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## MANAGEMENT | RESEARCH ARTICLE

# The impact of market uncertainty on international SME performance

Shahab Sharfaei<sup>1,2,3\*</sup>, Jeen Wei Ong<sup>2</sup> and Adedapo O. Ojo<sup>4</sup>

**Abstract:** This research explores the performance of international small and medium-sized enterprises (SMEs) in Iran. Iran as the 18<sup>th</sup> biggest market in the world, can potentially be an attractive market for firms. However, SMEs need to navigate the market uncertainty to achieve their performance goals. This study explores this issue by placing competitive advantage to mediate market uncertainty and international SMEs' performance. A foreign SME in Iran is considered a company with 99 employees or less, and which was founded abroad but have an established branch within the country. We used the partial least square (PLS) method to analyse the data gathered from 166 foreign SMEs in Iran. The findings imply that market uncertainty significantly affects performance. Nevertheless, competitive advantage does not mediate the relationship. This study offers insights to international SMEs on how to leverage comprehensive knowledge on market uncertainty to enhance their performance in developing markets. The empirical findings from this research reaffirms the notion that international SMEs ought to be informed about the effects of uncertainty in order to achieve high performance. This is particularly important in developing markets which are more prone to ambiguity.

**Subjects:** Business & Policy; Asian Business; Small Business Management; International Business

**Keywords:** Market Uncertainty; Performance; SME; Competitive Advantage; Small and Medium-sized Enterprises; Differentiation Advantage; Cost Advantage

### 1. Introduction

The Iranian economy offers substantial opportunities for businesses since it has a large population of 85 million people which makes it the world's 18<sup>th</sup> biggest market (United Nations, 2019). In addition to the human resources, it also has a vast array of natural resources, for example, it has one of the highest oil and gas reserves in the world as well as minerals, and it has a sophisticated manufacturing industry in many fields such as automobiles and pharmaceuticals (Alizadeh & Hakimian, 2014). These factors make Iran a potentially attractive market for businesses.

Despite these opportunities for multinationals in the Iranian economy, there are also the many challenges facing the market. These challenges are more consequential for SMEs since they typically have limited resources. Chief among these challenges are the trade and financial restrictions which have complicated the trade relations with the rest of the world (Iranmanesh et al., 2021). Case in point, many international SMEs have ceased their operations in the country due to the high uncertainty in the market, even though 66% of the consumers in Iran favour imported products (Pesaran,

2013), which in many cases are imported by SMEs. As a result, before SMEs venture into foreign markets, they need to consider factors such as market uncertainty and performance goals.

Several studies have explored the relationship between market uncertainty and the performance of firms (Abbas et al., 2019; Tseng & Lee, 2010). As a result, there are some empirical evidence to suggest that market uncertainty might have an adverse effect on the firm's performance. However, prior research has mainly concentrated on post economic crises conditions, such as the global financial crisis, which seems to impact SMEs differently (Bamiatzi & Kirchmaier, 2014; Cowling et al., 2015; Williams & Vorley, 2014). More recently, a number of studies have focused on the effects of uncertainties surrounding COVID-19 pandemic on businesses and the society (Azizi et al., 2021; Rahmat et al., 2022; Su et al., 2022; Yu et al., 2022). Nevertheless, there are still limited studies that have investigated how market uncertainty impacts firms (Ariefiara et al., 2017; Chu et al., 2018). Moreover, they do not focus on uncertainty's impact on SMEs in international markets, and they also do not consider the role of regulations in market uncertainty. This study attempts to address this gap by investigating the effects of market uncertainty on international SMEs' performance. It is crucial to understand the impact of uncertainty on firm performance in order to effectively operate in uncertain markets.

