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The impact of entrepreneurial orientation on the performance of Jordanian manufacturing small and medium enterprises (SMEs)

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Abstract

Purpose: This research aims to measure the impact of entrepreneurial orientation and its dimensions (innovativeness, proactiveness, and risk-taking) on the performance of Jordanian manufacturing SMEs.

Methodology: The data were collected using the stratified random sampling technique method. Respondents in Jordanian manufacturing SMEs in Abdullah II IBN Al-Hussein Industrial Estate were approached using an online questionnaire. Of these, 287 completed questionnaires were obtained for further analysis. Data was analyzed using Partial Least Square-Structural Equation Modelling. Descriptive tests, measurement, and structural models are among the analyses performed on the data.

Findings: The results show that the two dimensons of entrepreneurial orientation, innovativeness and risk-taking, have positively influenced the performance of Jordanian manufacturing SMEs. In addition, proactiveness does not impact the SME's performance. Moreover, the entrepreneurial orientation construct has been positively linked to the performance of Jordanian manufacturing SMEs.

Implications for theory and practice: The results of this study may facilitate manufacturing SMEs in Jordan to identify the impact of entrepreneurial orientation and its dimensions on SMEs' performance. Also, it may help to achieve the intentions of the government to create a greater Jordan in 2030 by spurring entrepreneurial orientations among the business players.

Originality and value: This study deliberates the roles of entrepreneurial orientation, and its dimensions on SME performance, where this scope is relatively new in Jordan.

Keywords (5-10): innovativeness, proactiveness, risk-taking, entrepreneurial orientation, small and medium enterprises, performance, Jordan

Introduction

In both developed and developing nations, SMEs play a critical role in economic, social, improving human capital, and environmental growth (Alam et al., 2022; Higgs & Hill, 2019; Susanto et al., 2023). SMEs also employ people with low incomes, and in certain situations, they are the primary source of employment in rural areas and their role must be noticed (Belas et al., 2020). Because of their ability to increase their productive capacity in tackling poverty and unemployment, the manufacturing sector of SMEs can be considered one of the most significant sources of economic development in both developed and emerging economies (Isichei et al., 2020; Shah & Ahmad, 2019). For instance, the Jordanian economy is mostly considered as an SME-based economy; it accounts for 95% of Jordanian enterprises (Trawnih et al., 2021). Additionally, SME manufacturing in Jordan contributed 40% of gross domestic

production in 2019 (Central Bank of Jordan, 2020). On another note, Jordanian SMEs employed 52% of the labor force and contributed around 45% of transformational exports in 2020 (Trawnih et al., 2021; Zighan et al., 2021).

Although SMEs are important for Jordanian and have significant contributions to the economy and individuals, a few past studies mentioned that Jordanian SMEs face many problems that negatively impact their performance (Alharbi, 2020; Bawaneh & Al-Abbadi, 2017; Masa'deh et al., 2018). Among the issues that influence its performance such as lack of proper and effective training and skilled employees (Alharbi, 2020; Bawaneh & Al-Abbadi, 2017), lack of technological advancement (Alhorani, 2019; Allataifeh & Al-Shaikh, 2020), financial problems (Alharbi, 2020; Alhorani, 2019), lack of cooperation and information (Alhorani., 2019; Alhnity et al., 2016), and limited water and energy resources (Alharbi, 2020; Sandri et al., 2020).

Due to this, more efforts must be focused on measuring the entrepreneurial orientation that will facilitate more success in Jordanian manufacturing SMEs (Alhorani, 2019; Gonthier & Chirita, 2019). For instance, Hayat et al. (2019) claimed that entrepreneurial orientation is one of the most critical firm success characteristics that might contribute to long-term competitive advantage. According to Zaato et al. (2020) entrepreneurial orientation is crucial for the survival and performance of small businesses. Other scholars (Ince et al., 2023; Isichei et al., 2020; Sajjad et al., 2023) also revealed that the entrepreneurial orientation allows managers and internal processes to be creative, in turn, more of SMEs' performance. Moreover, entrepreneurial orientation represents a strategic construct that reflects the level to which firms are innovative, proactive, and risk-taking in their behaviour and management philosophies (Covin & Wales, 2019). Many past works have proven the positive significant role of entrepreneurial orientation on SME manufacturing performance (Khizar & Iqbal, 2020; Kraus et al., 2018). However, most past studies have concluded the findings in many developed countries, and a similar study is underexplored in developing countries (Allataifeh & Al-Shaikh, 2020; Isichei et al., 2020).

