

## The effect of entrepreneurial orientation and knowledge management on innovation performance: The mediation role of market orientation

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### ABSTRACT

This study attempts to conceptualize the direct implications of entrepreneurial orientation and knowledge management on innovation performance and seeks to determine the mediation effect of marketing orientation on these relationships. This is the first attempt to construct such a model. The study empirically examines the conceptual model using a sample of 221 CEOs and owners of Small and Medium Enterprises (SMEs) in Kuwait. The data was collected using a close ended self-administered questionnaire. The validity and reliability of the model is tested using a measurement model and the structural model is constructed to understand the significance of the conceptual relationship posited in the hypotheses of the study. The findings of the study indicate that entrepreneurial orientation and knowledge management had a considerable effect on innovation performance and that marketing orientation had a considerable influence on innovation performance. In addition, the findings indicate that marketing orientation mediated the effect of entrepreneurial orientation and knowledge management on innovation performance. This study has provided some empirical evidence for the importance of entrepreneurship and innovation as well as knowledge management in ensuring the success of SMEs; it also provides an explanation on the manner in which entrepreneurial orientation and knowledge management improve the innovation performance of SMEs.

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## 1. Introduction

The economic downturn experienced by both the developing and developed nations have made it imperative for organizations to consider the concept of entrepreneurship from different perspectives (Yusoff et al., 2018). Policymakers in government institutions have acknowledged the significant and essential role played by entrepreneurship in facilitating economic upturn and reducing the rate of unemployment (Altinay et al., 2015). At present Small and Medium Enterprises (SMEs) provide employment opportunities for the workforce and young graduates and help them hone their entrepreneurship skills; which would ultimately help them develop their career paths instead or remain as career seekers (Lonial & Carter, 2015). Without entrepreneurship and innovations, SMEs would not be able to make the needed important contributions in economic expansion and affluence by generating employment, increasing savings and investments, developing skills and stimulating innovation. Innovation is currently the equivalent word for development. Thus, innovation is a critical driving force in the creation of wealth of an economy (Jogaratnam, 2017; Shirokova et al., 2016; Hussain et al., 2015; Ghomi & Barzinpour, 2018). SMEs make up 99% of all establishments operating in the Kuwait economy. They can be found across different sectors of the Kuwait economy, where 11.7% of the SMEs are in the industrial sector, 4% in agriculture, 0.3% in mining, 51% in trade, 16% in

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services, and 17% in other activities, including social and community services (IMF, 2019). Unlike in other developing economies, the contribution of Kuwait SMEs to gross domestic product (GDP) and employment is not encouraging. Kuwait SMEs contribute approximately 3% to the country's GDP in contrast the average 50% contribution made the SMEs in high income economies. The current employment rate in Kuwait is about 23% of the working population (Abukumail et al., 2016; Alzougool, 2019), which is half of the percentage developed and emerging countries (Al Sharekh, 2018). As in other developing and advanced countries, economic and social policy planner in Kuwait are currently giving closer attention to SMEs. Considering the importance of SMEs in realizing the objectives of community and environmental development as well as in achieving sustained financial goals, despite this they have not achieved the desired goal of improving the national economy in Kuwait (Ahmed & Al-Owaihian, 2015). Innovation is a key element ensuring the success of SMEs (Gurhan et al., 2011) and is regarded as a critical determinant of success in an extremely competitive world economy. Innovation can be used as a basis to clearly conceptualize future opportunities (Ahmed et al., 2018). Innovation Performance (IP) is regarded as a critical factor for the success of SMEs in an environment where international firms put more pressure on domestic firms to survive in a highly competitive market (Lonial & Carter, 2015; Altinay et al., 2015; Kasseeah, 2016; Zarei & Jabbarzadeh, 2019).