Against this backdrop, this study makes contribution to the knowledge in a number of ways. First, the limited market power of international SMEs makes them more exposed to the market's competitive forces. They have limited ability to react to competitors and to the uncertainty in the market when there is a constant shift in consumer needs. As a result, it is vital to examine the impact of competitive advantage on their capacity to navigate uncertainty so that they can achieve their performance goals. Second, SMEs are an important part of the job market and are instrumental in creating wealth and prosperity in the majority of the world economies (World Bank, 2014), and Iran is no exception. In fact, more than 95 percent of production firms in Iran are considered to be SMEs. Thus, they are responsible for a significant proportion of the GDP (Kamalian et al., 2015). In a nutshell, SMEs are considered to be unique engines of growth. They provide goods and services which drives economic development, and are instruments of wealth redistribution (ESF, 2009). As such, developing successful SMEs can create a solid foundation for both a strong economy as well as social wellbeing.

Section 2 of this paper discusses the theoretical background and the literature. Section 3 describes the methods, followed by the data analyses and the findings in section 4. Section 5 is the discussion of the findings. Section 6 concludes.

## 2. Literature review

### 2.1. Industrial organization

Industrial organisation is a recognized theory in clarifying firm performance and the industry from the standpoint of industrial structure. Tirole (1988) believed industrial organization to be the study of the inner workings of markets and industries. Hence, is positioned well to address the issue of uncertainties and competition in the market.

Industrial organization's development could be tracked to Mason (1939) and Bain (1956, 1959) (Porter, 1981, 1983; Teece, 1984). The structure-conduct-performance model which was created by Mason (1939), evolved from industrial organization as the main analytical framework (Martin, 2010). This framework required that industry factors such as market uncertainty have influence on firm performance (Lipczynski & Wilson, 2001). This would depend on the idea that every company in a given sector is similar (apart from size), and because of this similarity, market uncertainty is expected to impact every company at a similar extent (Caves & Porter, 1979).

Porter (1980, 1983, 1985), presented the five competitive forces model which consists of intensity of competition, threat of new entrants to the market, threat of substitute products,

consumers' and suppliers' bargaining power. An important consideration is the assumption of a firm's ability to influence the structure due to their position in the industry. This has repurposed the role of structure in explaining the performance of a firm. This development has made industrial organization a pertinent concept in management, all the while keeping its main principles that performance is mainly characterized by the nature of the industry factors such as uncertainty (Porter, 1981; Barney, 1986).

## **2.2. Firm performance**

There is a long track of research which reveal that the performance of an organization can indicate their survival since it impacts decisions made by investors, lenders, and other stakeholders to maintain their support of the organization (Adawiyah & Pramuka, 2017, Andow & David, 2016). According to Wu and Voss (2015), evaluating the efficiency and effectiveness of the decisions made by a firm is performance measurement. Businesses have to prove that they are able to turn a profit in a competitive market while demonstrating their capacity in sustaining their business in the long run.

Newbert (2008) believes that the real benefit that a firm earns from their various activities in the economy is measured by the firm's performance. Therefore, it is important that firms can measure their performance accurately. Furthermore, evaluating the outcomes are critical if the processes are to be improved and the firm's resources efficiently utilized (Demirbag et al., 2006; Eggers & Park, 2020).

The literature on corporate performance reveals the diverse processes that have been developed by researchers in order to quantify performance. As a result, those processes have been categorized mainly into two segments, objective, and subjective performance measures. Subjective measures primarily focus on a firm's performance compared to their rivals or even compared to themselves (Pont & Shaw, 2003). Objective measures, on the other hand, are observable information, typically financial data which can be obtained from either secondary sources or from primary sources in the form of an absolute value (Vorhies & Morgan, 2003).