Thus, the main objective of this paper is to measure the role of entrepreneurial orientation and its dimensions (innovativeness, pro-activeness, and risk-taking) on the performance of Jordanian manufacturing SMEs by answering the following research questions: (1) What is the influence of innovativeness, pro-activeness, and risk-taking on the performance of Jordanian manufacturing SMEs? and (2) What is the overall influence of entrepreneurial orientation on the performance of Jordanian manufacturing SMEs? The findings will add to the existing literature on entrepreneurial orientation in Jordanian SME manufacturing performance. Also, Jordanian SME manufacturing owners, managers, and decision-makers can improve SMEs' performance through entrepreneurial orientation. The remainder of the paper is structured as follows. Section 2 reviews the relevant literature, and Section 3 details the method applied. The fourth part discusses the findings and the last part presents the conclusion.

Literature Review

Manufacturing small and medium enterprises in Jordan

According to Jordan Strategy Forum (2021), the manufacturing sector is one of the main components of the Jordanian economy in terms of growth and sustainability; it employs around 20% of the total workers in Jordan and is considered one of the major sectors in term of job creation, whereas the value of exports was 4,540.7 million JOD by the end of 2020. By giving Jordan's government more than JOD 1 billion in direct or indirect taxes each year, the industrial sector helps to strengthen the country's financial stability (Ministry of Investment, 2022). Regarding the definition of an SME, the Jordanian government has referred to the common

criteria (the number of employees, the amount of capital, or both) used by many countries to define their SMEs (Shah & Ahmad, 2019). For example, micro-enterprises are those that include between 1 to 4 workers and their total assets/sales less than 100,000 JOD, whereas small-enterprises are those enterprises that include 5 to 19 workers or their total sales/assets greater or equal to 100,000 and less than 1 million, while the medium- enterprises are those which includes 20 to 99 workers and their total assets/sales between 1,000,000 and less than 3,000,000 JOD (Jordan Chamber of Industry (JCI, 2023). SMEs are the future of the economy in Jordan, as this sector is a major generator of job opportunities and a critical pillar of economic growth and national success (Bawaneh & Al-Abbadi, 2017). Thus, to study the impact of entrepreneurial orientation on the performance of Jordanian manufacturing SMEs is essential.

Theoretical background

This study has incorporated entrepreneurial orientation theory to measure the performance of Jordanian manufacturing SMEs. An entrepreneurial firm is one that engages in product-market innovation, takes on some dangerous projects and is the first to come up with 'proactive' inventions, beating competitors to the punch (Miller, 1983. Entrepreneurial orientation is a company activity that is related to proactive decision-making practices that pay attention to innovative strategies, risk-taking, and exploiting market opportunities (Lumpkin & Dess, 1996). This theory consists of five dimensions: 1) autonomy, (2) competitive aggressiveness, (3) innovativeness, (4) proactiveness, and (5) risk-taking (Covin & Slevin, 1989; Lumpkin & Dess, 1996). At the same time, Anderson et al. (2015) classified entrepreneurial orientation into two dimensions, namely, entrepreneurial behaviour (innovativeness, proactiveness) and managerial attitude (risk-taking). This study only focused on the three dimensions of entrepreneurial orientations (innovativeness, proactiveness, and risk-taking) on the performance of Jordanian manufacturing SMEs. This is in line with the past works of Dankiewicz et al. (2020), Isichei et al. (2020), and Parente et al. (2021), who highlighted that the entrepreneurial orientation dimensions (innovativeness, proactiveness, and risk-taking) are suitable to measure to business performance.

Small and medium enterprises performance

The performance of an organization is defined as its capacity to use its resources effectively and efficiently to accomplish both operational and strategic goals (Daft, 2000; Tseng & Lee, 2014) and to determine if the company is successful or not (Abdul Rahman et al., 2018; Nuvriasari et al., 2020). Performance in any organization depends on the concept that it needs to apply relevant management styles to foster growth, integrate essential processes to guarantee sustainability, and make efficient use of resources (Ali et al., 2021). In the modern global economy, performance has become crucial for an organization to remain successful and competitive (Abdul Rahman et al., 2018; Masa'deh et al., 2018). Generally, a firm's performance is determined by the real financial and non-financial outcomes of its attempts to accomplish its goals and objectives (Bature & Hin, 2017). Singh et al. (2016) have defined financial indicators as an objective assessment of an organization's performance, and the data utilized to compute them can often be obtained from financial reports and public reports that have been available for a while. In contrast, subjective measurements assess an organization's performance based on respondents' judgments of the organization's profit over time, the positions of competitors, the level of customer satisfaction, creativity, staff engagement, the organization's reputation, and other variables (Isichei et al., 2020).

