

# Influence of innovation on the relationship between market orientation, entrepreneurial orientation, and SME performance in Pakistan



Muhammad Hassan Arshad<sup>a</sup> | Yaty Sulaiman<sup>a</sup>   | Maha Mohammed Yusr<sup>b</sup>

<sup>a</sup>School of Business Management, College of Business, Universiti Utara Malaysia, Malaysia.

<sup>b</sup>Nottingham University Business School, University of Nottingham Malaysia, Malaysia.

**Abstract** Small and medium-sized firms (SMEs) are important in enhancing the economy, driving innovation, and enhancing competitiveness. Consequently, they play a substantial role in enhancing the overall operational efficacy of enterprises. The primary objective of this study was to investigate the impact of market orientation and entrepreneurial orientation on small and medium-sized enterprises (SMEs) operating in the Pakistani manufacturing sector. Additionally, the study sought to determine the mediating effect of innovation in the link between these orientations and SME performance. Data was collected from 381 small and medium-sized enterprises (SMEs) operating in Pakistan using a self-administered questionnaire. Out of the total surveys collected, 360 met the criteria for conducting a detailed analysis. The study utilized a structured equation modelling technique by SMART PLS 4 to evaluate the influence of Market Orientation (MO), Entrepreneurial Orientation (EO), and Innovation (INO) on the performance of Small and Medium Enterprises (SMEs). The findings of the study demonstrated a notable association between Market Orientation (MO), Entrepreneurial Orientation (EO), and Firm Performance (FP), wherein innovation played a crucial intermediary function within this framework. The aforementioned findings highlight the significant significance of market orientation (MO), entrepreneurial orientation (EO), and innovation orientation (INO) in the attainment of success for small and medium-sized enterprises (SMEs). This study serves as a significant reference for both scholars and practitioners who are interested in gaining a deeper understanding of the effects of market orientation (MO), entrepreneurial orientation (EO), and innovation orientation (INO) on the performance of small and medium-sized enterprises (SMEs). Therefore, this study makes a valuable contribution to the existing body of knowledge in the field, enhancing our comprehension of the topic.

**Keywords:** SMEs performance, innovation, orientations, PLS-SEM, manufacturing firm, quantitative study

## 1. Introduction

According to Arshad & Arshad, (2019), In recent years, there has been a significant increase in interest and attention paid to studies of small and medium-sized enterprises (SMEs) which has led to an increase in research and research publications. SME's are generally recognized for providing employment opportunities and providing companies with additional capital. SMEs are generally recognized for providing employment opportunities to the economy and providing additional capital for companies (Arshad & Arshad, 2018). As entrepreneurship is required as a catalyst to reduce number of unemployment (Poupalan et al., 2023). As a result of their crucial role in achieving sustainable economic and social development, small and medium businesses are often referred to as an economy's "backbone." OECD statistics reveal that SMEs make up 95% of all businesses worldwide (Koirala, 2019). The SME sector contributes to economic development, new jobs, innovation, entrepreneurship, and social integration, not only in developed countries but also in developing countries. As a result of their adaptability, nimbleness, and their capacity to meet market demands, they have all contributed significantly to economic growth. SMEs are a large part of the commercial landscape in Asian countries and are seen as the backbone of these economies (Ahmad et al., 2020; Kalesamy, 2021; Mahboob et al., 2017). SMEs are a substantial component of the commercial landscape in Asian economies. As a country's SMEs prosper, it not only contributes to the growth of a nation's economy, but additionally serves as an indicator of the extent to which the government's policies encourage an entrepreneurial culture within its economy, which is indicative of what a nation's economic growth will look like in the years to come.

Governments across the globe are currently placing emphasis on the optimization of business operations for small and medium-sized firms (SMEs) owing to their substantial influence on the global economy. Governments in both developed and developing nations have implemented proactive strategies to enhance and support small and medium-sized enterprises (SMEs), with the objective of fostering economic growth and creating job opportunities. It is worth noting that during the



period from 2005 to 2010, small and medium-sized enterprises (SMEs) accounted for about 99% of all registered businesses inside the European Union. Furthermore, these SMEs produced a comparatively larger contribution to the Gross Domestic Product (GDP) when compared to microenterprises (Karadağ, 2016). According to Asare (2014), Ghana's SME sector reduces unemployment and contributes to the nation's GDP growth. According to Arshad & Arshad, (2019), the SMEs constitute 90 percent of all businesses in Pakistan, generate more than 30% of the nation's GDP, and employ more than 80% of all workers in the country. As SMEs play a critical role in national economies, scholars have increasingly concentrated on analyzing their performance, which is key to strengthening economies.

According to Azmi's (2017) estimation, small and medium-sized enterprises (SMEs) constitute approximately 37.5% of Pakistan's gross domestic product (GDP). Nevertheless, the aforementioned proportion is somewhat lesser when compared to China, which stands at 60%, and Iran, which stands at 50%. In contrast to the aforementioned figures, Qalati et al. (2021) conducted a study revealing that Small and Medium Enterprises (SMEs) in Pakistan do not exhibit superior performance or social profitability compared to their counterparts in Malaysia, Thailand, China, Taiwan, and Indonesia. However, small and medium-sized enterprises (SMEs) in Pakistan persist in playing a crucial role in promoting regional development, enhancing social cohesion, and stimulating innovation inside the country. These factors exert a substantial influence on the levels of employment, quantities of exports, and the overall gross domestic product (GDP) of a nation. As a result, these elements exert significant effect on the economic development of a nation (Malik, 2015).

The concepts of enterprise orientation (EO) and market orientation (MO) have been the subject of substantial research in recent years (Lekmat et al., 2018). These terms are commonly used to describe the ways in which firms approach their internal operations and external market strategies. Market orientation (MO) refers to a company's capacity to develop a marketing plan that incorporates an innovative, proactive, and risk-taking management style (Acosta et al., 2009). There is a considerable body of research that examines the historical evolution of market orientation (MO) and entrepreneurial orientation (EO), as well as their individual effects on the expansion of small and medium-sized enterprises (Baker & Sinkula, 2009; Amin, Thurasamy et al., 2016; Pratono et al., 2019; Arshad et al., 2020). Nevertheless, there is a scarcity of information regarding the developmental trajectory of these orientations and their potential impact on the advancement and enlargement of small and medium-sized enterprises (SMEs). Both market orientation (MO) and entrepreneurial orientation (EO) play a critical role in achieving corporate success, with neither orientation being more significant than the other. According to Asheq and Hossain (2019), it is imperative for developing nations to investigate the effects of varied orientations on the performance of firms. Valentim, Lisboa, and Franco (2016) argue that small and medium-sized enterprises (SMEs) need to find a harmonious equilibrium between satisfying customer demands and pursuing strategic goals. In a similar vein, Yadav, Tripathi, and Goel (2019) highlight the crucial significance of marketing activities in the achievement of organizational success, with a continued emphasis on market orientation.