There are a number of advantages that subjective measures of performance have over objective measures. First, a good performance that is based on subjective measures is associated with a good objective performance in the long run (Richard et al., 2009). For instance, subjective measures such as sales and market share growth reflect the firm's performance in the long run (Varadarajan & Clark, 1994). Second, subjective measures are typically more transparent than objective measures. The secrecy and the lack of accessibility surrounding objective measures deter many researchers from pursuing them in favor of subjective measures (Matsuno et al., 2002; Diez, 2021). Third, studies that are based on objective measures mainly relied on financial parameters which are typically not reliable during times of economic volatility. Hence, when an economy experiences volatility, firms should rely on subjective measures to evaluate their performance (Ibrahim & Lloyd, 2011). Consequently, in uncertain markets such as Iran, subjective measures of performance are the superior alternative.

## **2.3. Market uncertainty**

Market uncertainty is the amount of vagueness and risk that exists in an economy due to various factors which may include regulations, operational costs, trade restrictions, etc. It can be a result of different circumstances such as competition, consumer behaviour, policies, and technological change (e.g., Incekara, 2018).

The market environment can make it easier for some international firms with certain characteristics, and at the same time it could make it difficult for companies with a different set of characteristics (Albert, 2020; Tseng & Lee, 2010). For instance, market uncertainty will have more effect on SMEs that lack knowledge and experience in uncertain markets, which would then lead experienced firms to gain an upper hand. As a result, the nature of the market and

the business environment can play a key role in either helping or damaging the capability of a firm to overcome market uncertainty and achieve their desired goals.

An uncertain business environment may result in major changes to the work processes of a firm, contrary to periods when stability and economic growth is prevalent (Diez, 2021; O'toole & Meier, 2014). Markets that are constantly changing require a more careful examination in order to minimize existing threats and exploit the opportunities that emerge from these circumstances (Goll & Rasheed, 1997; Pashaa & Poisterb, 2017; Zhang et al., 2022). These opportunities or threats can even include critical issues such as food security (Zafar et al., 2022; Zhuang et al., 2022) As such, before entering developing markets, it is important to have a clear approach on how to cope with their particular business environment (Li et al., 2022; Mubeen et al., 2021). For example, in some developing countries corporate social responsibility was found to have a positive influence on firm's performance (Abbas et al., 2019). In fact, social media marketing tools also played a role. Corporate social responsibility was also found to have a dissimilar effect on firm performance in large versus small companies (Mubeen et al., 2021). Consequently, to achieve high performance, firms should obtain comprehensive information on the environment and improve their organizational processes (e.g., Chu et al., 2018; Hart & Banbury, 1994). Adcroft et al. (2007) believe that if firms encounter a destabilizing external event like the Great Recession, they could lose their stability and might be compelled to adopt a fundamental change so that they can reclaim their control over the operations and preserve their viability and performance objectives.

Based on the literature, one of the main elements of market uncertainty is the level of competition in the market (Ariefiara et al., 2017; Tjahjadi, 2011). To mitigate the uncertainty surrounding competition, many firms strive to distinguish themselves from their competitors in various ways. In other words, they attempt to achieve competitive advantage against their rivals in the market.

#### **2.4. Competitive advantage**

Competitive advantage has been an important concept in the field of management for a long time. Michael Porter in 1985 published a book called *Competitive Advantage*, which emphasized the need for firms to improve their processes so that they can rival their competitors. The most crucial phase in this process takes place when the consumer either directly or indirectly weighs the firm's value creation to their competitor's value creation, and therefore competitive advantage is manifested in the difference in the consumer's perception of these rival value creations (Yi-Lin et al. 2021). In fact, Competitive advantage is the capability of a firm to create more value for their consumers relative to their competitors in the market (Ong et al., 2018).

When competitive advantage is attained by a firm because of their products, they gain an elevated status in their consumers' psyche as the value generating agents (Adner & Zemsky, 2006; Grahovac & Miller, 2009). This is regarded as a sign of these consumers' loyalty towards the firm's products, as a result playing a direct role in elevating the firm's performance in the market.