Many studies used subjective measurements to assess business performance (Arshad et al., 2014). Freeman (1984) defines a stakeholder as, stakeholders are individuals who may be

impacted by business outcomes and who may have a variety of effects on the operations' outcomes. Stakeholders include different groups such as customers, employees, partners, and shareholder's communities (Freeman et al., 2018). Based on stakeholder theory, firm performance has at least seven facets: employee satisfaction, customer satisfaction, environmental performance, social satisfaction, market value, profitability, and growth (Santos & Brito, 2012). According to Masocha (2019), many authors mentioned that the non-financial performance dimensions are customer satisfaction, employee satisfaction, innovativeness, competitiveness, and entrepreneur satisfaction. According to Bénet et al. (2022), many studies mentioned that non-financial performance is considered through different aspects such as customer satisfaction, market share, and quality. Hence, the current study has selected the subjective measures for firm performance.

Innovativeness and SME's performance

Innovativeness entails the desire for new ideas and approaches towards the products and services offered to the market (Vila-Lopez & White, 2018). Innovativeness is a fundamental aspect of an organization's perspective, that justifies the extent to which a company can be considered entrepreneurial in its operations and administration (Lumpkin & Dess, 1996). Importantly, modern company survival is based on innovation, enabling organizations to offer value to their customers by introducing new products, modifying existing products, and developing new ones (Kallmuenzer & Peters, 2018; White & Vila, 2017). Several past studies have proved that innovation has a major impact on a firm's performance (Al Naqbia et al., 2020; Basco et al., 2020; Isichei et al., 2020; Jiang et al., 2018; Vila-Lopez & White, 2018; White & Vila, 2017). For instance, Basco et al. (2020) included a sample of SMEs from different countries (China, Spain, and Mexico) and found a positive effect of innovation on SMEs' performance.

However, it is crucial to note that several significant past studies have highlighted a negative relationship between innovativeness and SME performance (Chin et al., 2016; Dai et al., 2014; Sahut & Peris-Ortiz, 2014; Shah & Ahmad, 2019). For instance, Sahut and Peris-Ortiz (2014) underscored that, unlike larger companies, SMEs might face adverse effects from innovation, pointing out that non-innovative businesses often outperform innovative ones in the marketplace and have a lo]nger lifespan. Similarly, a study by Shah and Ahmad (2019) found that innovativeness can hamper the performance of SMEs in the case of Pakistani enterprises, as entrepreneurial firms invest in developing innovative concepts but struggle to commercialize them due to resource constraints. Building on these significant findings, this study proposes the following hypothesis:

H1: Innovativeness has a positive impact on SME's performance.

Proactiveness and SME's performance

Proactiveness can refer to the firm's ability to identify, predict, and proactively act on future customers' demands by providing new services and products not known by anyone in the industry (Kallmuenzer & Pefactor, 2018). A firm's ability to take advantage of industry first-movers indicates high entrepreneurial activity and is considered the key internal component contributing to its success (Isichei et al., 2020; Lumpkin & Dess, 1996). Past works have revealed the positive impact of proactiveness on SMEs' performance (e.g., Isichei et al., 2020; Shah & Ahmad, 2019). According to Knight (1997), proactiveness is the strategy that ensures the firm's survival and good performance, both of which contribute to its long-term sustainability. Another study by Uchenna et al. (2019) demonstrated the positive influence of

proactiveness on enterprise performance. The findings are also consistent with past research by Oni et al. (2019), which emphasizes the positive impact of proactiveness on SME performance.

However, it's important to note that not all studies have found a positive correlation between proactiveness and SME performance. Several past studies have, in fact, highlighted a negative impact (e.g., Filser & Eggers, 2014; Okangi, 2019). For instance, a study by Filser and Eggers (2014) found that proactiveness did not significantly affect firm performance. These contrasting findings form the basis for the following hypothesis in this study:

H2: Proactiveness has a positive impact on SMEs performance.

