



Entrepreneurial orientation and new venture performance in emerging markets: the mediating role of opportunity recognition

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Abstract

How entrepreneurial orientation facilitates the identification of new opportunities in newly established ventures in emerging economies remains largely unexplored. Approaching entrepreneurial orientation as a second order latent construct, we examined the mediating role of opportunity recognition on new venture performance. Using a survey data from 316 SMEs, the results of the analysis in SmartPLS highlights that entrepreneurial orientation indirectly contributes to the performance of new ventures, where the relationship is partially mediated by opportunity recognition. The findings show that firms with high entrepreneurial orientation can identify and exploit new opportunities as well as enjoy superior performance.

Keywords Entrepreneurial orientation · Opportunity recognition · New venture performance · Sensing capacity

Jel Classification L26 · M13 · M16

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1 Introduction

Many emerging economies are confronted with immense challenges such as uncertain markets (Czakov et al. 2020; Yu et al. 2020), globalization (Fatima 2017), new market systems (Alvarez et al. 2015) and intense competition (Chari and Banalieva 2015). As compared to developed markets, new ventures suffer from a higher failure ratio due to institutional challenges. For instance, Wang and Chen (2010) argue that in China, more than 70% of newly established ventures fail in the first year. Another study by Parnell et al. (2015) reports 67% failure ratio of Chinese ventures in the first year while 85% in the first 10 years. Anwar and Ali Shah (2020) report that more than 50% of new ventures in Pakistan do not survive in the long run. These institutional challenges impinge on the growth of small and medium enterprises (SMEs) largely due to the liability of newness and smallness, which limits their ability to adapt rapidly to changing business conditions (Yu et al. 2020). Consequently, the ability of these firms to exploit new opportunities in order to survive the competition is impeded (Zhou and Li 2010; Chen et al. 2020). Thus, bringing to the fore the issue of performance and survival of newly established SMEs in emerging economies (Anwar and Ali Shah 2020; Yu et al. 2020; Guo et al. 2019a).

The issue of performance, profitability and competitive advantage of new ventures have extensively been addressed by prior studies, for the example through the lenses of the resource-based view (RBV) and organization theory (See Filser et al. 2014; Hughes et al. 2015). However, the explanations provided by these prior studies may be incomplete when they are applied to the specific context of newly born ventures in emerging economies. Reasons include poor entrepreneurial capabilities, lack of resources and poor competencies, which hinder the growth and survival of new ventures (Anwar and Ali Shah 2020; Yu et al. 2020). More precisely, ventures in developed economies do not have the magnitude of resource constraints as faced by ventures in emerging economies. It is important to note that small ventures have fewer resources for opportunity recognition as compared to large firms (Wright and Etemad 2001) and, thus, less leverage and higher risks when doing business in a dynamic environment (Yuliansyah et al. 2016). Moreover, the institutional setting, competition and digital trends in developed and advanced markets are different from emerging markets (Schneider 2018; Devece et al. 2019). Therefore, firms in emerging markets often search for less expensive and less risky but fruitful alternatives for growth.

However, very little is known about the factors that facilitate the recognition of new opportunities and success in newly established ventures. It has been shown that not all enterprises can recognize an opportunity and transform it into a successful undertaking (Wasdani and Mathew 2014). Meanwhile, with time some ventures develop better capabilities to recognize, exploit new opportunities and succeed in turbulent markets (Gielnik et al. 2012; Tang et al. 2012). There is a growing research interest in these capabilities of opportunity recognition (Filser et al. 2020). However, how entrepreneurial orientation (EO), innovativeness, risk-taking and proactiveness facilitate the recognition of new opportunities that in turn enhance the performance of new ventures particularly in emerging markets has not yet been fully established.

To fill this important gap in the literature, we used an untested path to explore if EO directly or indirectly contributes to new venture performance through opportunity recognition.

There are two main reasons for testing the hypothesized model in the context of newly born SMEs in emerging economies. First, as mentioned earlier that little is known about the role of EO in opportunity recognition that results in the success of new ventures. There is ample evidence of the benefits of EO in new and matured ventures in both emerging and developed economies (Marom et al. 2019; Jin et al. 2017; Parida et al. 2016; Yang and Meyer 2019). Research also highlights the advantages of opportunity recognition for enterprises (Guo et al. 2019b; Gielnik et al. 2012; Hamel 2012; Hansen et al. 2011). However, there is little evidence that demonstrates how a newly established venture creates and exploits an opportunity (e.g., Cai et al. 2016; Nambisan and Zahra 2016; Vogel 2017). Additionally, the following questions remain unexplored: (a) What is the effect of EO on opportunity recognition in new ventures in emerging economies (b) How does opportunity recognition mediate the relationship between and new venture performance in emerging economies?" Second, ventures in emerging economies continue to outgrow those in developed economies (Prashantham et al. 2019). For instance, the growth of new product development (Jin et al. 2019), internationalization process (Anwar et al. 2018) and investments by venture capitalists (Wu and Xu 2020) are reported more in emerging economies than in developed markets. Surprisingly, the rate of failure of newly born ventures is higher in emerging economies in comparison to those in advanced economies (Anwar and Shah 2020). The failure can be attributed to a lack of capabilities, insufficient resources, poor entrepreneurial skills and opportunities. Therefore, the decision to test the model in emerging markets allows us to assess if EO enables the discovery of opportunities and long-term survival of new ventures.