Porter (1985) believed that that competitive advantage can be achieved by firms in two ways, namely by engaging in a differentiation strategy or lowering costs. Hence, it is proposed that firms employ specific competitive strategies that might help organizations compete by either lowering their costs (i.e., cost differentiation) or differentiate their products (i.e., product differentiation) relative to their competitors in the market in order to increase their performance (see Grant et al., 2015; Walsh & Dodds, 2017).

Indeed, there is a positive relationship between firm's performance and competitive advantage which researchers in the past have provided evidence for (Cater & Cater, 2009; Ong & Ismail, 2012). Ong et al. (2018) found that SMEs can achieve a more robust performance through competitive advantage. Moreover, they found that the effect of differentiation advantage is greater than cost advantage. However, firms are nowadays confronted with an ever-increasing competitive

landscape which renders it challenging to maintain their competitive advantage (Nenzhelele & Pellissier, 2014). If an international SME is unable to gain competitive advantage in the marketplace, it could adversely affect their performance in a significant way. In order to be able to thrive in this competitive environment while enhancing their performance relative to their rivals, international SMEs should analyze the uncertainties in the market, gather information, and be able to take decisive action if they face opportunities or threats.

We examine the link between market uncertainty, SME performance, and competitive advantage through industrial organization. The somewhat narrow focus on foreign SME performance is not often emphasized in industrial organization, nevertheless, the nature of market uncertainty and the way in which it affects firms is heterogeneous. Through integrating the current contributions on industrial organization, the research model will incorporate the experiences of foreign SMEs in the Iranian economy and how they are impacted by uncertainty. Furthermore, it will analyse whether competitive advantage mediates this relationship.

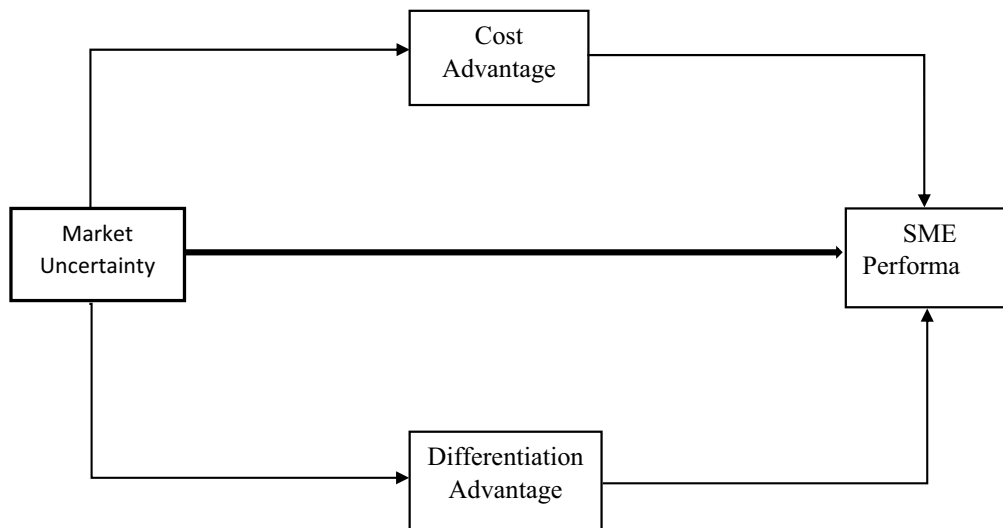
### 3. Research methods

The literature empirically argues that market uncertainty can impact firm performance (Y. Liu & Liangb, 2015; Chu et al., 2018; Raza et al. 2019). We approach this issue by analysing the mediating effect of cost advantage and differentiation advantage on the relationship between market uncertainty and international SME performance. The review of the literature suggests that differentiation advantage and cost advantage could affect the management of uncertainty by a firm. A framework has been developed to lead this study following the review of the literature and the background of the study. Figure 1 presents the conceptual model. This paper hypothesizes that market uncertainty influence firm's performance, and that their relationship is mediated by cost advantage and differentiation advantage.