Several studies have revealed the importance of developing a conceptual model in an effort to improve Innovation Performance (IP) (Eggers et al., 2013; Fang et al., 2014; Jebarajakirthy, 2015; Morgan et al., 2015; Jogaratnam, 2017). There are a number of variables which should be taken into account for the development of the IP of SMEs given that these variables influence the innovation performance of an organization. For example, Entrepreneurial Orientation (EO) (Imran et al., 2018), Marketing Orientation (MO), and Knowledge Management (KM) have been shown to be correlated with IP (Kajalo & Lindblom, 2015), and therefore it is critical to understand the effect of these variables on improving the IP of SMEs in the market. (Amin et al., 2016). Knowledge management (KM) has become a continually crucial factor as organizations have realized that a sustained competitive advantage is dependent on the ability to efficiently manage their vast and varied knowledge assets. Organizational innovation is the result of a combination of knowledge elements (Kamasak et al., 2016) that are related to the creation new knowledge and ensuring the practical application of expertise (Susanty et al., 2019) as well as the subsequent sharing of this knowledge with all employees across all levels of the business organization (Kim & Shim, 2018; Eshlaghy et al., 2011). In addition to knowledge management, organizations with a stronger market-orientated culture are usually more successful in implementing innovations (Adams et al., 2016; Leal-Rodríguez, & Albort-Morant, 2016) and are able to better develop both exploratory and exploitative innovations (Ramachandran & Badrinarayanan, 2016). By taking into account factors such as knowledge management, market orientation, and entrepreneurial orientation, SMEs should seek to establish a high degree of IP (Jabeen & Mahmood, 2014; Kellermanns et al., 2016). Thus, the result of this study will reflect on developing the innovation performance of SMEs in Kuwait and enhance the knowledge on entrepreneurship in general.

## 2. Literature Review

### 2.1 Entrepreneurial Orientation

Entrepreneurial orientation (EO) is one of the most consistently researched constructs in the field of entrepreneurship (Gupta & Wales, 2017). It is a strategic consideration at the enterprise level which elucidates the practices of a firm, leadership principles, and ethical conducts that are inherently entrepreneurial (Anderson et al., 2015). One shared characteristics in the previous conceptual definition of EO is the consideration of innovative capacity, proactivity, and risk-taking as the fundamental defining aspects or components of orientation (Kellermanns, et al., 2016). EO contributes towards improving firm performance and the overall variance of firm performance. The greater variance is due to the observation that entrepreneurial actions eventually were not able to produce economic benefits and thus contribute to a wider distribution of firm performance (Linton & Kask, 2017). Some scholars have suggested that EO is a fundamental strategic approach adopted by a firm; and the dimension of this research continues to broaden given that this concept is used to understand the consequences of an entrepreneurial action in an increasingly wider research context. (Linton & Kask, 2017). Alhinity et al. (2016) divided EO into three components, namely proactiveness, risk taking, and innovativeness. Innovativeness is the preparedness to implement innovation and introducing new elements through ingenuity and trials that focus on product development and enhanced services as well as new processes (Lechner & Gudmundsson, 2014); on the contrary, proactiveness is linked with exploring opportunities, making advancement through the introduction of newer products and services in addition to forecasting potential demands to bring about change and to shape the environment (Kwak, 2013; Khan & Khaliq, 2014). The third component is risk-taking, which is the ability to act with boldness. This includes scrutinizing new and unconventional environment and market, depending on a large amount of resources to take risk with uncertain results, and securing a large amount of loan (Kellermanns, et al., 2016; Kajalo & Lindblom, 2015; Hoque & Awang, 2019; Khot & Thiagarajan, 2019).

### 2.2 Marketing Orientation

Marketing Orientation (MO) is the effort of an organization to understand and satisfy its definitive needs, which is essentially the recognized and apparent customer requirements. In order to be able to satisfy the latent needs of customers, organizations must have extensive market knowledge and productive learning styles (Baker & Sinkula, 2009). MO describes a combination of customer orientation, competitor orientation and inter-denominational coordination. It focuses on customers, and it requires the organization to have an integrated market knowledge in addition to being aware of the steps taken by their competitors.

Firms customize their products and services to fulfil customer demand and ensure customer satisfaction in order to gain a larger share of the market and achieve sustained competitive edge (Zafar et al., 2016). MO entails the implementation of solid actions as a means of responding to consumer requirements by using the information obtained through market intelligence. Generally, MO strategy can ensure greater consumer satisfaction while ensuring that the organization has a greater opportunity to attain performance goals (Yan et al., 2017). In this regard, Mokhtar et al. (2014) suggested that MO is an important means for sustaining an organization due to its advantage in creating better values for their customers. In other words, putting in place such marketing strategies will provide the managers with a tool which enable them to ensure superior business performance of their organization (Mokhtar et al, 2014). Market orientation has been categorized into two distinct but mutually exclusive types of orientation, namely a) responsive market orientation, which is the response of an organization to definitive customer requirements and the customers are aware of these responses; and b) proactive market orientation, which is the response of an organization towards unstated (or latent) customers desire without the customer being aware of it. These components are known as responsive MO and proactive MO (Gatignon et al., 2016; Gutierrez-Gutierrez et al., 2018).