It is imperative to emphasize that strategic orientations can have a significant impact on facilitating the success of small and medium-sized enterprises (SMEs) in two critical domains: attaining a competitive advantage and improving overall performance. The research conducted by Shariff et al (2017) aims to enhance our comprehension of the importance of entrepreneurial orientation (EO), market orientation (MO), and learning orientation (LO) in order to gain a more comprehensive understanding of the abilities of small and medium enterprises (SMEs) to succeed in developing economies. Although previous studies have explored strategic orientations (Bakar et al., 2015), there is a dearth of research that investigates the collective influence of these three strategies on the performance of small and medium-sized enterprises (SMEs). In addition, the availability to financial resources has a crucial role in the development of small and medium-sized enterprises (SMEs), as it enables them to seize chances for growth and investment (Amin et al., 2016; Pratono et al., 2019). Due to the presence of financial resources, both EO (entrepreneurial orientation) and MO (market orientation) can be considered essential factors that contribute to the development and success of small and medium-sized enterprises (SMEs).

Expanding upon the aforementioned discourse, the present study is designed with the intention of accomplishing two principal research aims: 1) The objective of this study is to examine the interconnections between Market Orientation (MO), Entrepreneurial Orientation (EO), Innovation (INO), and Firm Performance (FP), while also exploring any potential underlying mechanisms. 2) This study aims to examine the mediating effect of innovative organizational culture (INO) on the relationship between market orientation (MO), entrepreneurial orientation (EO), and firm performance (FP) in small and medium-sized enterprises (SMEs). In order to achieve the above objectives, a set of four important hypotheses has been created. These hypotheses will be subjected to empirical testing in the subsequent sections of this research report. Section 3 of this study focuses on the research technique, which is closely aligned with the relevant literature that was previously examined. In the subsequent section, Section 4, we will show the data obtained from our model. This will be followed by a complete summary of our discussion and conclusions in Section 5. In addition, this study delves into the potential practical, policy, and societal implications of these findings, emphasizing the possible applications of our model. As we approach the final section, "Section 6," we will carefully examine any constraints, restate the findings, and investigate possible directions for future research.

## 2. Literature review and hypothesis development

### 2.1. Firm Performance

A manager's decision-making is driven by the performance, which includes the exactness, cost-effectiveness, efficiency, and comprehensiveness of task execution (Al-Dhaafri et al., 2016). It is recognized in Lyon et al. (2000) that it is essential to assess the performance of SMEs since they contribute to economic growth and unemployment decrease. Aspelund & Moen (2004) and Glavas et al. (2017) found that both information technology and entrepreneurial qualities and resources positively influenced small and medium-sized enterprises' success. Scupola (2003), conducted an investigation that demonstrated that foreign markets can improve performance of SMEs. A wide range of performance indicators should be used when assessing the efficiency of SMEs, which should include both financial and non-financial measurements in order to get an accurate picture of the efficiency of these organizations. Among the various types of financial measures are "return on investment" (ROI), "profitability", "market share," and "sales growth." It is important to recognize that non-financial measures can be measured in a similar way, this includes customer satisfaction, staff satisfaction, innovation, as well as a number of other important factors. As Al-Dhaafri et al. (2016) pointed out, managers are crucial in allocating organizational resources strategically so as to achieve the desired level of performance. It can be determined by examining how well small and medium-sized enterprises (SMEs) are able to fulfill their aims and objectives to what extent they can be considered successful.

## 2.2. Market Orientation and Firm Performance

Market orientation has gained considerable attention regarding its characteristics, framework, and outcomes in the literature on strategic orientation. Market orientation is one of the earliest concepts that have been identified within the literature on strategic orientation. An important characteristic of a company that is market-orientated is that its strategies and operations can be adjusted to meet the changing needs and expectations of the market over time. According to Zahra (2008), when a business cultivates positive relationships with its customers and focuses on delivering exceptional value to them, it leads to excellent customer retention. MO refers to the process of meeting and adapting to market demands in business. Experiencing positive customer relationships and providing outstanding customer value are more likely for companies with strong market orientation (Zahra, 2008). According to Kirca et al. (2005), the MO is recognized as a fundamental component of marketing theory. This is due to the fact that the marketing mix has been connected to a number of different company performance models, including the idea of customer orientation.

The concepts of market orientation were introduced by Narver & Slater (1990) and Kohli & Jaworski (1990), both of whom emphasized that a company's success depends on its market orientation. As described by Narver & Slater (1990), market orientation is a way of operating those results in customer-focused behaviours that allow the organization to deliver superior value to its customers. According to Kohli and Jaworski (1990), market orientation is the process of generating market intelligence across the organization concerning current and future customer requirements, disseminating it across departments, and responding in a timely manner to these demands. Market orientation involves three aspects, according to Jaworski & Kohli (1993), including gathering market information, disseminating that information, and encouraging organizational responsiveness. In the field of marketing research, there have been a series of studies that have demonstrated that market orientation has an important role to play in driving the success of a business (Ngai & Ellis, 1998; Liao et al., 2011). It has been established by prior empirical research (Verhees & Meulenbergh, 2004; Liao et al., 2011; Hurley & Hult, 1998; Bamfo & Kraa, 2019) that a market orientation has a positive influence on organizational innovation adoption and performance across a wide range of industries and business sizes. The study by Bhattarai et al. (2019) examined 252 subsidiaries in the United Kingdom and found that market orientation had a positive impact on the success of the businesses. Based on the findings of a study carried by Lee et al. (2015) on 156 Korean franchisors, concluded that market orientation can also positively influence the success of businesses. According to the findings of a study that was carried out by Ramayah et al. (2011), there was a substantial connection that existed between MO and performance. This study was conducted on 101 service companies located in the northern region of Malaysia and the results indicated a significant positive relationship between market orientation and performance. As a result of a study conducted by Charles et al. (2012), they discovered that 147 manufacturing firms in Kenya perform better when they are market-oriented. Additionally, Mahmoud (2011) described in his study an association between market orientation and performance in 191 SMEs in Ghana, and emphasized the fact that the association was highly substantial. From the discussion we have just had, it is clear that the following hypothesis can be formulated based on the evidence presented:

**H1: "There is a significant relationship between MO and firm performance."**

## 2.3. Entrepreneurial Orientation

The idea of EO was developed by Miller (1983) and is credited with developing the concept. According to Merlo & Auh (2009), strategic orientation maps and defines entrepreneurial processes, practices, and decision-making styles, as they relate to EO. By differing from conventional practices, Khan et al. (2020) stressed that EO entails the ability of an organization to be proactive in discovering and capitalizing on opportunities that can support its growth by proactively identifying and leveraging those opportunities (Baker & Sinkula, 2009; Lumpkin & Dess, 1996). As a result of EO, decision makers are able to focus on long-term strategies and sustain a competitive edge in their markets, offering them the tools they need to thrive in the future.