The study used a quantitative method in its approach, which was done using a survey as the instrument. Furthermore, we adapted the measurement scales from prior research and conformed them to the context of this analysis. The items for SME performance, cost advantage, and differentiation advantage are adapted from Ong et al. (2018). Additionally, we measured market uncertainty using items adapted from Gao, Lin and Yang (2016). The survey instrument is presented in the appendix.

The survey instrument consists of an introduction to the topic and explains the purpose of the data collection. The respondents were also informed about the topic of the questionnaire. Likewise,

Figure 1. Conceptual model.



the researchers guaranteed the privacy of the respondents. These steps helped in addressing the issues associated with common method bias. Additionally, we used a different scale for the independent variable and the dependent variable, also in an attempt to avoid common method bias (Podsakoff et al., 2003). Furthermore, the measurement items were clarified and improved following the methodological expert review. The survey was tested and refined following the feedback of two experts in the private sector and two academics in Iran, as well as two academics in Malaysia. Thus, the number of survey reviewers is well above the two recommended level required to validate the measurements (Rubio et al., 2003). Based on the experts' feedback, a few small refinements to the questionnaire were made in order to ascertain contextual suitability. The refinements included breaking certain items in two in order to avoid double-barrelled questions, in addition to changing the wording of some items to increase their clarity. Furthermore, in order to improve the overall design of the survey, the experts were asked to voluntarily add any suggestions that they may have.

The main unit of analysis for this study is the SMEs, and the sampling frame is comprised of international SMEs with official presence in Iran. A number of strategies were employed to increase participation in the survey. For example, the cover page included a summary of the goals of the research, assured privacy, and the academic nature of the study was emphasized as well. Moreover, referral networks were used since previous empirical research in the Iranian market confirm that participation rate can be improved by leveraging networks (Kamalian et al., 2015).

The dataset which was utilized as the sample base for this study, was obtained from a leading industry database provider and included 1452 international SMEs. In order to achieve an acceptable number of responses, the questionnaire was sent to the entire sample between March and October 2020. During this period, the researchers sent four reminders and relied on referral networks to obtain the responses. Ultimately, 166 usable responses were gathered. The data was collected using an online survey sent to senior managers of international SMEs in Iran.

#### **4. Results and findings**

This study performed factor analysis as well as the correlation of the measurement scales in order to assess reliability and validity. Furthermore, the study conducted the structural equation modelling (SEM) procedure using the PLS software. SEM is the most appropriate method for this analysis since the framework has several relationship paths. This study utilized the mediating model to test the relationship between cost advantage, differentiation advantage, market uncertainty, and international SME performance. We also tested the direct impact of market uncertainty on international SME performance.

The next section reports the results of the research analysis, starting with the demographic profiles.

##### **4.1. Demographic profiles**

Table 1 reports the demographic profiles of the 166 foreign SME participants in the survey. Most of the respondents had 50 to 99 employees (37.3%). 57.8% of the SMEs originated in Asia Pacific, 35.5% in Western Europe, and 5.4% in Eastern Europe. Furthermore, the manufacturing sector accounted for 33.1% of the international SMEs that contributed to the survey, which were higher than other sectors.

##### **4.2. Validity Test**

We first determined convergent validity by using the average variance extracted (AVE). As shown in Table 2, the AVEs of all the variables are well above 0.5, which indicate convergent validity (Hair et al., 2017). Additionally, the item of a construct with an outer loading of below 0.40 must be deleted (Hair et al., 2011). The results showed that only two items had an outer loading of 0.4, which were eliminated.