### *2.3 Knowledge Management*

For the past several years, knowledge has been recognized to be an important intellectual source in the organization. In order to efficiently define intellectual resource, it is essential to introduce Knowledge Management (KM) in an organization (Zia & Shafiq, 2017). Knowledge management is defined as, “The process of systematically capturing, describing, organizing, and sharing knowledge – making it useful, usable, adaptable, and re-useable” (Gao et al, 2018). To remove any ambiguity, it is important to differentiate knowledge from data and information. Data refers to an unprocessed set of alphabets, numbers, objects and ideas obtained through scientific or experimental observations; however, arranging the data in a meaningful form turns it into information. Knowledge is obtained after this process has been completed and combined with experience, engagement, contexts, orientation, and understanding (Sarooghi et al., 2019; Hassan & Raziq, 2019). Knowledge management (KM) is gaining importance as organizations began to realize that sustainable competitive advantage is influenced by the ability to efficiently manage their vast and varied knowledge assets. The increase in number of workers in an organization as well as the evolution of knowledge-based or technologically advanced sectors signals the changes that are taking place in the effort to establish a knowledge environment in which abilities and skills become obsolete within a short period of time (Abdullah et al., 2018). KM involves creating, organizing, storing, disseminating and applying knowledge. Abdullah et al. (2018) have suggested that KM involves the management of both explicit and tacit knowledge and the use of information technology to aid in the process of identifying, acquiring, coding, storing, retrieving, sharing and disseminating knowledge. Previous researchers have developed models and tools for measuring knowledge management in organizations. The process of KM is carried out in several stages, namely creation of knowledge, organization of knowledge, storage of knowledge, exchange of knowledge, and application of knowledge (Lee & Wong, 2015; Massingham, 2014; Fauzi et al., 2018).

### *2.4 Innovation Performance*

The literature has defined the concept of innovation from different perspectives. Several types of innovations, including gradual product, revolutionary product, phased process, progressive process, and administrative innovation, have been extensively studied (Kim & Shim, 2018). This study focuses on the four types of organizational innovation. The first component is product innovation, which involves introducing novel goods/services or introducing substantially improved products/services (Mohnen et al., 2018). The second component is process innovation, which requires making substantial improvement in the manufacturing process or logistical support; this could also be in the form of implementing significantly improved supporting activities such as purchasing, accounting, maintenance and computing (Mohnen et al., 2018). Third component is marketing innovation which entails the development of new marketing techniques. The development of new marketing techniques, methods and tools are critical to assure the success of an organization (OECD, 2005). Finally, organizational innovation requires implementing new organizational approaches in the enterprise practices, workplace organization or external relations (Kinder et al., 2019).

## **3. Hypotheses Development**

### *3.1 The association of Entrepreneurial Orientation with Innovation Performance*

Even though the association of EO with firm performance has been extensively investigated theoretically and empirically (Amin et al., 2016; Presutti & Odorici, 2018; Vega-Vázquez et al., 2016; Gupta & Wales, 2017), only a small number of studies focused on the manner in which SMEs innovation performance is affected by EO (Zhai et al., 2018). There is a need to explore the impact of EO on the innovation performance of SMEs (Jalilvand et al., 2017; Norris & Ciesielska, 2019). Furthermore, there is a dearth of knowledge on the impact of EO in the innovation performance of SMEs even though this is one of the most significant performance indicators for SMEs. Although the results of the studies conducted by Zhai et al. (2018) and Jalilvand et al. (2017) have provided limited insights on this relationship in context of SMEs in China, Iran and Taiwan, the different EO constructs and the extent of innovation performance in different industries may vary between countries (Amin et al., 2016). Asbjørn and Tor (2013) have shown that EO should focus on organizational innovation as an effective method for improving the overall performance of a firm. Schueffel (2014) developed a model for determining the effect of EO on IP, open innovation proclivity, and organizational openness. It has been argued that higher levels of EO bring about

improved IP, and that a higher degree of EO has a beneficial impact on open innovation proclivity. It is found that the correlation between EO and IP is essential for firm in all different characteristics and context (Rauch et al., 2009). A large number of entrepreneurship research which focused on EO as a fundamental aspect have all contributed to EO in relation to IP in different levels of businesses (Morgan et al., 2019). Thus, this study seeks to make an extensive investigation of the EO in Kuwait SMEs and its impact on their IP. Therefore, the author posits that:

**H<sub>1</sub>:** Entrepreneurial orientation has a significant effect on the innovation performance of SMEs in Kuwait.

### *3.2 The association of Knowledge management with Innovation Performance*

Knowledge Management includes the acquisition, sharing, and application of knowledge, and is regarded as the primary driving force for administrative innovation and supports the new innovation administrative policies constantly (Breznik, 2018; Ding et al., 2019; Cheshmberah et al., 2020). Organizational innovation is the result of the combination of different knowledge elements (Kamasak et al., 2016) and is related to the creation of new knowledge, ensuring the practical application of knowledge (Susanty et al., 2018), and the subsequent sharing of this knowledge with all employees across all levels of the business organization (Kim & Shim, 2018) (Abbas & Sağsan, 2019). Through effective KM employees would be able to ensure a sustained innovation advantages (Hussain et al., 2019). Similarly, Hamdoun et al. (2018), Abbas and Sağsan (2019) and Breznik (2018) considered KM as a strategically important resource for innovation activities. Future research should investigate this phenomenon in different contexts (Susanty et al., 2019), for example, in SMEs. KM has a positive impact on product and process innovation, and this influence is even more powerful in organizations which have an established research and development unit (Tieng et al., 2016). Sarkar et al., (2016) have shown that knowledge management practices leads to improved product IP. Hence, researchers believe that KM processes is critical to innovation. However, the process of creating knowledge is associated primarily with organizational creativity (Choi et al., 2020). Therefore, this study seeks to examine how KM in SMEs may influence knowledge sharing practices for innovation performance. The findings of previous studies have to be reconfirmed through more extensive research to test the consistency and generalization in the context of SMEs. With this assumption, this study will examine the following hypothesis:

**H<sub>2</sub>:** Knowledge Management has a significant effect on the innovation performance of SMEs in Kuwait.

### *3.3 The relationship Between Market orientation and innovation performance*

A number of research studies have proven the positive association of MO with innovation (Adams et al., 2019; Newman et al., 2016; Leal-Rodríguez, & Albort-Morant, 2016). More specifically, these studies contended that MO brings about greater innovation and success with new products (Kocak et al. 2017). Organizations with higher market-orientated cultures are more likely to achieve successful innovations (Adams et al., 2019; Leal-Rodríguez, & Albort-Morant, 2016) and are more able to further expand their exploratory and exploitative innovations (Ramachandran & Badrinarayanan, 2016; Manab & Aziz, 2019). Kocak et al. (2017) recommended that future research examine the impact of different degrees of strategic orientation (e.g., MO and EO) on innovation performance considering that this would make an important contribution to the current body of knowledge. Moreover, most present studies investigate this issue against the backdrop of developed and emerging markets (Eggers et al., 2018; Leal-Rodríguez & Albort-Morant, 2016), and several studies have been carried out in developing countries with particular focus being given to the SMEs in the Gulf Region (Genc, Dayan, & Genc, 2019). Zhang & Zhu (2016) examined the relationships of MO with firm innovation performance. The results of their study seem to support the effect of both proactive and responsive MO on the innovation performance of SMEs. Another study was conducted by Asbjørn and Tor (2013) to investigate the influence of MO on organizational IP. The researchers administered a survey on 213 firms and the results were analyzed using structural equation modelling. The results suggest that there is a positive and statistically significant relationship between MO and IP. Based on the above literature and evidences, the following hypothesis will be examined in the empirical part of this study:

**H<sub>3</sub>:** Market Orientation has a significant effect on the innovation performance of SMEs in Kuwait.

### *3.4 The association of Entrepreneurial Orientation, Market Orientation and Innovation Performance*

Entrepreneurial orientation is regarded as an essential and extensive strategic orientation that can lead to successful innovation Eggers, et al. (2018). However, Seo (2019) conducted a study involving 11,837 ventures in Korea and found that there is a curvilinear relationship between EO and IP (technology and product). Similarly, Kollmann et al. (2019) found that there is no path between EO (encompassing proactiveness, risk-taking, and innovativeness) and IP, and that varying EO structure could have brought about innovation of product/service in Germany via MO. However, MO is not merely a process or an activity, rather it is a key element of the culture of an organization and this relationship has an impact on IP (Genc et al., 2019). RBV provides a complementary perspective where one resource of a firm (EO in the case of this study) interreact with other resources (e.g., MO) to concurrently influence IP (e.g. Barney, et al., 2001). Therefore, EO, together with MO, may have the effect of enhancing the IP of SMEs. In the same context, Li et al. (2020) were able to elucidate the intricate association of EO

with IP in different cultural backgrounds to understand the nature of the business environment or industry-specific characteristics. These intricacies of intertwined circumstances mean that one particular solution may be used to nurture and maintain such relation implies that MO could play a mediating role between EO and IP (Amin et al., 2016; Montiel-Campos, 2018; Vega Vázquez et al., 2016). Specifically, EO is more likely to influence innovation, in particular in its complementary role to MO (Genc et al., 2019). Given that EO is often characterized by customer centricity and exploring potential market opportunities, a recent study has identified the impacts of EO–MO on innovation (Morgan et al., 2019). Presutti and Odorici (2018) proposed that future studies should investigate the effects of EO and MO on the enhanced SMEs performance in order to better understand how MO and EO develop over time. Along the same line, researchers have posited that EO leads to better MO, which in turn results in improved performance (Vega-Vázquez et al., 2016). EO on MO may have the potential to enhance SMEs innovation performance. Therefore, the following hypothesis will be evaluated:

**H4:** Market orientation mediates the association of entrepreneurial orientation with innovation performance of SMEs in Kuwait.