In organizations with an entrepreneurial orientation (EO), methods for supporting entrepreneurs' decision-making and implementing their actions have been developed (Shah & Ahmad, 2019). In Lumpkin and Dess (1996), EO refers to "the process by which organizations foster an entrepreneurial mindset when confronted with new business opportunities." Since these characteristics are defining entrepreneurial mindsets, Miller (1983) claimed entrepreneurial organizations seek product/market innovation, accept risk, and present creative ideas ahead of competition. As defined by Miller (1983), EO is characterized by three key characteristics: creativity, bravery, and initiative. A company's innovation depends on its willingness and ability to embrace new ways of thinking (Salleh et al., 2018), working and meeting customer needs (Lumpkin & Dess, 2001). "Risk-taking" is characterized by managers' willingness to undertake large and potentially risky investments in order to achieve high returns (Lumpkin & Dess, 2001).

Lumpkin and Dess (2001) has concluded that an entrepreneurial approach to business has been found to be better for companies in the long run (Kajalo & Lindblom, 2015), since an entrepreneurial approach leads to greater performance. Alerasoul et al., (2022) assert that organizations that demonstrate entrepreneurial behavior have ability to adapt to competitive environments and respond to external challenges. Entrepreneurship enables a company to stay abreast of changes in the marketplace and capitalize on the opportunities that arise as they arise in the market (Manikandan & Ramachandran, 2015; Tidd & Bessant, 2020) and thus pro-actively scan its external environment. In this way, the company is able to gain a competitive advantage over its competitors.

According to many scholars, entrepreneurial orientation (EO) is essential for the survival and success of SMEs (Imran et al., 2016). A number of studies have shown that companies with a stronger EO typically perform better when it comes to exporting (Al Mamun & Fazal, 2018). According to theory, entering new markets and adopting new strategies, taking prudent risks, and discovering new business opportunities all belong to what is known as EO (De Clercq & Zhou, 2014). It takes into account key people's practices, methodologies, decision-making styles, and intentions (Lumpkin & Dess, 1996). In Wiklund's and Shepherd's (2003) view, EO represents a strategic approach that allows companies to surpass rivals by embracing innovations, showing their willingness to take calculated risks, and taking advantage of market opportunities proactively rather than wait for them to emerge. As a direct result of the topic at hand, we have arrived at the realization that we can create the following hypothesis as a direct consequence of this conversation:

**H2: "There is a significant relationship between EO and firm performance."**

#### 2.4. Innovation as Mediator

As determined by Baron and Kenny (1986), a variable is considered to be a mediator if the variable can explain the relationship that exists between the predictor variable and the criterion variable in order to explain the relationship between the two variables. As determined by MacKinnon et al. (2000), mediation, suppression, and confounding have equal mathematical effects. Various patterns of interactions between variables are analyzed by researchers to investigate these effects. There has been evidence that there is a positive impact that the market has on performance; however, other research has failed to identify any significant connections between the two, which is why a mediating component has been introduced in order to address this issue. When an immediate variable is inserted in a direct relationship, Baron & Kenny (1986) claim that it is able to serve as a mediator by reducing the strength of the relationship (full mediation), or at least a significant reduction (partial mediation), when the immediate variable is introduced in the relationship. Based on their observations, they came up with the concept of an immediate variable causing a reduction in the strength of a relationship when it is paired up with another immediate variable.

A consensus has been reached by both academics and industry professionals that innovation has become an essential part of today's economic climate, and this agreement is widely accepted. Innovation is increasingly being used by companies to boost their competitiveness and ensure long-term viability, especially as sector dynamics are changing. Besides serving as a means to create new markets and innovations, innovation also serves as a tool that is utilized by the trade community as well as by industry in order to create a substantial amount of interest and attention. According to the findings of a study conducted by Kim (2003), innovation is one of the most critical factors that determines a company's level of success and has a substantial impact on the ability of a business to remain competitive in its industry (Khan et al., 2020). There is no doubt that innovation plays an important role in improving performance. Therefore, in order for companies to maximize their chances of success, it is imperative that they integrate innovation between their focus on the market and their performance to ensure that they will have a successful outcome.

**H3: "Innovation mediates the relationship between MO and firm Performance."**

**H4: "Innovation mediates the relationship between EO and firm Performance."**

On the basis of details relationship discussion above, Figure 1 illustrates the research model of the current research.

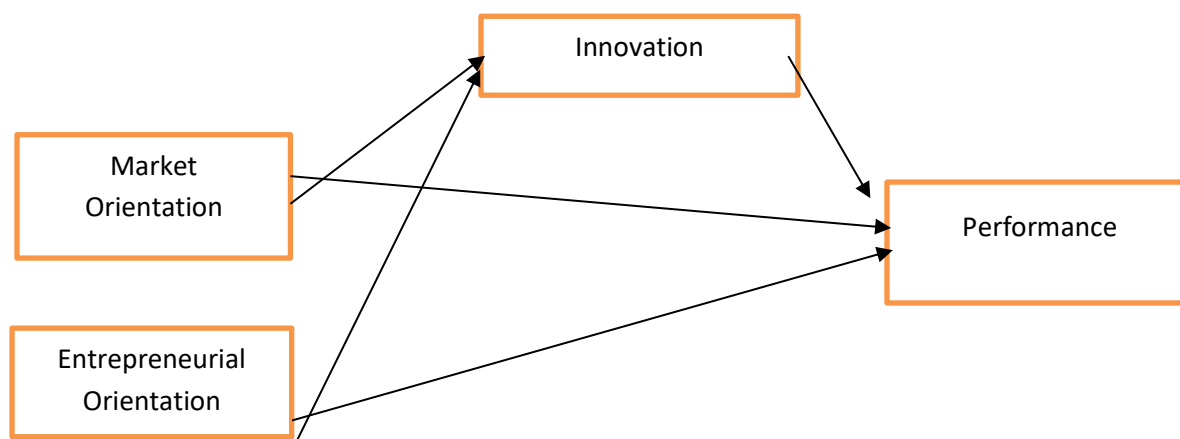


Figure 1 Research Model.