**Table 1. Demographic profiles of international SMEs**

Variables	Frequency	Percentage
SME Size (number of employees)		
0–10	46	27.7
11–49	58	34.9
50–99	62	37.3
Origin		
Western Europe	59	35.5
Eastern Europe	9	5.4
Asia Pacific	96	57.8
Other	2	1.2
Core Industry		
Service	48	28.9
Manufacturing	55	33.1
Retail	29	17.5
Agriculture	28	16.9
Other	6	3.6

**Table 2. Convergent validity**

Variable	Composite Reliability	Average Variance Extracted (AVE)
Firms Performance	0.887	0.503
Market Uncertainty	0.868	0.558
Differentiation Advantage	0.780	0.521
Cost Advantage	0.768	0.509

Table 2 also reports the score of the composite reliability, which is above 0.7 for all the variables (Hair et al., 2017), thus, confirming that the model has a satisfactory level of reliability.

To measure the discriminant validity, the study used the Fornell and Larcker (1981) criterion, Heterotrait-Monotrait Ratio (HTMT), and the cross-loading criterion. Tables 3 and 4 presents the findings of the Fornell Larcker’s criterion and the HTMT ratio. The results confirm that there is a suitable degree of discriminant validity.

Additionally, the variance inflation factors (VIF) was performed in order to determine multicollinearity. The VIFs are deemed suitable as all the variables had a lower VIF than the cut-off.

**Table 3. Fornell-Larcker criterion**

	Cost Advantage	Differentiation Advantage	Firm Performance	Market Uncertainty
Cost Advantage	0.528			
Differentiation Advantage	0.063	0.649		
Firm Performance	–0.211	0.162	0.709	
Market Uncertainty	–0.266	0.126	0.663	0.698



**Table 4. HTMT ratio**

	Cost Advantage	Differentiation Advantage	Firm Performance
Cost Advantage			
Differentiation Advantage	0.856		
Firm Performance	0.228	0.186	
Market Uncertainty	0.275	0.159	0.739

**Table 5. Results of the direct effect**

Path	Beta	SE	T Value	P Values	F	R <sup>2</sup>	R <sup>2</sup> Adjusted
Cost Advantage -> SME Performance	-0.046	0.104	0.443	0.658			
Differentiation Advantage -> SME Performance	0.084	0.076	1.111	0.267			
Market Uncertainty -> SME Performance	0.663	0.042	15.844	0.000	0.675	0.448	0.438

#### 4.3. Model testing

Bootstrapping is used in this study to estimate the relationships between the variables. Table 5 presents the findings. The results show that there is a significant impact between market uncertainty and the performance of SMEs in international markets ( $\beta = 0.663, p < 0.000$ ).

#### 4.4. Test of mediation

The mediating effect of differentiation advantage and cost advantage on the relationship between market uncertainty and international SME performance is reported in Table 6. Based on the results, the impact of market uncertainty on international SME performance mediated by cost advantage ( $\beta = 0.012, p < 0.601$ ) and differentiation advantage ( $\beta = 0.011, p < 0.613$ ) is not significant.

**Table 6. Results of the mediation effect**

	Beta	SE	T Value	P Values	CI	
					LL	UL
Market Uncertainty -> Differentiation Advantage -> SME Performance	0.011	0.021	0.506	0.613	-0.053	0.032
Market Uncertainty -> Cost Advantage -> SME Performance	0.012	0.023	0.523	0.601	-0.034	0.060

## 5. Discussion of the findings

The findings born out from this study confirm that market uncertainty has an impact on firm performance, as predicted. While the positive effects of market uncertainty on the performance of firms have been established in previous studies (Blind et al., 2016), the same assertion cannot be made about its effect in developing economies. Moreover, the impact on uncertainty on international SMEs has not been fully explored either. Since developing countries face constant changes and uncertainty, it is imperative to understand their effect on performance. Hence, this paper provides an explanation to increase our understanding on this topic.

Consistent with past research (Blind et al., 2016), this study found that market uncertainty has an effect on the performance of firms in Iran. The Iranian market has experienced uncertainty for many decades; therefore, international firms are aware of the uncertainty in the market. Despite this awareness, they are nevertheless affected by the uncertainty, as the findings of this study indicates. This highlights the importance of market uncertainty and its influence on performance.

