findings are shown in “**Table 8**”.

**Table 8.** Multiple regression for competitive priorities

Competitive priorities	Beta	T	Sig
<i>Product innovation</i>	0.152	2.751	0.014
<i>Product Flexibility</i>	0.173	2.842	0.011
<i>R<sup>2</sup></i>	0.153		
<i>F</i>	9.329		
<i>Sig</i>	0.000		

**Table 9.** The effect of product innovation on market share

Dependent variable	Model Summery		ANOVA			Coefficients				
	R	r <sup>2</sup>	F	Df	Sig F*	Independent variable	B	Std Dev	T calculated	Sig t*
Market share	0.235	0.055	12.397	1	0.001	Product innovation	0.162	0.053	3.521	0.001

\* Statistical effect at a significant level ( $\alpha \leq 0.5$ )

According to the “**Table 8**”, the results of multiple regression show that there is a significant effect of competitive priorities with its dimensions (product innovation and flexibility) product on market share in Jordanian manufacturing SMEs., since ( $F= 9.329$ ,  $P < 0.05$ ), therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. The results show that ( $R^2= 0.153$ ) which indicate that competitive priorities explain 15.3% of the variance in the market share as a dependent variable.

#### 4.3.2 The effect of product innovation on market share

To test the first hypothesis, simple regression method and ANOVA analysis and are used; the results are shown in “**Table 9**”.

As shown in the “**Table 9**”, value of B is 0.162 which indicates to the maker share regardless of the product innovation. The results show that the R value is 0.235, which indicates that there is a positive association between the product innovation and the market share in manufacturing SMEs. Moreover,  $R^2$  value is 0.055, which refers that the explained ratio of product innovation is only 5.5% in variance of market share in SMEs. T value is 3.521 with significant level ( $\alpha \leq 0.5$ ) and F value is 12.397 at the significant level is 0.001.,

therefore it can be confirmed that the null hypothesis can be rejected and the alternative hypothesis is accepted. As shown by the results, the weak effect of product innovation on increasing market share can be justified that the product innovation is limited in Jordanian SMEs. Limited innovation practices refer to lack of employees’ skills, shortages of financial resources, lack of research and development, and poor marketing activities to communicate with customers in the manufacturing Estates.

The study results are supported by Kumar et al. (2010) study in Canadian product manufacturing firms, they concluded that flexibility is very important in the beginning of the product life cycle. Dangayach and Deshmukh (2001) also stated that due lack of relevant resources for research and development; SMEs do not have enough innovation practices. Al-Weshah et al. (2011) in their study for using e-networks in gaining market share, they confirmed that there are many barriers for increasing SMEs market share such as lack of employee’s skills in terms of English language skills and marketing skills. Ibidunni et al. (2014) also stated that some SMEs do not invest many resources on the utilization of modern technologies, as this leads to decline in products design and deployment.

**Table 10.** The effect of product flexibility on market share

Dependent variable	Model Summery		ANOVA			Coefficients				
	R	r <sup>2</sup>	F	Df	Sig F*	Independent variable	B	Std Dev	T	Sig t*
Market share	0.261	0.068	21.261	1	0.0000	Product flexibility	0.245	0.055	4.611	0.000

\* Statistical effect at significant level ( $\alpha \leq 0.5$ )

### 4.3.3 The effect of product flexibility on market share

To test the second hypothesis, the simple regression method and ANOVA analysis are used; the results are shown in “Table 10”.

As shown in the “Table 10”, value of B is 0.245 which indicates to the maker share regardless of the product flexibility. The results show that the R value is 0.261, which indicates that there is a positive association between the product flexibility and the market share in manufacturing SMEs. Moreover,  $R^2$  value is 0.068, which refers that the explained ratio of product flexibility is only 6.8% in variance of market share in SMEs. T value is 4.611 with significant level ( $\alpha \leq 0.5$ ) and F value is 21.261 at the significant level is 0.000. Therefore, the results show that null hypothesis is rejected and the alternative hypothesis is accepted.

As shown by the results, the weak effect of product flexibility on increasing market share can be justified that the product flexibility is still at embryonic stages in Jordanian SMEs. The weak effect of flexibility refers to lack of design' skills, shortages, poor market segmentation, lack of research and development, and poor marketing activities and customer relationship management (CRM) to keep on touch with customers and get their feedback about proposed products in the manufacturing areas.

The study results are supported by many studies such as Amoako-Gyampah and Acquah, (2008) and Sakhter and Pounder (2008) who stated that flexibility is a product manufacturing strategy that can be used by manufacturing firms to shape customer needs and preferences in the market. The results are also supported by Zhang et al. (2003) who stated that many issues such as product customization, pressures of globalization, and technological innovation can be adopted to support radical changes in customer expectations, thus, market share. Ibidunni et al. (2014) also stated that any SME survival is not guaranteed without assessing consumption patterns that adapt them with the dynamism of the environment.

## 5. Discussion and conclusions

This study investigates the role of product innovation and flexibility in increasing market share in the Jordanian manufacturing SMEs. Also, the study focuses on considering different competitive priorities of their manufacturing activities that support business units to become more competitive to increase market share.