### 3. Methodology

#### 3.1. Research Design

An explanatory research design was used in this study. In the process of selecting the participants for the study, samples that were based on simple random sampling were used as methods of sampling. In order to collect data, questionnaires were used. Each questionnaire had a number of items that were scored on a seven-point Likert scale, which ranged from "very strongly disagree" (1) to "very strongly agree" (7). We were able to use both SPSS and Smart PLS 4 for the purpose of analyzing the data gathered during the collection phase. It was determined that indications that failed to load adequately following the completion of a Confirmatory Factor Analysis (CFA) were removed from further analysis. It was believed that structural equation modelling (SEM) was the most important analytical tool that was used as part of the estimation process. In this research, market orientation was measured using the three-factor scale developed by Narver & Slater (1990): customer orientation, competitive orientation, and instructional orientation. As a result of the use of this scale, market orientation was measured. Agarwal et al. (2003) also conducted a study, the variables that were used to evaluate the objective performance of small businesses included net profit, market share, revenue growth, receivables, etc. In their study they also used variables such as net profit and market share to evaluate SMEs. Calantone et al. (2002) assessed business innovativeness by examining how SMEs explore new ways of doing things and change their operation regularly. A number of factors that were considered in earlier research were also taken into account in this study.

#### 3.2. Sample and Data Collection Instrument

This study had been designed to gather information regarding small and medium-sized enterprises (SMEs) operating in a variety of industries in Pakistan for the purpose of collecting information. In this study, SMEs operating all over the country and operating across a wide variety of industries were targeted. There was a total of 479 questionnaires that were requested to be filled out by SMEs in Pakistan. Out of a total of 479 questionnaires sent out to SMEs, 381 were filled out by the SMEs involved in the study. It was, however, found that 21 of these questionnaires had either incomplete or incompletely filled out information, so they were discarded from the investigation, due to the fact that they were incomplete or poorly filled out. Consequently, as a result of these factors, the total number of legitimate answers used in the research was 360 as a result of this process. It has been determined that all 360 questionnaires were completed in accordance with the criteria for completion as well as meet the criteria for analysis of the data. According to the study, 75% of questionnaires were returned, based on the total number of questionnaires distributed (479), divided by the valid questionnaires received (360), and multiplied by 100%. To ensure that the sample of SMEs selected from the population is representative of the population, a sampling method known as simple random sampling was used to select the SMEs from the population in order to ensure the sample was representative of the population as a whole. This method consists of randomly selecting SMEs (small and medium-sized enterprises) from the population at random, without paying much attention to any particular criteria or procedures for selecting the SMEs. The aim was to ensure that all small and medium-sized enterprises (SMEs) were equally represented in the study.

#### 3.3. Profile of Respondents

This study was conducted among 316 respondents, which accounted for 91% of the total respondents (316 people) who were either the chief executive officers or managing directors of their respective companies. This meant that a majority of the respondents were either chief executive officers or managing directors for their respective companies. Compared to the 32% who responded, only 9 percent of the respondents were senior managers or executives. It was evident that opinion was divided when a consideration was made of the gender makeup of those who responded. More specifically, the vast majority of all

respondents (89.3% in total) were male (310 individuals), while only 10.4% of all respondents (38 individuals) were female. According to the survey, 82.1% (285 people) said that they were married. According to the results of the survey, 17.9% of respondents were single. There were 52.9% of respondents in the 31-40 age range, which represented the highest proportion of respondents overall. The second largest group, which comprised of 99 people (28.6% of the total) was represented by those who were in their forties to a maximum age of 50 years over the course of the study. There were only 43 people aged 20 to 30 in the total population, 12.4%. There were 21 responses from those older than 50 years old, representing 6.1% of the total number of responses.

#### 4. Results

In order to analyze the primary data, Smart-PLS was used in a way that adhered to PLS-SEM's assumptions (Arshad et al., 2023). The analysis was broken down into a few essential components, that are the assessment of the measurement model as well as the assessment of the structural model, which were the most important aspects of the analysis (Malik et al., 2022; Khan et al., 2023). A number of measures, such as Cronbach's alpha, composite reliability, and AVE, were utilized in order to assess the reliability and validity of the measurement items, so that the measurement model could be tested in terms of its reliability and validity. To ensure each construct accurately measured its own concept, discriminant validity was assessed. As part of the structural model examination, bootstrapping and analysis of path coefficients were primarily used to analyze the differences between the latent constructs.

##### 4.1. Measurement Model Assessment

As agreed, upon by Hair et al. (2017), authors developed a method for analyzing PLS-SEM that consists of two stages. During this step, both the "Measurement Model" and the "Structural Model" will be evaluated, which makes it an important step in the process. Before testing the structural model, Henseler et al. (2009) recommend analyzing the measurement model first to guarantee relevance of the results. As a second step, the structural model was assessed following the measurement model. It was found that the composite reliability (CR) values for the constructs related to firm performance (0.852), innovation (0.860), market orientation (0.863), and entrepreneurial orientation (0.847) were similar across the constructs evaluated for the research, as exhibited in Table 1 and Figure 2. It appears that the measurement model has a reasonably high degree of reliability based on these numbers. Further, Cronbach's alpha values were as follows: 0.901 for firm performance, 0.834 for innovation, 0.863 for market orientation, and 0.815 for entrepreneurial orientation. The firm performance construct showed excellent internal consistency, while the other constructs showed good internal consistency. After evaluating the measurement model, the study confirmed the constructs were reliable and internally consistent. These findings laid the foundation for further analysis of the structural model, allowing for meaningful interpretation of the relationships between the constructs.