Risk-taking and SME's performance

Risk-taking is the firm's willingness to commit resources, perform activities and take initiatives, whereas the results are uncertain (Jiang et al., 2018; Kallmuenzer & Peters, 2018). There are various forms of risk encountered by entrepreneurs, such as business risks, financial risks, and personal risks (Linton, 2019; Baird & Thomas, 1985; Rauch et al., 2009). SMEs often are unable to achieve success and satisfy their goals, because of fair reasons such as shortage in resources and weak managerial skills, so policymakers and managers look for less risky activities and projects (Khan et al., 2021). Most studies assert the crucial role of risk-taking in a firm's performance and development in the long run (Belás et al., 2018; Dankiewicz et al., 2020; Shah & Ahmad, 2019). Although some studies indicate that risk-taking has no significant effect on a firm's performance (Kallmuenzer & Peters, 2018; Isichei et al., 2020), they highlighted that a well-planned decision-making process, risk-taking, which takes into consideration all the decision sides and firm's abilities, will enhance and promote firm's performance, which is the overall goal of risk-taking as an important feature of entrepreneurial orientation.

However, several past studies have exposed a negative role of risk taking on SME performance (Rezaei & Ortt, 2018; Le Roux & Bengesi, 2014; Saif, 2023). For example, a past work by Saif (2023) highlighted a negative relationship between risk-taking and SME performance. Based on the prior literature, this study postulates the following hypothesis:

H3: Risk-taking has a positive impact on SMEs performance.

Entrepreneurial orientation and SME's performance

Entrepreneurship involves a strong process of ideas, revolution, and creation, which requires the willingness to create and execute new opinions to come up with inventive solutions promoted by tendency for risk taking and the creation of a strong team of co-founders and venture partners, the capacity to manage resources, the presence of a business plan, and the capacity to spot and take opportunities (Zahari, 2019). As a result of the new and complex structure of the global economic environment, companies have been pushed to develop new methods for enhancing their competitiveness (Hassen & Singh, 2021). Numerous empirical studies show that there is a strong correlation between entrepreneurial orientation and companies' financial performance (Hassen & Singh, 2021; Semrau et al., 2016). This finding has significant practical implications, as it suggests that companies can enhance their financial performance by fostering an entrepreneurial orientation. Entrepreneurial orientation is crucial for SMEs surviving development, since it deals with innovative and creative abilities and to explore chances for business success (Herlinawati et al., 2019; Shah & Ahmad, 2019). The relationship between entrepreneurial orientation and performance has received considerable attentions from scholars (Wiklund & Shepherd, 2005; Rauch, et al., 2009). Entrepreneurial

orientation is widely regarded as a critical factor in firm's performance (Kraus et al., 2018; Khizar & Iqbal, 2020).

Many studies have shown that entrepreneurial orientation positively impacts a company's performance (Khan et al., 2021; Kim et al 2021). According to Isichei et al. (2020) entrepreneurial orientation promotes internal processes and allows managers, particularly small businesses, to be innovative to obtain market advantage. This is consistent with (Hassen & Singh, 2021; Hayat et al., 2019; Isichei et al., 2020) findings that a firm's development and performance are linked to its entrepreneurial orientation. On another note, past work by Oktavio et al. (2019) highlighted a negative relationship between entrepreneurial orientation and SME performance. Based on the abovementioned literature, this study postulates the following hypothesis:

H4: Entrepreneurial orientation positively impacts SME's performance.

Figure 1 shows the conceptual framework used for this study. The framework consisted of four hypotheses. It shows that innovativeness, proactiveness, risk-taking (dimensions of entrepreneurial orientation considered as the first order-model), and entrepreneurial orientation (referred to second-order model) are independent variables, whereas SME's performance is the dependent variable.