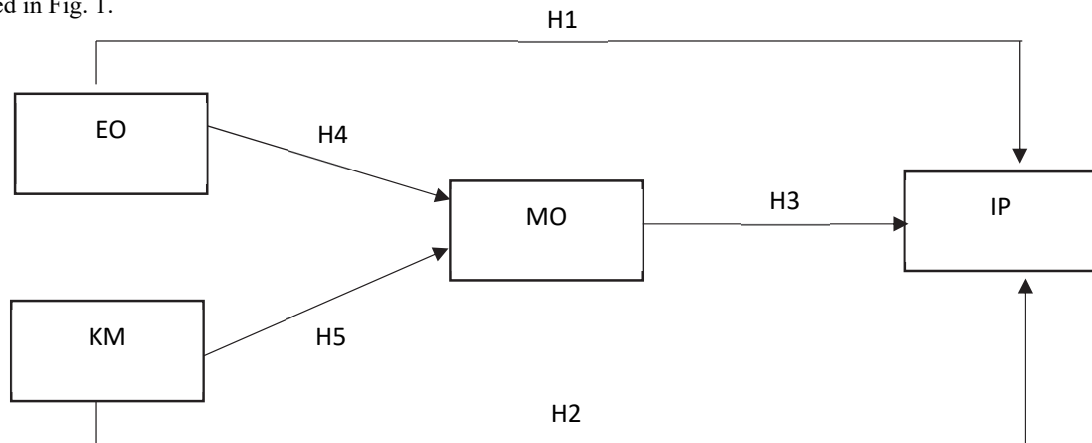
### 3.5 The association of Knowledge management, Market orientation and Innovation Performance

Previous studies have shown that KM and IP could be mediated by a third variable (Ode & Ayavoo, 2019) such as marketing orientation. For instance, Inkinen et al. (2015) hypothesized an association of KM practices with IP by using a sample of Finnish companies; the results for PLS showed that not all the practices are directly associated with IP. In other words, a third influential variables could interact in this relationship. Some authors suggested that KM has no direct influence on innovation indirectly is more common sense. Similarly, Susanty et al. (2019) used SEM analysis techniques and discovered that even though KM practices may improve innovation, knowledge-based compensation practice is negatively associated with IP. Other studies have demonstrated that KM has most effective impact in innovation performance (Byukusenge et al., 2017). Others researchers reported a positive effect of each dimension of knowledge on enhanced firm IP (Wang et al., 2018; Hussain et al., 2019). This study argues that, through MO, companies may have a better capability to create, share and apply new knowledge within the companies and thus ensure a better innovation process. In other words, the absence of KM in a firm undermine and hinder the effectiveness of its activities to generate and disseminate the required information on customer demand, their competitor, and market. The ability of a firm to use information to respond to the market is a critical factor in achieving superior innovation (Ferraris et al., 2012). Based on the above discussion, this study hypothesizes that:

**H5:** Market orientation mediates the association of knowledge management with innovation performance of SMEs in Kuwait.

## 4. Conceptual Framework

In order to have a thorough understanding of this study in relation to the reviewed literature, Entrepreneurial Orientation (EO) and Knowledge Management (KM) have been designated as the independent variable (IV), innovation Performance (IP) is the dependent variable (DV), and Marketing Orientation (MO) is the mediating variable. The diagram for this relationship is illustrated in Fig. 1.