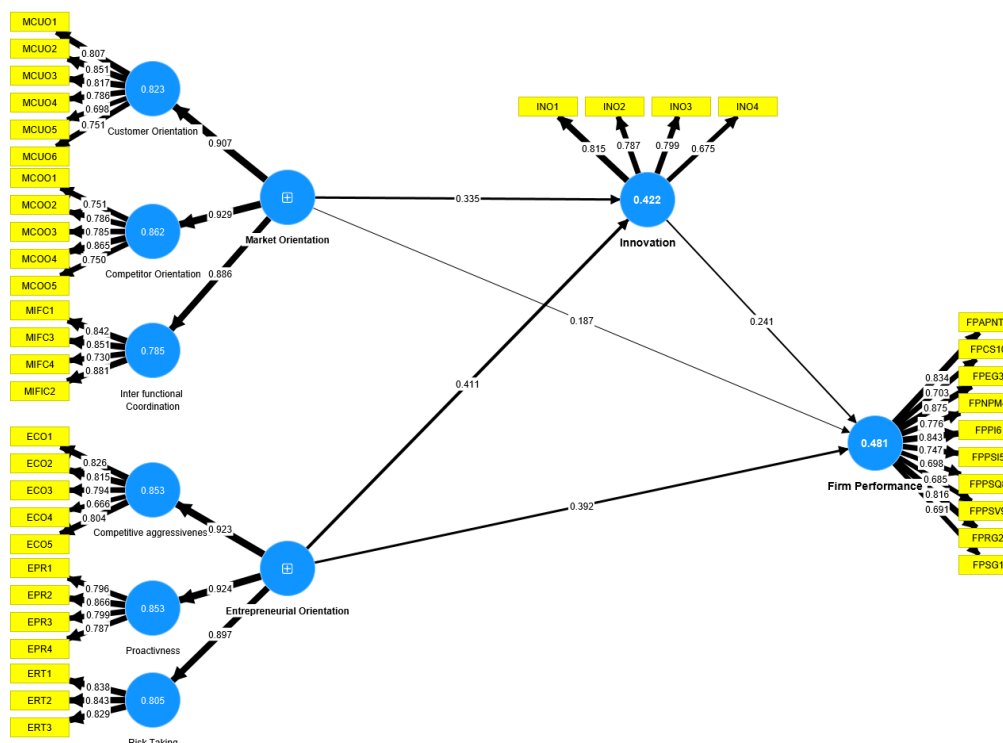


Figure 2 Measurement Model.



**Table 1** Reliability and Validity.

	CA	CR	AVE
FP	0.901	0.852	0.636
INO	0.834	0.860	0.677
MO	0.863	0.846	0.591
EO	0.815	0.847	0.583

Convergent validity of the constructs was investigated using Average Variance Extracted (AVE). Based on data presented in Table 1, we can see that the mean AVE values for firm performance, innovation, market orientation, and entrepreneurial orientation were all 0.636, 0.677, 0.591, and 0.583, respectively. As can be seen from these values, many of the variances in each construct can be explained by its indicators, which indicates high convergent validity.

To evaluate the discriminant validity of the model, the Fornell-Larcker Criterion (Hair et al., 2014) was used. This criterion is shown in Table 2. Based on this criterion, construct correlations are compared to the square root of the AVE (diagonal). The point of discriminant validity of the constructs is to explain whether the items are redundant. It also means that factors or items only measure one latent construct (Wahid et al., 2021). There is a strong correlation between diagonal correlations and off-diagonal correlations for all reflective constructs, according to the square root of the average variance extracted from the analysis. There is no doubt that the research has demonstrated a capacity to differentiate between groups, given the fact that each construct is different from the other. This study showed adequate convergent validity in terms of measuring the constructs accurately using the measurement items.

**Table 2** Fornel-Larcker Criterion.

	FP	INO	MO	EO
FP	0.752			
INO	0.714	0.837		
MO	0.529	0.523	0.772	
EO	0.656	0.497	0.583	0.673

**4.2. Structural Model Assessment**

Once the measurement model's validity and reliability were established, the structural model was evaluated. As part of the investigations, the researchers undertook a phase where they examined the path coefficients and calculated the R<sup>2</sup> value, i.e., the coefficient of determination, based on the hypothesis they had developed. Firm performance has an R<sup>2</sup> value of 48.1%, while innovation has a value of 42.2%, which represents the amount of variance that can be explained by the model. To evaluate the significance of the path coefficients and test the hypotheses, Smart-PLS bootstrapped using a one-tailed test with a significance level of 5%. "P-Values" and "T-statistics" were used to evaluate the hypotheses' significance and to evaluate their importance. Furthermore, the researchers investigated if innovation mediated the association between market orientation (MO) and firm performance, as well as the association between entrepreneurial orientation (EO) and firm performance, using the mediation test developed by Baron & Kenny (1986). Table 3 depicts the structural model (also referred to as the "inner model"). Path coefficients are presented along with their levels of significance in the following table. These findings provide insights into the strength and direction of the links between the variables, enabling testing of hypotheses and interpreting the implications of the model. In addition to providing insight into the relationships between variables, the findings also provide insight into their strength and direction.

**Table 3** Direct and Indirect Hypothesis Testing.

Hyp	Beta	T-statistics	P-Statistics	Decision
H <sub>1</sub> : MO -> FP	0.187	2.819	0.005*	Supported
H <sub>2</sub> : EO -> FP	0.396	6.534	0.000*	Supported
H <sub>3</sub> : MO-> INO -> FP	0.081	3.189	0.002*	Supported
H <sub>4</sub> : EO-> INO -> FP	0.099	4.180	0.000*	Supported

A significant correlation was found between the first hypothesis (H1), which proposed that firm performance may be related to a firm's market orientation (MO), as well as the level of market orientation (Beta=0.187, t=2.819, p0.01). As a result of the research conducted in this paper, it was proposed that the level of market orientation (MO) is significantly correlated with the performance of the company.

The second hypothesis (H2) of the study hypothesized that entrepreneurial orientation (EO) is positively correlated with business performance. According to Table 3, there is an undeniable statistical significance between the EO and FP, as well as a positive connection between them (Beta= 0.396; t=6.534; p0.01).

It is also claimed that the third hypothesis (H3) may serve as a mediator between EO and FP of SMEs. In addition, the analysis revealed the existence of a significant mediation effect (Beta=0.081, t=3.189, p0.01), so this theory could also be regarded as supported by the results of the analysis.



Finally, hypothesis 4 (H4), which states that innovation contributes to MO and company performance, was empirically supported at significance level 0.01 (Beta=0.099,  $t=4.180$ ,  $p=0.01$ ).

## 5. Discussion

An in-depth investigation of the elements that contribute to the issue of poor performance of SMEs would be a good place to start if one wanted to find a solution to the problem of poor performance of SMEs. If both EO and INO are fostered within a corporation, it will be possible to improve that organization's overall performance. This will be done in order to improve that organization's overall performance. This study has the potential to make a substantial contribution, not only to academic understanding, but also to practical insight, particularly in the industrial industries, not only in terms of theoretical understanding, but also in terms of practical research. This is one of the reasons why this study was undertaken. It is advised that the proposed framework be further assessed and tested in future research, both in Pakistan and in other developing countries, in order to gain information that is valuable for professionals working in the segment. This can be done both in Pakistan and in other developing nations. The objective is to acquire knowledge that can be helpful for professionals who are currently working in the sector.