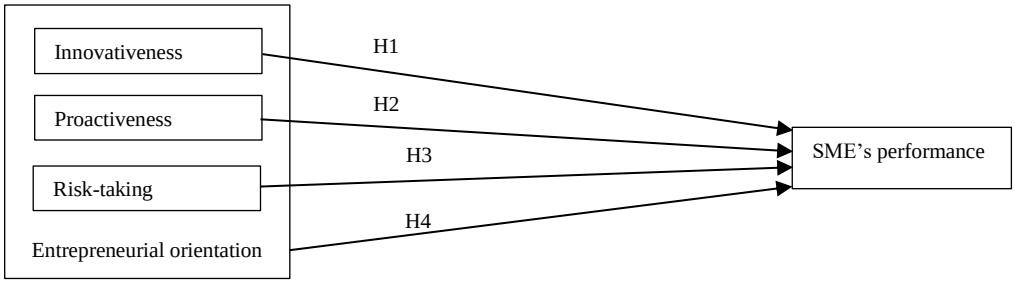

Figure 1. Conceptual framework

Methodology

This study adopted the quantitative survey design; the population study is the manufacturing SMEs in the Jordan industrial company, which consists of nine industrial cities and comprises 870 companies, but the greatest city, which includes almost all industrial cities, is King Abdullah industrial city in Sahab, which includes 424 companies. The middle and senior managers, and chief executive officer of manufacturing sector SMEs located in Abdullah II IBN Al-Hussein Industrial Estate / Sahab are the target population of this study which employed the stratified random sampling technique for selecting the samples. A sample size of 271 was determined by Krejcie and Morgan (1970). To ensure the validity and reliability of the questionnaire, this study asked four expert opinions and conducted pre-test procedures with the participations 20 respondents. The suggestions obtained from the two procedures were used to refine the questionnaire. A total of 409 prospective respondents (middle manager, senior manager, and chief executive officer) were approached via email between September and October 2023. Of 409 email addresses, 382 were successfully delivered, and 27 failed to be delivered due to invalid email addresses. However, only 287 completed questionnaires were received for this study, and the response rate was 70.2%.

A self-completed questionnaire, consisting of three sections, was chosen as the main data collection method. Section One collected information about the entrepreneurial and sustainable

orientations in the SMEs, Section Two gathered information about SME performance, and the Third Section asked for details about the demographics of the respondents. A five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree) was used. All items related to entrepreneurial orientation were adapted from Zhang et al. (2014). Additionally, firms' performance items were adapted from Santos and Brito (2012), Masocha (2019), Anwar and Shah (2021), Le and Ikram (2022), Khan et al. (2019) and Mansi (2021). The data was then analyzed using Partial Least Square (PLS), SmartPLS 4, version 4.0.9.8 (Ringle et al., 2022). The analyses were conducted in two stages. First, the measurement model was tested to ensure the constructs had sufficient psychometric validity. Then, the structural model in which the hypotheses were tested was assessed. A bootstrap resampling procedure was also conducted to estimate the coefficients.

Results

Table 1 displays the profile of respondents. Respondents varied in terms of job positions, gender, age, level of education, year of experience, type of SME manufacturing, number of employees they have, and sales value they achieved. The sample in this study comprises a total of 287 respondents. Most respondents act as middle managers, with 46.7% of the total respondents. Meanwhile, most of the respondents are male (87.5%). The majority of respondents are from the age range of 30 to 49 years old. The majority possessed a bachelor's degree, accounting for 66.6% of the respondents. 161 respondents have 6 to 10 years of company experience, while 60 have more than ten years of experience. Most respondents are from metal and electrical products SMEs' manufacturing type, which accounted for 23.3%, followed by rubber and plastic products at 19.9%, and chemical products at 18.5%, respectively. The majority of 179 companies have 5 -19 employees, followed by 105 companies having 20-99 total number of employees. These responses resulted in most sales values ranging from greater or equal to 100,000 and less than 1 million JD from 182 companies or 63.4% of the total respondents.

Table 1. Profile of Respondents

Item	Sub-item	Frequency (N=287)	Percentage (%)
Job	Chief Executive Officer	78	27.2
	Senior Manager	75	26.1
	Middle Manager	134	46.7
Gender	Male	251	87.5
	Female	36	12.5
Age	18 - less than 29	11	3.8
	30 - less than 39	120	41.8
	40 - less than 49	119	41.5
	50 and above	37	12.9
Education	Secondary	3	1.0
	Bachelor's	191	66.6
	Master	84	29.3
	Doctoral	9	3.1
Experience	Less than 1 year	4	1.4
	1-5 year	62	21.6
	6-10 year	161	56.1
	More than 10 years	60	20.9
Manufacturing type	Food products	26	9.1
	Pharmaceutical products	31	10.8
	Rubber and plastic products	57	19.9
	Metal and electrical products	67	23.3
	Garments and textile products	19	6.6
	Chemical products	53	18.5

	Paper and packaging	20	7.0
	Wood and furniture	9	3.1
	Construction	5	1.7
Number of employees	1- 4 employees	1	0.3
	5 -19 employees	179	62.4
	20-99 employees	105	36.6
	100 and above	2	0.7
Sales value	Less than 100,000 JD	102	35.5
	100,000 to less than 1 million JD	182	63.4
	1 million to less than 3 million JD	1	0.3
	More than 3 million JD	2	0.7

Next, the descriptive analysis was used to measure the central tendency between variables. These include the mean and standard deviation of those variables, as shown in Table 2. It shows that the mean value for SME performance is M=4.535; SD=.354. Moreover, the mean scores and standard deviation values of entrepreneurial orientation, innovativeness, proactiveness, and risk-taking are M=4.431; SD=.450, M=4.433; SD=.562, M=4.484; SD=.400, and M=4.392; SD=.607, respectively. The results are similar to past studies (Khan et al., 2021; Uddin et al., 2022).