**Fig.1.** Conceptual framework of SME innovation in Kuwait.

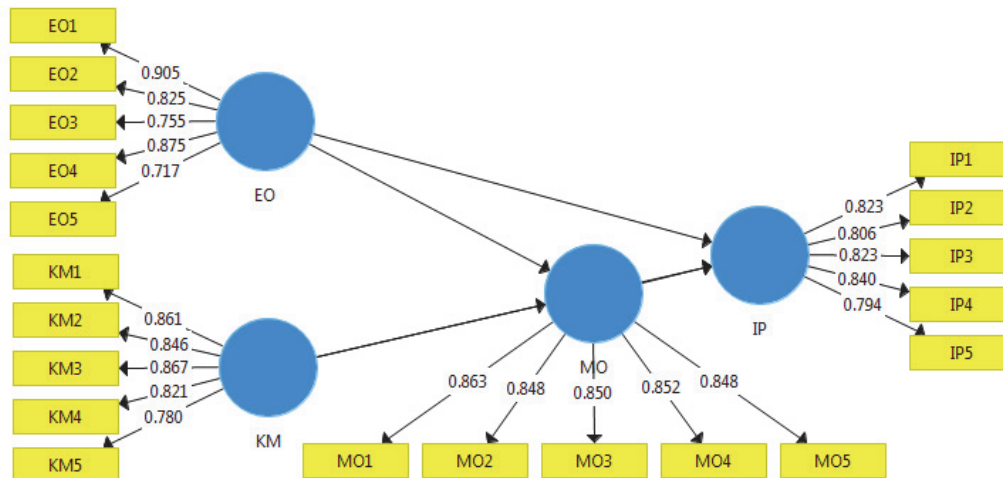
## 5. Methodology

The current study adopted a quantitative design and the data was collected from 221 respondents using a close ended questionnaire, which were then statistically analyzed. The questions included in the questionnaire were related to the study construct and were adapted from those used in previous studies to ensure the reliability and validity of the questionnaire. All the questions were based on a five-point likert scale which range from strongly disagree to strongly agree

The Structural Equation Modelling, which is a variance-based modelling performed using Smart PLS, was used to analyze the gathered data. According to Hair et al, (2018) and Eneizan et al, (2019) PLS-SEM is one of the most often used methods for analyzing complex models with several relationships, including mediation and moderation relations. Moreover, this technique focuses specifically on prediction and theory testing. The current study intends to empirically test the theoretical relationships on a limited sample size of 221. Hence the desired goal can be achieved by using Smart PLS without restricting to the normality assumption of the data (Garson, 2016; Hair et al., 2018)

## 6. Analysis and Results

This research paper used Smart PLS 3 to perform the hypotheses testing. The measurement model was assessed to ensure that the model is valid and reliable. The model and the items loading are presented below in the form of Smart PLS output.



**Fig. 2.** Measurement Model (Factor Loadings)

### 6.1 Measurement Model

The PLS algorithm was run to assess the validity of the model. Assessment of the model was based on two types of validity, namely convergent validity and discriminant validity. The convergent validity was established by using factor loading, scale reliability (Cronbach's alpha), composite reliability and average variable extracted (AVE). The recommended minimum value for the factor loading is 0.7 for each item, the minimum composite validity is 0.8, and the minimum value for Cronbach alpha is 0.7 (Hair et al., 2014). All criteria have been fulfilled for the model.

**Table 1**  
Convergent validity, Cronbach's alpha, Composite Reliability (CR), AVE

| Construct                   | Item | Loading | Cronbach's Alpha | CR    | AVE   |
|-----------------------------|------|---------|------------------|-------|-------|
| Entrepreneurial Orientation | EO1  | 0.905   | 0.874            | 0.910 | 0.669 |
|                             | EO2  | 0.825   |                  |       |       |
|                             | EO3  | 0.755   |                  |       |       |
|                             | EO4  | 0.875   |                  |       |       |
|                             | EO5  | 0.717   |                  |       |       |
| Innovation Performance      | IP1  | 0.823   | 0.876            | 0.909 | 0.668 |
|                             | IP2  | 0.806   |                  |       |       |
|                             | IP3  | 0.823   |                  |       |       |
|                             | IP4  | 0.840   |                  |       |       |
|                             | IP5  | 0.794   |                  |       |       |
| Knowledge Management        | KM1  | 0.861   | 0.893            | 0.920 | 0.698 |
|                             | KM2  | 0.846   |                  |       |       |
|                             | KM3  | 0.867   |                  |       |       |
|                             | KM4  | 0.821   |                  |       |       |
|                             | KM5  | 0.780   |                  |       |       |
| Marketing orientation       | MO1  | 0.863   | 0.906            | 0.930 | 0.726 |
|                             | MO2  | 0.848   |                  |       |       |
|                             | MO3  | 0.850   |                  |       |       |
|                             | MO4  | 0.852   |                  |       |       |
|                             | MO5  | 0.848   |                  |       |       |

## 6.2 Discriminant Validity

The discriminant validity of the model was established using the HTMT ratio. This ratio must be less than the benchmark value of 0.85 (Voorhees et al., 2016). The table 2 shows that all values meet the threshold, and thus the discriminant validity of the model is assured.