Since Pakistan has such a large population, the country is still in the development stage, and is still fighting both high unemployment rates and economic instability as a result of its large population. As the two problems of stimulating economic growth as well as creating employment opportunities are both intertwined SMEs, are being sought as a possible solution. The performance of SMEs in Pakistan is still hampered by a number of obstacles that adversely affect the performance of these enterprises. These obstacles include a shortage of skilled workers, an inadequate infrastructure, and a lack of entrepreneurial skills that have adverse effects on the performance of such enterprises. The problem is also exacerbated by weak management systems. In developing economies like Pakistan, SMEs are much more likely to fail as compared to those in industrialized economies, due to a higher failure rate. Additionally, SMEs are frequently underserved by the government in terms of support and assistance. Instead, they are favored by large corporations. As a result of the difficulty in gaining access to the fundamental business resources among SMEs, they are disadvantaged when it comes to adopting new technology and fostering innovation within their organization.

## 6. Conclusions

In summary, this research highlights the considerable contribution of small and medium-sized firms (SMEs) to the economy, innovation, and competitiveness, substantially improving total business operating efficiency. The main objective of this study was to investigate the influence of market orientation and entrepreneurial orientation on small and medium-sized enterprises (SMEs) operating in the Pakistani manufacturing sector. Additionally, the study aimed to evaluate the mediating effect of innovation in establishing a connection between these orientations and the performance of SMEs. The study collected data from 381 small and medium-sized enterprises (SMEs) in Pakistan. This data was then analyzed using structural equation modelling. The findings of the analysis indicated a significant and noteworthy correlation between Market Orientation (MO), Entrepreneurial Orientation (EO), and Firm Performance (FP).

Moreover, the concept of innovation has emerged as a crucial mediator within this dynamic framework. The findings mentioned above emphasize the substantial importance of market orientation (MO), entrepreneurial orientation (EO), and innovation orientation (INO) in the endeavor to achieve success for small and medium-sized enterprises (SMEs). This study provides a significant point of reference for scholars and practitioners interested in gaining a more comprehensive understanding of the impact of these orientations on the performance of small and medium-sized enterprises (SMEs). This study contributes substantially to the current body of knowledge in this particular domain, enhancing our understanding of how market orientation, entrepreneurial orientation, and innovation orientation jointly influence the performance outcomes of small and medium-sized firms (SMEs).

## 7. Theoretical and Practical Contribution

This study provides actual evidence to support the theoretical linkages proposed in the research framework. In particular, this highlights the crucial role of innovation in facilitating the relationship between market orientation, entrepreneurial orientation, and the success of small and medium enterprises (SMEs) in Pakistan. The study's four hypotheses received unanimous approval, confirming the theoretical foundations. The selection of strategic orientations as the primary factors in this study was based on a thorough examination of the existing literature, which highlighted their significant impact on predicting the performance of small and medium-sized enterprises (SMEs). This study is a notable undertaking that effectively combines market orientation with entrepreneurial orientation while also considering the mediating role of innovation in the performance of small and medium-sized firms (SMEs). The empirical findings provide further evidence to strengthen the research framework, enhancing its empirical support. This study contributes significantly to the Resource-Based View (RBV) by presenting empirical evidence that supports the underlying premise of the theory. According to the Resource-Based View (RBV), the performance of a corporation is contingent upon the intricate interaction between tangible and

intangible resources. In this study, market orientation and entrepreneurial orientation are considered inherent resources the organization possesses.

Primarily, it is commonly recognized that Small and Medium-sized Enterprises (SMEs) substantially impact employment generation, economic growth promotion, and poverty reduction. Government agencies and policymakers, such as the Small and Medium Enterprise Development Authority (SMEDA), need to acknowledge that their decisions regarding small and medium enterprises (SMEs) directly impact the operations of these businesses. Therefore, it is crucial to investigate potential approaches that government officials and policymakers might employ to improve the efficiency and long-term viability of small and medium-sized enterprises (SMEs) in Pakistan. This study provides significant information that can assist policymakers and government officials formulate policies and making well-informed decisions regarding small and medium enterprises (SMEs) inside the country. Concurrently, this study highlights the crucial significance of strategic orientations in influencing the performance of small and medium-sized enterprises (SMEs). This illuminates this crucial component and introduces a novel avenue of investigation for researchers. More specifically, this motivates additional investigation into the role of organizational culture as an intervening variable, providing a clearer understanding of the complex connections between different strategic orientations and the performance of small and medium-sized enterprises (SMEs). This study makes a substantial contribution by elucidating the strong mediating influence of organizational culture on the associations between market orientation (MO), entrepreneurial orientation (EO), Innovation (INO), and small and medium-sized enterprise (SME) performance. As a result, it enhances our comprehension of these interrelationships.

## 8. Limitation and Recommendation

Despite making substantial contributions to the field, this research has some limitations. One limitation of this study is that it relied solely on self-administered surveys completed by a single respondent from each organization. There is a possibility of bias as a result of this. By obtaining information from multiple sources, an organization can gain a more comprehensive and objective perspective. Furthermore, although our model accounted for a significant portion of the variance in the endogenous variables (Firm performance and Innovation), There is still a possibility that other variables or factors contribute to variations despite the  $R^2$  values of 48.1% and 42.2% respectively for each endogenous variable. The correlations might be further explored by adding more independent variables, mediator effects, or moderators to the model during a subsequent study. Furthermore, to analyze the data collected in this study, a cross-sectional approach was utilized to collect the data. For improvement of knowledge, generalizability, and understanding of correlations between the variables of interest, future studies may consider longitudinal data and comparative research on the factors of interest (innovation, external environment, and SME performance). It would be useful to conduct further research that is analogous to those already conducted in order to ensure that the findings apply to a wide range of contexts and developing nations. This study had the primary objective of examining the performance of SMEs from an economic point of view in order to come to a conclusion. A future research study may focus on social and environmental aspects of performance as well.

## Ethical considerations

The authors state that the study correctly followed the ethical policies for a questionnaire study, in addition to confirming the consent of all the respondents involved.

## Conflict of Interest

All authors declared no conflict of Interest.

## Funding

The research is not funded by any Grant or financial support.