Table 2. Descriptive analysis

Constructs	Mean (M)	Standard deviation (SD)
SME performance	4.535	.354
Entrepreneurial orientation	4.431	.450
Innovativeness	4.433	.562
Proactiveness	4.484	.400
Risk-taking	4.392	.607

The following analysis is called measurement model test. The first test under the measurement model assesses the loading factors for individual items used in this study. The individual indicator reliability signifies whether each indicator measure is consistent or low in measurement error. In the current study, individual reflective indicator reliability was determined by factor loadings to their respective constructs and considered adequate when it has a factor loading higher than .70 on its respective construct (Chin, 1998; Henseler et al., 2009). Generally speaking, the higher the average loadings, the higher the reliability (Gerbing & Anderson, 1988). Generally, two separate analyses were carried out: the initial PLS run of the measurement model to determine indicator factor loadings and the second PLS run with the bootstrapping procedure of 5000 resamples to generate standard error and t-values for each indicator.

Table 3 shows the loading of the indicator. It was discovered that the loading factor values for all items in first order model were above .70, ranging from .726 (PR1) to .981 (RT3). On top of that, the loading factor values for all items in second order model (entrepreneurial orientation) were recorded from .754 (PR2 and PR4) to .885 (RT2). Based on the findings, this model explained that all items were retained because they had loading values greater than .70 and were considered significant (Hair et al., 2017; Ramayah et al., 2016). The current study has tested the reliability and convergent validity of the constructs following the guidelines recommended by Henseler et al. (2009) through investigating Cronbach's alpha and composite reliability value. According to Nunnally and Berstein (1994), Cronbach's alpha coefficient value equal to .60 or above is considered adequate for constructing reliability. Results in Table 3 show that all constructs' alpha values were above .700. For instance, Cronbach's alpha values for independent variables in the first order model are recorded at .958 (innovativeness), .791 (proactiveness), .984 (risk-taking), and entrepreneurial orientation (second order) is at .941. While, the Cronbach's alpha value of SME performance was .951. Thus, no issue of reliability

seen in this study. Additionally, this study also used composite reliability to check the reliability of the constructs. The results shown in Table 3 demonstrated that composite reliability values ranged from .866 (proactiveness) to .988 (risk-taking). According to Fornell and Larcker (1981), a composite reliability of .700 or greater is considered acceptable. Therefore, based on the results of composite reliability, as shown in Table 3, the constructs were considered reliable.

Moreover, this study has measured the convergent validity using Average Variance Extracted (AVE) as suggested by Fornell and Larcker (1981) and Hair et al. (2017). The AVE measures the variance captured by the indicators relative to measurement error, and to be accepted, the value of AVE should be above .50 (Chin, 2010; Fornell & Larcker, 1981; Henseler et al., 2009). Table 3 parades the AVE values for each construct and shown above the accepted value, range of .515 (SME performance) to .942 (risk taking). Thus, the results indicate that these indicators satisfied the requirement for the convergent validity of their respective constructs (Chin, 2010; Fornell & Larcker, 1981; Henseler et al., 2009). The present study also tested the Variance Inflation Factors (VIF) to check the multicollinearity issue. As illustrated in Table 3, the VIF values for all constructs were below 5, showing no multicollinearity issue in this study (Hair et al., 2021). The VIF values shown in Table 3 ranged from 1.00 (entrepreneurial orientation-second order) to 2.153 (innovativeness-first order).

Table 3. Measurement model results (First and second-order)

Constructs/Items	Loading1	Loading2	CA	CR	AVE	VIF1	VIF2
IN			.958	.970	.889	2.153	
IN1	.929	.823					
IN2	.954	.843					
IN3	.942	.825					
IN4	.946	.843					
PR			.791	.866	.622	1.542	
PR1	.726	.760					
PR2	.858	.754					
PR3	.872	.770					
PR4	.775	.754					
RT			.984	.988	.942	1.765	
RT1	.957	.879					
RT2	.977	.885					
RT3	.981	.878					
RT4	.975	.884					
RT5	.961	.872					
EO (Second order)			.941	.950	.602		1.000
SP			.951	.956	.515		
SP1	.807						
SP2	.800						
SP3	.805						
SP4	.859						
SP5	.867						
SP6	.751						
SP7	.797						
SP8	.780						
SP9	.745						
SP10	.777						
SP11	.788						
SP12	.756						
SP13	.791						
SP14	.791						
SP15	.742						
SP16	.782						
SP17	.759						
SP18	.769						
SP19	.765						
SP20	.728						
SP21	.734						