Recently, the effects of economic uncertainty have been in full display with the advent of the COVID-19 pandemic and the ensuing lockdowns that followed (Wang et al., 2021). This environment created much uncertainty for many firms, particularly those that were unable to fully function remotely by adopting different technologies. As such, it was found that technological adoption can help mitigate the uncertainty surrounding COVID-19 pandemic, thus lowering the pandemic's burdens on businesses (Al Halbusi et al., 2022; Zhou et al., 2022).

This study also examined the role of cost advantage and differentiation advantage as mediators. They were found to not have a significant effect on the relationship between uncertainty and performance. This study advances the implications of competitive advantage and market uncertainty on firm performance in the context of developing economies. The reason why neither cost advantage nor differentiation advantage have an impact on performance may have to do with how SMEs operate in Iran. Due to local regulations, international firms have constraints in operating in Iran independently, as such, they operate by partnering with local companies. Given the differential level of competitive advantage, the international SME may prohibit a full sharing of knowledge in order to protect their competitive advantage. Therefore, cost advantage and differentiation advantage may have a more significant effect if foreign SMEs are able to operate in the market without collaborating with local partners, which is consistent with the literature (Kaleka & Morgan, 2017; Zhao & Priporas 2017). Since the regulations in Iran does not allow international firms to operate without a local partner, as an alternative, SMEs should foster close ties with their local partners and develop trust in order to share, and benefit from their valuable competitive advantage.

To sum up, the statistical findings imply that market uncertainty have an impact on the performance of international SMEs, which is consistent with the findings from past studies. However, competitive advantage was found to not have a significant mediating effect in this relationship. The empirical findings resulted from this research reaffirms the notion that foreign SMEs ought to be mindful of the effects of uncertainty in order to achieve their objectives. This is particularly important when it comes to some developing markets which are more characterized by ambiguity. It might be more advantageous for international SMEs to choose markets with lower uncertainty in order to maximize their gains. This study closes gaps in the knowledge by demonstrating the consequences of market uncertainty on firm performance, and by validating the impact of competitive advantage on the hypothesized dimensions of industrial organization in this context.

### 5.1. Implications of the study

This research extends the literature on the need to conceptualize industrial organization by exploring the influence of market uncertainty on the performance of foreign SMEs in developing countries. The literature has established that the organization of industries as well as the amount

of regulations and competition in the economy are vital elements that impacts firm performance in uncertain markets (e.g., Audretsch, 2018; Hussain et al., 2017; Q. Liu et al., 2022). However, the exact mechanisms driving these relationships have not been fully investigated. This study advances the industrial organization perspective to explain the predictability of market uncertainty on international SME performance. Accordingly, the model supports the link between market uncertainty and performance.

In the 1980s, at a time when the global marketplace experienced the emergence of big industrial companies, industrial organization emerged to tackle this new paradigm (Schmalensee, 1988). Industrial organization frameworks have developed and subsequently encompassed a wide array of topics including, market structure, industrial policy, and organizational behaviour. Nevertheless, the different conceptualizations have not fully captured its multifaceted nature, as limited steps have been taken to explain how market uncertainty impact firm performance. A number of scholars have suggested that more research on industrial organization is needed in order to advance the knowledge on the topic. Consequently, this paper presents a conceptually validated model to describe industrial organization and its significance as it relates to market uncertainty and international SME performance.

In addition to the suggestions to policy makers to create a conducive business environment which would attract international SMEs, this study seeks to offer recommendations to the management in international SMEs which could help enhance their performance. The findings of this study show that foreign SMEs should collect information related to the uncertainty in markets in which they operate. Market uncertainty could benefit some SMEs, but harm others, based on different factors such as the industry that they serve. As such, collecting information on market uncertainty can help these firms to take advantage of the uncertainty by incorporating them into their decision-making processes. If SMEs have information on uncertainty and its evolution over time, they will be able to react to it in a way that they could avoid its downsides and take advantage of the upsides. To effectively manage uncertainty, SMEs should be informed about their business environment and the market players within it. To fully benefit from the opportunities that market uncertainty presents, international SMEs should gather, analyse, and utilize consumer data, particularly in markets that experience rapid changes. Importantly, SMEs need to also have strong knowledge sharing apparatus to be able to effectively use the information they have obtained and achieve higher performance. The importance of knowledge sharing in similar contexts has been pointed out in past studies as well (Abbas et al., 2020).