## References

- Acosta, A. S., Crespo, Á. H., & Agudo, J. C. (2018). Effect of market orientation, network capability and entrepreneurial orientation on international performance of small and medium enterprises (SMEs). *International Business Review*, 27(6), 1128-1140.
- Ahmad, N. N., Hanafi, W. N. W., Abdullah, W. M. T. W., Daud, S., & Toolib, S. N. (2020). The Effectiveness of Additional PRIHATIN SME Economic Stimulus Package (PRIHATIN SME+) in Malaysia Post-COVID-19 Outbreak: A Conceptual Paper. *Global Business & Management Research*, 12(4).
- Akhtar, S., & Liu, Y. (2018). SMEs' use of financial statements for decision making: Evidence from Pakistan. *Journal of Applied Business Research (JABR)*, 34(2), 381-392.
- Al Asheq, A., & Hossain, M. U. (2019). SME performance: Impact of market, customer and brand orientation. *Academy of marketing studies journal*, 23(1), 1-9.
- Al Mamun, A., & Fazal, S. A. (2018). Effect of entrepreneurial orientation on competency and micro-enterprise performance. *Asia Pacific Journal of Innovation and Entrepreneurship*.
- Al-Dhaafri, H. S., Al-Swidi, A. K., & Yusoff, R. Z. B. (2016). The mediating role of total quality management between the entrepreneurial orientation and the organizational performance. *The TQM Journal*, 28(1), 89-111.

- Alerasoul, S. A., Afeltra, G., Bouncken, R. B., & Hakala, H. (2022). The synergistic impact of market and technology orientations on sustainable innovation performance: evidence from manufacturing firms. *International Journal of Entrepreneurial Behavior & Research*, (ahead-of-print).
- Amin, M., Thurasamy, R., Aldakhil, A. M., & Kaswuri, A. H. B. (2016). The effect of market orientation as a mediating variable in the relationship between entrepreneurial orientation and SMEs performance. *Nankai Business Review International*.
- Arshad, M. Z., Arshad, D., Lamsali, H., Alshuaibi, A. S. I., Alshuaibi, M. S. I., Albashar, G., ... & Chuah, L. F. (2023). Strategic resources alignment for sustainability: The impact of innovation capability and intellectual capital on SME's performance. Moderating role of external environment. *Journal of Cleaner Production*, 417, 137884.
- Arshad, M. Z., & Arshad, D. (2018). Intellectual capital and SMEs performance in Pakistan: The role of environmental turbulence. *International Journal of Entrepreneurship*, 22(1).
- Arshad, M., & Arshad, D. (2019). Internal capabilities and SMEs performance: A case of textile industry in Pakistan. *Management Science Letters*, 9(4), 621-628.
- Arshad, M. Z., Ahmad, M. J., Ali, M., Khan, W. A., & Arshad, M. (2020). The role of government business support services and absorptive capacity on SMEs performance. *International Journal of Advanced Science and Technology*, 29(3), 1492-1499.
- Aspelund, A., & Moen, Ø. (2004). Internationalization of small high-tech firms: the role of information technology. *Journal of Eeromarketing*, 13(2-3), 85-105.
- Azmi, I. A. G. (2017). Muslim women entrepreneurs' motivation in SMEs: A quantitative study in Asia Pacific countries. *Asian Economic and Financial Review*, 7(1), 27-42.
- Bakar, H. A., Mahmood, R., & Ismail, N. N. H. N. (2015). Fostering small and medium enterprises through entrepreneurial orientation and strategic improvisation. *Mediterranean Journal of Social Sciences*, 6(4), 481.
- Baker, W. E., & Sinkula, J. M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses. *Journal of small business management*, 47(4), 443-464.
- Bamfo, B. A., & Kraa, J. J. (2019). Market orientation and performance of small and medium enterprises in Ghana: The mediating role of innovation. *Cogent Business & Management*, 6(1), 1605703.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Bhattarai, C. R., Kwong, C. C., & Tasavori, M. (2019). Market orientation, market disruptiveness capability and social enterprise performance: An empirical study from the United Kingdom. *Journal of Business Research*, 96, 47-60.
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial marketing management*, 31(6), 515-524.
- Chan Hung Ngai, J., & Ellis, P. (1998). Market orientation and business performance: some evidence from Hong Kong. *International marketing review*, 15(2), 119-139.
- Charles, Lagat, Chepkwony Joel, and Kotut Cheruiyot Samwel. "Market orientation and firm performance in the manufacturing sector in Kenya." *European Journal of Business and Management* 4, no. 10 (2012): 20-27.
- De Clercq, D., & Zhou, L. (2014). Entrepreneurial strategic posture and performance in foreign markets: the critical role of international learning effort. *Journal of international Marketing*, 22(2), 47-67.
- Fu, Q., Sial, M. S., Arshad, M. Z., Comite, U., Thu, P. A., & Popp, J. (2021). The inter-relationship between innovation capability and SME performance: The moderating role of the external environment. *Sustainability*, 13(16), 9132.
- Glavas, C., Mathews, S., & Bianchi, C. (2017). International opportunity recognition as a critical component for leveraging Internet capabilities and international market performance. *Journal of international entrepreneurship*, 15(1), 1-35.
- Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. saGe publications.
- Hair, J. F., Gabriel, M., & Patel, V. (2014). AMOS covariance-based structural equation modeling (CB-SEM): Guidelines on its application as a marketing research tool. *Brazilian Journal of Marketing*, 13(2).
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *Journal of marketing*, 62(3), 42-54.
- Imran, M., Aziz, A., Hamid, S. N. B. A., Shabbir, M., Salman, R., & Jian, Z. (2018). Retracted: The mediating role of total quality management between entrepreneurial orientation and SMEs export performance. *Management Science Letters*, 8(6), 519-532.
- Kajalo, S., & Lindblom, A. (2015). Market orientation, entrepreneurial orientation and business performance among small retailers. *International Journal of Retail & Distribution Management*, 43(7), 580-596.
- Kalesamy, K. M. (2021). A Conceptual Study: Technology Adoption among Malaysian Manufacturing SMEs for Corporate Sustainability in the Context of IR 4.0. *The International Journal of Business & Management*, 9(9).
- Karadağ, H. (2016). The role of SMEs and entrepreneurship on economic growth in emerging economies within the post-crisis era: An analysis from Turkey. *Journal of Small Business and Entrepreneurship Development*.
- Khan, M. L., Salleh, R., Javaid, M. U., Arshad, M. Z., Saleem, M. S., & Younas, S. (2023). Managing Butterfly Career Attitudes: The Moderating Interplay of Organisational Career Management. *Sustainability*, 15(6), 5099.
- Khan, W. A., Hassan, R. A., Arshad, M. Z., Arshad, M. A., Kashif, U., Aslam, F., & Wafa, S. A. (2020). The effect of entrepreneurial orientation and organisational culture on firm performance: The mediating role of innovation. *International Journal of Innovation, Creativity and Change*, 13(3), 652-677.
- Khan, W. A., Hassan, R. A., Wafa, S. A., & Arshad, M. Z. (2020). Does Innovation Affect the Firm Performance in Developing Countries? A Conceptual Framework. *Jurnal Pengurusan*, 59.
- Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of marketing*, 69(2), 24-41.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: the construct, research propositions, and managerial implications. *Journal of marketing*, 54(2), 1-18.