Note: IN = Innovativeness; PR = Proactiveness; RT = Risk -Taking; SP = SME Performance; EO = Entrepreneurial Orientation; Loading1 = First-order; Loading2 = Second-order; CA = Cronbach's Alpha; (CR) = Composite Reliability; AVE = Average Variance Extracted; VIF1 = Variance Inflation Factor First-order; VIF2 = Variance Inflation Factor Second-order

Furthermore, there are three ways to check discriminant validity: (1) the criteria put forward by Fornell and Larcker (1981), (2) observing cross-loadings (Chin, 1998), and (3) the Heterotrait-Heteromethod Ratio Correlations (HTMT) (Henseler et al., 2015). To measure discriminant validity, the current study used two approaches (Fornell and Larcker criterion and HTMT criterion). The Fornell and Larcker criterion is an approach that compares the square root of the AVE with the correlation of latent constructs (Hair et al., 2017). The square roots of AVE coefficients are presented in the correlation matrix along the diagonal. Furthermore, the square root of each construct's AVE should have a greater value than the correlations with other latent constructs (Hair et al., 2017). The result of the Fornell-Larcker approach of this study is shown in Table 4. In brief, the square root of AVE values of each latent construct in different groups at the diagonal matrix is larger than its correlation values, thus indicating that the measurement model is validated statistically. In addition, Table 5 shows that the HTMT values for the two models have recorded below .085. Thus, it passed the HTMT.85 measures (Clark & Watson, 1995; Kline, 2011). Thus, the discriminant validity has been established for the research constructs (Henseler et al., 2015). These results confirm that discriminant validity exists in this study.

Table 4. Fornell-Larcker criterion

Constructs (First-order)	IN	PR	RT	SP	Constructs (Second-order)	EO	SP
Innovativeness	.943				Entrepreneurial orientation	.776	
Proactiveness	.581	.790			SME performance	.609	.718
Risk-taking	.654	.445	.970				
SME performance	.534	.388	.568	.718			

Note: IN = Innovativeness; PR = Proactiveness; RT = Risk Taking; SP = SME Performance; EO = Entrepreneurial Orientation

Table 5. Heterotrait-Heteromethod Ratio Correlations (HTMT)

Constructs (First-order)	IN	PR	RT	SP	Constructs (Second-order)	EO	SP
Innovativeness					Entrepreneurial orientation		
Proactiveness	.672				SME performance	.628	
Risk-taking	.673	.502					
SME performance	.549	.453	.575				

Note: IN = Innovativeness; PR = Proactiveness; RT = Risk Taking; SP = SME Performance; EO = Entrepreneurial Orientation

Moreover, structural model assessments consist of four main criteria such as structural model path coefficients (β), coefficient of determination (R^2), effect size (f^2), and global fit (GoF) index. Based on the values of the coefficients shown in Table 6, it was revealed that two hypotheses were supported in the first-order model. Specifically, innovativeness -> SME performance and risk-taking -> SME performance (β = .240, t = 3.563, p = .000; β = .373, t = 6.329, p = .000) were found positive significant. Therefore, Hypothesis 1 and Hypothesis 3 are supported. However, one of the dimensions in entrepreneurial orientation, namely proactiveness, has failed to positively impact the SME performance, with the results of (β = .085, t = 1.455, p = .146). Thus, Hypothesis 2 is not supported. In the second-order model, the entrepreneurial construct is positively linked to SME performance (β = .609, t = 15.523, p = .000). Hence, Hypothesis 4 is supported.

Next, model explanatory power is assessed through the R^2 value. Table 6 shows the adjusted R^2 value for the endogenous variables (innovativeness, proactiveness, and risk-taking) in the first-order model is .367. Moreover, the adjusted R^2 in the second-order model is recorded at .368. Only a few differences of adjusted R^2 can be seen in both models. Chin (1998) has outlined R^2 values for dependent variables based on: .67 (substantial), .33 (moderate) and .19 (weak). Thus, the adjusted R^2 values obtained from this study for both models can be described as moderate (Chin, 1998). As shown in Table 6, the conceptual model of this study explains

36.7% (first model) and 36.8% (second model) variation in SME performance. The model also explains that the 63.3% and 63.2% variation in SME performance construct was accounted for by its antecedent constructs.