### **5.2. Limitations and future research**

Although this study made every attempt to meticulously adhere to the methodological steps, the possibility of respondent bias is nevertheless present. While this paper employed a number of empirical and statistical techniques to control for these types of biases, self-reported data can nevertheless be prone to bias (Howard, 1994; Podsakoff & Organ, 1986). Yet, surveys continue to be the most suitable method of gathering evidence on certain phenomena (Spector, 1994, 2006). According to Rupp and Spencer (2006), by including a mediator, as it was done in this study, the influence of bias can be minimized, hence, strengthening the suitability of self-reported surveys. Finally, the research only explored the international SMEs in the Iranian market, and the result ought to be regarded as such. The difference in sizes of the firms and whether the firm is local or international, might impact their performance in the market. Therefore, the generalizability of the model depends on conducting the research in other types of firms and other developing countries too.

### **6. Conclusion**

This study explored the previously neglected influences of market uncertainty on foreign SMEs' performance in emerging markets. The concept of industrial organization was revisited, and thus conceptually related notions, namely differentiation advantage and cost advantage were considered. Based on the literature, market uncertainty was hypothesized to impact firm performance. To

this end, data was gathered from a survey of foreign SMEs operating in the Iranian market. Following the hypothesized effects on firm performance, the revised structural model confirmed the effects of market uncertainty on SME performance.

In developed countries, maturity of the economy provides some certainties which may not exist in developing countries. These certainties such as the legal system, transparency, and government policies, etc. present international firms in these economies with a set of expectations which may not apply to the more volatile developing economies. Therefore, before getting involved in markets with high uncertainty, international SMEs should evaluate the possible risks of operating in such markets, particularly those in the developing economies.

This study also examined the role of differentiation advantage and cost advantage as a mediator between market uncertainty and performance. Surprisingly, the findings showed that differentiation advantage and cost advantage do not mediate the relationship. This further underscores the differences that developing countries exhibit compared to developed economies. This study thus contributes to the discussion by highlighting these differences between the developed and developing economies.

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## Appendix

### Survey instrument for the construct in the research model

<b>Regulatory Uncertainty</b>	
In our sector there ...	
1	are constant changes in regulatory policy.
2	are constant currency fluctuations.
3	are constant changes in the tax policy.
4	are constant changes in monetary policy.
<b>Market Uncertainty:</b>	
In our sector there are constant changes in ...	
1	the cost of operation.
2	the price of raw materials.
3	the cost of labor.
<b>Differentiation Advantage</b>	
Our organization ...	
1	provides better customer service than our competitors.
2	is better in commercializing new products than our competitors.
3	is more successful at retaining customers than our competitors.
4	can display our technology know-how in our products.
5	enjoys the image as a premium producer.
6	can attract customers to pay higher prices for our products because of its better quality.
7	is able to serve a new market segment.
<b>Cost Advantage</b>	
Our organization ...	
1	produces the products faster than our competitors.
2	has lower production wastage than our competitors.
3	utilizes better technology to operate more efficiently than our competitors.
4	uses latest management philosophy to operate more effectively.
5	has certification and recognition for an effective production system.
6	has a tight production control to achieve consistent product quality.
<b>Firm's Performance:</b>	
Evaluate your firm's performance against your closest competitors in the following areas ...	
1	sales growth
2	capturing market share
3	profitability
4	financial wellbeing
5	financial stability
6	efficiency
7	customer loyalty
8	Liquidity