Moreover, Product innovation can be used to gain the market share over competitors, and to improve a competitive position of the business. Product innovation is one of the essential strategies of growth that usually adopted by companies to serve new market segments, to gain market share, and to improve competitive position of the business. Product innovation can satisfy the dynamic changes in customers' taste and performance. Thus, product innovation can increase sales volume of SMEs and face tremendous competition. In addition, innovation represents solutions to achieve many issues for businesses such as low cost and high quality, hence, innovation is a business strategy that can sustain and grow businesses.

Furthermore, the study focuses on flexibility which is the products adaptation to customer needs and requirements of different changes. Flexibility also is the business ability to adapt to changing and dynamic business environment globally and locally in terms of time flexibility and customization flexibility. The study results show a positive association between the product innovation and the market share in manufacturing SMEs. Also, the study indicates that there is a positive association between the product flexibility and the market share in manufacturing SMEs. The results are also supported by Zhang et al. (2003) who stated that many issues such as product customization, pressures of globalization, and technological innovation can be adopted to support radical changes in customer expectations, thus, market share.

The study results emphasis that lack of employees' skills, shortages of financial resources, lack of research and development, and poor marketing activities to communicate with customers can limit innovation practices and leads to decline in products design and deployment. Furthermore, the study stress out that lack of design skills, shortages, poor market segmentation, lack of research and development, and poor marketing activities and customer relationship management (CRM) to keep on touch with customers and get their feedback about proposed products in the manufacturing areas can lead to weak effect of product flexibility on increasing market share. The study results are supported by many studies such as Amoako-Gyampah and Acquah, (2008) and Sakhter and Pounder (2008) who stated that flexibility is a product manufacturing strategy that can be used by manufacturing firms to shape customer needs and preferences in the market.

### 5.1 Practical implications

Based on the study results, many recommendations can be proposed by the study. The manufacturing sector has to focus on all manufacturing strategies dimensions. However, the manufacturing sector must be more concerned with different types of innovation especially product innovation, which is presently lower than needed to benefit from markets available for Jordanian products. Product innovation can provide SMEs with more leverage than is needed in competition with other international products. Flexibility of products has vital importance, but without innovation, SMEs will be one step behind other sectors. In the other hand, western SMEs have already reduced international competition by adopting innovation strategies. Consequently, Jordanian manufacturing SMEs should establish an innovation fund of Jordanian SMEs to confirm the edge needed for competition. Moreover, flexibility of products is one of major competitive priorities that enable a business to deal with competitive moves. Product flexibility enhances the business contribution to develop new products and take the strategic decisions of entry to or exit from the markets (Abuhasshesh et al., 2019c). NPF can be used by SMEs to enhance their organizational performance through rapid entry to new markets.

To activate the role of product innovation and flexibility, management support and commitment is needed here. Moreover, market research is a driver of new product introductions to adapt our SMEs products with changing environment. Doing research on dissatisfied customers to assess their needs is priority for marketing SMEs. SMEs have to evaluate their current products as a key for such types of incremental product innovation. Benchmarking strategies and learning processes from experience of other industries can be considered by managers especially in product design in to extend product life cycle. Product innovation and flexibility must be planned and implemented by Jordanian manufacturing SMEs through developing operation and marketing strategies to respond effectively and efficiently to shortened product life cycles.

SMEs managers have to take manufacturing advantages that stem from business capabilities and strategic aware and adaptation. These capabilities enable SMEs to adopt a competitive strategy in terms of product innovation and flexibility. The interaction between SEMs staff and customers is highly important to get suggestions for the product development. The management has to focus on communication capabilities within the firm to formulate a competitive strategy which are related product innovation and flexibility.

## 5.2 Theoretical implication

The study also orients the researchers in the manufacturing domain to use this study and its conceptual model to assess the effect of product innovation and product flexibility as competitive priorities on increasing market share in Jordanian manufacturing SMEs. It also suggests expanding this study and evaluating the effect of product innovation and product flexibility in different places and different industrial sectors. Future research could also adopt the instruments of this study and measure the effect of product innovation and product flexibility to increase market share. In addition, researchers could benefit from the results of this study and provide recommendations to the industrial decision-makers and manufacture managers regarding the best ways to expand their market share, increase customers' satisfaction, and to improve a competitive position of the business.

## 5.3 Recommendations and limitations for further research

The study has some limitations. The current study has been restricted to Jordanian manufacturing SMEs and more specifically in King Abdullah II Industrial Estate. The study considers only product innovation and product flexibility as competitive priorities. The current study adopts quantitative and hypothesis testing approach. In the light of study limitations, some recommendations can be proposed for future studies. In future studies, extended research is needed to cover all industrial cities in the north, middle and south of Jordan. Also, further research is needed with regards to several countries around the world since this would help to advance understanding of the research topic from different nationwide origins in different contexts. Another limitation is that the proposed model is based on the cross-sectional data from Jordan; therefore, longitudinal investigations are preferred for better implications of the research topic. Methodologically, future studies can employ qualitative studies to investigate different aspects of manufacturing SMEs with different roles. Future studies can also investigate the impact of innovation and flexibility on product life cycle and its extension. Future studies can investigate different competitive priorities such as cost, quality, delivery, talent, manager, and market strategy.

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