In addition, the effect on the path model can be evaluated using the effect size (f^2) (Cohen, 1988). According to Cohen (1988), an f^2 of .02 is considered a small effect, .15 a medium effect, and .35 as a large effect. Table 6 indicates that f^2 of innovativeness, proactiveness, and risk-taking were reported at .043, .007, and .126, respectively. These values were considered weak. Furthermore, the f^2 value for entrepreneurial orientation was .589, indicating a large effect size. Finally, the GoF index was calculated using the formula suggested by Wetzels et al. (2009). Wetzels et al. (2009) viewed a GoF index of .10 as a small effect, .25 as a medium effect, and .36 as a large effect. In this study, the GoF index is .500 and exceeds the cut-off value of .36 in effect size. Thus, the study concludes that the research model has a better predictive power, and the findings of the study adequately validated the PLS model globally (Wetzels et al., 2009).

Table 6. Path coefficient and hypothesis testing

Hypothesis		Relationship	Beta	t-value	P values	Results	Adjusted R^2	f^2
H1		IN -> SP	.240	3.563	.000	Supported		.043
H2	First-order	PR -> SP	.085	1.455	.146	Not supported	.367	.007
H3		RT -> SP	.373	6.329	.000	Supported		.126
H4	Second-order	EO -> SP	.609	15.523	.000	Supported	.368	.589

Note: IN = Innovativeness; PR = Proactiveness; RT = Risk-Taking; SP = SME Performance; EO = Entrepreneurial Orientation

Discussion

This study aimed to examine the role of entrepreneurial orientation and its dimensions, such as innovativeness, proactiveness, and risk-taking, on SME performance. The findings shown in Table 6 proved that the two dimensions of entrepreneurial orientation, namely, innovativeness (Hypothesis 1) and risk-taking (Hypothesis 3), were positive and significantly linked with SME performance. These findings are consistent with previous research (e.g., Basco et al., 2020; Belas et al., 2018; Isichei et al., 2020; Shah & Ahmad, 2019). In contrast to earlier findings in the literature, this study could not make a positive connection between proactiveness (Hypothesis 2) and SME performance. A possible explanation for this might be that, according to Chen and Hsu (2013) study, proactiveness can help organizations make a profit, but too much of it can drive away customers due to tend to concentrate on new products rather than researching the market trends and customer demands, which leads to a decline in market performance. However, the findings agree with several past studies (e.g., Duru et al., 2018; Putniņš & Sauka, 2020), which found no significant relationship between proactiveness (Hypothesis 2) and SME performance.

Moreover, this study has revealed a positive significant impact of entrepreneurial orientation on SME performance. Thus, Hypothesis 4 is accepted. The finding aligned with previous works (Khan et al., 2021; Khizar & Iqbal, 2020; Kim et al., 2021). Additionally, this study aligned and supported by the theory of entrepreneurial orientation because most of proposed relationship are supported. Meanwhile, the findings of this study give insight into the application of the theory of entrepreneurial orientation to understand the under-study constructs. This study elaborated on the crucial role of entrepreneurial orientation and its dimensions, such as innovativeness, proactiveness, and risk-taking, on SME performance.

Conclusion

To conclude, the findings confirmed that entrepreneurial orientation and its two dimensions, innovativeness and risk-taking, did impact SME performance. In contrast, one of the entrepreneurial orientation dimensions, namely, proactiveness, has been unable to be associated with SME performance in Jordanian. The findings are expected to encourage Jordanian SME owners and managers to adopt a more entrepreneurial mindset to enhance their companies' performance and maintain their continued existence in a highly competitive sector. It suggests that strengthening attributes like taking risks and being innovative would assist SMEs in performing successfully. However, regarding the proactiveness attribute, SME owners and managers are advised to be proactive in those new products related to most consumers' needs and high demand to enhance and maintain SME performance.

This study has its limitations. Firstly, the study was conducted in SME manufacturing sectors in Jordan, which may limit the generalizability of the findings. Thus, future studies that replicate the present study in different industries further support the research model. Secondly, the data was gathered using a cross-sectional design and confined to a single point of time. Supporting future studies using longitudinal and qualitative studies may be useful in closing the gap associated with this study. Finally, this study made propositions regarding entrepreneurial orientation and its two dimensions, innovativeness, and risk-taking, which did impact SME performance but did not concentrate on the other factors associated with SME performance in Jordan. Future studies should integrate other factors like sustainable and human resource orientations as part of the enabler of SME performance in Jordan.

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