**Table 2**  
Heterotrait –Monotrait Ratio

|    | EO    | IP    | KM    | MO |
|----|-------|-------|-------|----|
| EO |       |       |       |    |
| IP | 0.548 |       |       |    |
| KM | 0.484 | 0.500 |       |    |
| MO | 0.330 | 0.438 | 0.301 |    |

## 6.3 Structure Equation Modelling

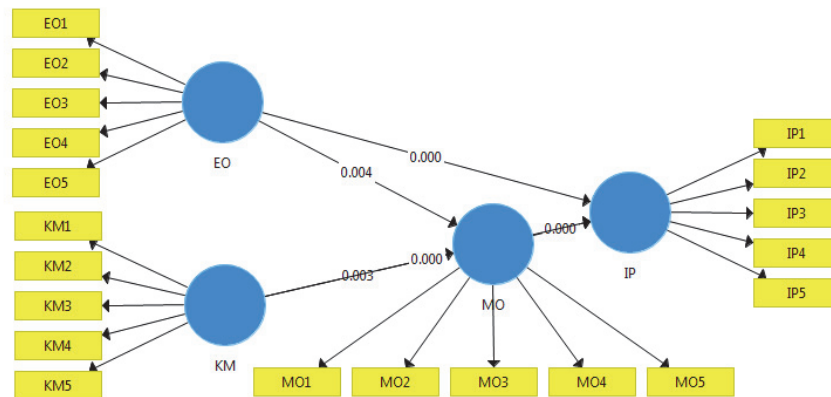
The hypotheses of the model were determined by performing bootstrapping. The direct and indirect effects were tested to support the direct and mediated hypotheses (Hair et al., 2014; Soto-Acosta et al., 2016).

### Path Model (Bootstrapping Results)

**Table 3**  
Direct Effects (Hypotheses 1 to 3)

|         | Std. Beta | SE    | T Statistics | P Values |
|---------|-----------|-------|--------------|----------|
| EO → IP | 0.303     | 0.063 | 4.773        | 0.000    |
| KM → IP | 0.261     | 0.066 | 3.930        | 0.000    |
| MO → IP | 0.230     | 0.059 | 3.869        | 0.000    |

The above table shows the result for the direct hypotheses 1 to 3. Entrepreneurial orientation has a positive and significant impact on innovation performance with ( $\beta=0.303$ ,  $P=0.000$ ). The impact of knowledge management on innovation performance is positive and significant with ( $\beta=0.261$ ,  $P=0.000$ ), and the impact of marketing orientation on innovation performance is also positive and significant with ( $\beta=0.230$ ,  $P=0.000$ ). Thus, all three direct hypotheses are positive and significant.



**Figure: Path Model (Coefficients and P-values)**

**Table 4**  
Indirect Effect/Mediation (Hypothesis 4 and 5)

|              | Std. Beta | SE    | T Statistics | P Values |
|--------------|-----------|-------|--------------|----------|
| EO → MO → IP | 0.049     | 0.023 | 2.153        | 0.032    |
| KM → MO → IP | 0.044     | 0.019 | 2.319        | 0.021    |

The results of the mediation analysis shown in the table indicate that entrepreneurial orientation and knowledge management have an indirect relationship with innovation performance through the mediation of marketing orientation. The results show

a significant mediation effect with ( $\beta = 0.0049$ ,  $P=0.0032$ ) for entrepreneurial orientation with innovation performance and ( $\beta = 0.0044$ ,  $P=0.0021$ ) for knowledge management with innovation performance