- Koirala, S. (2019). SMEs: Key drivers of green and inclusive growth.
- Lekmat, L., Selvarajah, C., & Hewege, C. (2018). Relationship between Market Orientation, Entrepreneurial Orientation, and Firm Performance in Thai SMEs: The Mediating Role of Marketing Capabilities. *European Journal of Pediatric Dermatology*, 28(4).
- Liao, S. H., Chang, W. J., Wu, C. C., & Katrichis, J. M. (2011). A survey of market orientation research (1995–2008). *Industrial marketing management*, 40(2), 301-310.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of management Review*, 21(1), 135-172.
- Lyon, D. W., Lumpkin, G. T., & Dess, G. G. (2000). Enhancing entrepreneurial orientation research: Operationalizing and measuring a key strategic decision-making process. *Journal of management*, 26(5), 1055-1085.
- MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention science*, 1, 173-181.
- Mahboob, A. M., Vichayanan, R., & Abusayed, K. A. (2017). Comparative positioning of small and medium enterprises in Bangladesh, Thailand and the Philippines. *Экономика региона*, 13(2), 381-395.
- Mahmoud, M. A. (2011). Market orientation and business performance among SMEs in Ghana. *International Business Research*, 4(1), 241-251.
- Malik, K. (2015). Impact of foreign direct investment on economic growth of Pakistan. *American Journal of Business and Management*, 4(4), 190-202.
- Malik, S., Arshad, M. Z., Amjad, Z., & Bokhari, A. (2022). An empirical estimation of determining factors influencing public willingness to pay for better air quality. *Journal of Cleaner Production*, 372, 133574.
- Manikandan, K. S., & Ramachandran, J. (2015). Beyond institutional voids: Business groups, incomplete markets, and organizational form. *Strategic Management Journal*, 36(4), 598-617.
- Merlo, O., & Auh, S. (2009). The effects of entrepreneurial orientation, market orientation, and marketing subunit influence on firm performance. *Marketing Letters*, 20, 295-311.
- Miller, D. (2011). Miller (1983) revisited: A reflection on EO research and some suggestions for the future. *Entrepreneurship theory and practice*, 35(5), 873-894.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of marketing*, 54(4), 20-35.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of marketing*, 54(4), 20-35.
- Poupalan, R., Salleh, S. S. M. M., Rozali, A. Z., Fareed, M., Laeeq, H., & Ahmad, A. (2023). Setting entrepreneurial mindset, what university graduates need to have? Evidence from Malaysian public universities. In *AIP Conference Proceedings* (Vol. 2544, No. 1). AIP Publishing.
- Pratono, A. H., Darmasetiawan, N. K., Yudianto, A., & Jeong, B. G. (2019). Achieving sustainable competitive advantage through green entrepreneurial orientation and market orientation: The role of inter-organizational learning. *The Bottom Line*.
- Qalati, S. A., Yuan, L. W., Khan, M. A. S., & Anwar, F. (2021). A mediated model on the adoption of social media and SMEs' performance in developing countries. *Technology in Society*, 64, 101513.
- Ramayah, T., Samat, N., & Lo, M. C. (2011). Market orientation, service quality and organizational performance in service organizations in Malaysia. *Asia-Pacific Journal of Business Administration*, 3(1), 8-27.
- Renko, M., Carsrud, A., & Brännback, M. (2009). The effect of a market orientation, entrepreneurial orientation, and technological capability on innovativeness: A study of young biotechnology ventures in the United States and in Scandinavia. *Journal of Small Business Management*, 47(3), 331-369.
- Salleh, S. S. M. M., Fareed, M., Yusoff, R. Z., & Saad, R. (2018). Internal and external top management team (TMT) networking for advancing firm innovativeness. *Polish Journal of Management Studies*, 18(1), 311-325.
- Scupola, A. (2003). The adoption of Internet commerce by SMEs in the south of Italy: An environmental, technological and organizational perspective. *Journal of Global Information Technology Management*, 6(1), 52-71.
- Shah, S. Z. A., & Ahmad, M. (2019). Entrepreneurial orientation and performance of small and medium-sized enterprises: Mediating effects of differentiation strategy. *Competitiveness Review: An International Business Journal*.
- Shariff, M. N. M., Ahmad, N. R., & Hafeez, M. H. (2017). Moderating role of access to finance on entrepreneurial orientation, market orientation, learning orientation and SMEs performance of gem and jewelry industry in Thailand. *Journal of Business and Social Review in Emerging Economies*, 3(1), 109-120.
- Tidd, J., & Bessant, J. R. (2020). *Managing innovation: integrating technological, market and organizational change*. John Wiley & Sons.
- Valentim, L., Lisboa, J. V., & Franco, M. (2016). Knowledge management practices and absorptive capacity in small and medium-sized enterprises: is there really a linkage?. *R&D Management*, 46(4), 711-725.
- Verhees, F. J., & Meulenbergh, M. T. (2004). Market orientation, innovativeness, product innovation, and performance in small firms. *Journal of small business management*, 42(2), 134-154.
- Wahid, S. D. M., Noor, A. A. M., Fareed, M., Hussain, W. M. H. W., & Ayob, A. A. (2021). ENRICHING STUDENT'S SOCIAL ENTREPRENEURSHIP INTENTION: A MEASUREMENT MODEL. *Academy of Entrepreneurship Journal*, 27, 1-13.
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic management journal*, 24(13), 1307-1314.
- Yadav, S. K., Tripathi, V., & Goel, G. (2019). Mediating effect of innovation with market orientation and performance relationship. *Management Research: Journal of the Iberoamerican Academy of Management*, 17(2), 152-167.
- Zafar, U., Rashid, T. U., Khosa, A. A., Khalil, M. S., & Rashid, M. (2018). An overview of implemented renewable energy policy of Pakistan. *Renewable and Sustainable Energy Reviews*, 82, 654-665.
- Zahra, S. A. (2008). Being entrepreneurial and market driven: implications for company performance. *Journal of strategy and management*, 1(2), 125-142.