## 7. Discussion of the findings

The results of the present study have shown that innovation performance was influenced by several factors that are related to knowledge, entrepreneurship, and marketing orientation. If SMEs use their EO thoroughly, the implementation of programs to develop the processes of MO as well as innovation performance can be a logical decision. More specifically, managers should develop strategies that focus on EO and how this orientation can influence on MO to improve innovation performance. Additionally, the extent of MO mediation affects innovation performance, which could be achieved through strategic market plans on customers' needs and competitors' actions. The first hypothesis of the study suggests a relationship between Entrepreneurial Orientation and Innovation Performance. Results of the analysis support this hypothesis and the link has been shown to be positive and significant. Asbjørn and Tor (2013) have shown that EO should focus on organizational innovation as an efficient means of improving the overall performance of a firm. Patrick (2014) developed a model for determining the effect of EO on IP, open innovation proclivity, and organizational openness which posit that higher levels of EO has the effect of enhancing IP. Rauch et al., (2009) have demonstrated the relation of EO with IP. The second hypothesis is the association of Knowledge Management with Innovation Performance. The result of the current study supports this premise. This influence is more potent in organizations which have an established research and development unit (Tieng et al., 2016). Moreover, Sarkar et al. (2016) have demonstrated that knowledge management practices lead to an improvement in product IP. Hence researchers believe that KM is critical for innovation to take place. However, the process of creating knowledge is associated primarily with organizational creativity (Choi et al., 2020). A number of research studies have proven the beneficial link of MO with innovation (Adams et al., 2019; Newman et al., 2016; Leal-Rodríguez, & Albort-Morant, 2016). In particular, these researchers contended that MO brings about greater innovation and greater success with newer products (Kocak et al. 2017). Organizations with higher market-orientated cultures are more likely to make successful innovations (Adams et al., 2019; Leal-Rodríguez, & Albort-Morant, 2016). They are expected to improve both exploratory and exploitative innovation. The findings made by Zhang & Zhu (2016) indicate that MO has significant impact on product innovation and performance. Hence, the association of market orientation with innovation performance is well supported in the existing literature. The RBV complementary point of view contends that the resource of a firm (EO in the case of this study) interact with other resources (e.g., MO) to exert a joint impact on IP (e.g. Barney, et al., 2001). Therefore, the potential effects of EO on MO could result in a better IP of SMEs. In the same context, Li et al. (2020) elucidated the intricate association of EO with IP against different cultural backgrounds in order to understand the nature of business environment or industry-specific characteristics. Along the same line, researchers have posited a relationship in which EO enhances MO, which in turn leads to improved performance (Vega-Vázquez et al., 2016). The current study has established that market orientation plays an important mediating role in the association of entrepreneurial orientation with innovation performance. Hence, hypothesis four is supported. The fifth hypothesis proposed that market orientation plays a mediating role in the association of knowledge management with innovation performance. The results of the present study support this hypothesis and found a significant mediation effect of market orientation on the relationship between knowledge management and innovation performance. Susanty et al. (2019) performed SEM analysis and found that KM practices may improve innovation and that knowledge-based compensation practice is negatively related to IP. Other studies have shown that KM has positive impact on innovation (Byukusenge et al., 2017). Other researchers reported a positive effect of each dimension of knowledge in improving the IP of a firm (Wang et al., 2018; Hussain et al., 2019). Hence, the results of the current research have demonstrated the vital role of entrepreneurial orientation in innovation performance, which in turn impacts the performance of SMEs.

## 8. Conclusion

Small and medium enterprises (SMEs) are regarded as the fundamental pillar of the economy, especially in developing nations. Kuwait, as a developing country, has a firm belief in the potentials of small businesses as an economic driver and a key factor of the economic reform scheme. EO has been recommended as a fundamental strategy in ensuring a high performing SME with a competitive advantage in the business. This study has provided the practical implications that should be taken into account by SME managers, practitioners and policymakers, together with the impact of knowledge management and entrepreneurship, when formulating their strategic market orientations for innovation performance. The results of this study have proven that innovation performance is influenced by several factors that are related to knowledge, entrepreneurship and marketing orientation. If SMEs use their EO thoroughly, the implementation of programs to develop the processes of MO as well as innovation performance can be a logical decision. More specifically, managers should develop strategies that focus on EO and how these orientations affect both the MO to improve innovation performance. Additionally, the extent of MO mediation affects innovation performance, which could be achieved through strategic market plans on customers' needs and competitors' actions. The results of the current research have proven the vital role of entrepreneurial orientation in innovation performance, which consequently influence SMEs performance. It is of critical importance for SME managers to have a good knowledge management skill in order to be able to improve the innovative performance of their firm. The managerial implication of the above-presented work is to ensure that knowledge management is given the highest priority by organizations.



## 9. Limitations of the study and future research

In order to gain greater insight on this concept, future studies are recommended to use a bigger sample size in order to be able to generalize the findings and to apply the results across different industrial sectors. Moreover, longitudinal data would be able to provide better understanding of the robustness of the long-term relationships of the constructs as well as better insights on the links of innovation performance with strategic orientation. Additionally, further conclusions can be made by taking into consideration internal business environment as a moderator. It is worth noting that the present study performed a purely quantitative analysis. Future researches could gather both quantitative and qualitative data in order to perform quantitative and qualitative analysis; this would provide a better understanding of the investigated phenomena. Moreover, the current economic scenario requires for a more robust findings to be made. Strategic orientation and innovation performance are but a small part of the sophisticated organizational culture, and hence different aspects of the culture can be included in order to develop a better model.

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