We provide important contributions to the study of EO and new venture growth. First, we extend the literature on EO and venture growth to the specific context of emerging markets. The context is particularly important as it reveals an important but less explored dimension in EO studies. Therefore, we show how different venture growth could turn out for firms in emerging economies. Second, considering the extra-ordinary failure ratio of new ventures in emerging markets, our research provides worthy insights on the mitigating failure of new ventures. That is how EO (as an intangible and convenient source) enables new enterprises to the recognition of useful opportunities in order to avoid failure. Third, we use empirical data of 316 new ventures from an emerging market (Pakistan) and employed EO as a first and second-order construct (post hoc analysis) in partial least squares (PLS) for opportunity recognition and new venture performance. It allows us to advance the existing literature of EO by taking us one-step ahead of previous studies that used EO as the first-order construct in simple regression analysis. Fourth, the inconclusive and mixed evidence investigated by previous studies (e.g. positive, significant and insignificant etc.), allow researchers to examine potential mechanisms between EO and performance. We hereby assess a possible mechanism (opportunity recognition) (Lumpkin and Dess 1996) that can be an actual mediator in the apparent empirical disjunction. Fifth, we add a

contribution of an empirical value to earlier extensions of RBV by showing the performance gains obtained from using EO as a resource. For instance, EO is deemed as an intangible resource, which facilitates firms in acquiring sustainable positions in the market (Anwar and Shah 2020).

The rest of the paper is organized as follows: Sect. 2 discusses the theoretical background and hypothesis development. The methodology is presented in Sect. 3 while the results are presented in Sect. 4. Finally, we present the discussion and conclusion in Sect. 5.

2 Theoretical background and hypothesis development

2.1 Opportunity recognition

“One of the pillars of entrepreneurship research is the concept of ‘opportunity’” (Harms et al. 2009). Opportunity recognition demonstrates the capability of a firm to identify a good idea and transform it into a business impression that improves value and creates revenues (Lumpkin and Lichtenstein 2005). Opportunity recognition focuses on market and customer demands as well as helps in problem-solving to make firms successful (Shrader and Hills 2015). It also contributes to a firm’s performance (Cassia and Minola 2012). Meanwhile, identifying and exploiting opportunities is still poorly understood (Nambisan and Zahra 2016; Vogel 2017; Wang et al. 2013).

For the last 3 decades, opportunity recognition has become a key topic in the field of entrepreneurship (Donbesuur et al. 2020; George et al. 2016; Yang and Meyer 2019). However, there is little agreement on the accepted definition of opportunity recognition (Hulbert et al. 2015). For instance, Bull and Willard (1993) demonstrated that “entrepreneurship” appears under conditions of: first, a task-related motivation (certain visions or social values that motivate individuals to act); second, available expertise (knowledge about the current situation); third, a personal gain expectation (e.g., economic and psychological benefits and goals); and, fourth, a supportive environment. According to the authors, these conditions impact the ability of an individual (e.g., entrepreneur) who searches for an opportunity and aims to benefit from the opportunity. For instance, Kirzner (1985) demonstrated that an entrepreneur is one who perceives profit opportunities and undertakes actions to fill the presently unsatisfied need or process inefficiencies.

Opportunity recognition is based on experiences and entrepreneurial characteristics (Parida et al. 2016) and entrepreneurial behavior that follows (Wasdani and Mathew 2014). Firms with strong potential towards opportunity recognition are more successful over those having little opportunity recognition in the market (Ketchen et al. 2007). There is a great chance of failure if SMEs cannot search or identify opportunities in a dynamic market (Sambasivan et al. 2009). Considering the high ratio of failure of new ventures in emerging markets, recognition of new opportunities is deemed a key strategy of success (Zhou and Li 2010; Chen et al. 2020). Apparently, small firms are more flexible and adapt to changes more quickly than large firms. For this reason, they may have a higher degree of EO (Rauch et al.

2009) but a lack of resources forces them to rely on new opportunities (Ireland et al. 2003; March and Simon 1968).

2.2 Entrepreneurial orientation

While there is no precise definition of EO (Lechner and Gudmundsson 2014), a three-dimensional model is used to describe EO. Its elements include innovativeness, risk-taking, and proactiveness (Covin and Slevin 1989). Although Lumpkin and Dess (1996) propose two additional dimensions—competitive aggressiveness and autonomy—most authors support the three-dimensional model (Shirokova et al. 2016; Su et al. 2011; Wiklund 1999; Zahra and Garvis 2000).

A closer look at the three dimensions reveals a construct that may be directly or indirectly related to a firm's performance. First, innovativeness is about supporting and inspiring new ideas as well as investigation and creativity (Lumpkin and Dess 1996). Second, risk-taking tells us about "the degree to which owners and managers of firms are willing to take the risk and make great resource commitments" (Miller and Friesen 1978, p. 923). Finally, proactiveness means searching for novel opportunities which may or may not be complementary to the existing line of operations (Lumpkin and Dess 1996).

There are two schools of thought regarding the influence of EO on a firm's performance. The first group of authors claims that EO does not always directly influence performance but rather some internal factors and capabilities, which mediate its relationship to a firm's performance. Examples include networking (Jiang et al. 2017), market orientation (Amin et al. 2016), competitive strategy (Lechner and Gudmundsson 2014), or strategic entrepreneurship (Kantur 2016). By contrast, the other group of authors argues that EO has a significant direct influence on performance (e.g., Chen and Yang 2009; Kraus et al. 2012; Zahra et al. 2001). In line with our previous arguments, we align with the first school of thought and assume an indirect influence of EO on a firm's performance. Indeed, several studies have revealed that newly established ventures persistently seek opportunity recognition to ensure their survival in the market (De Carolis and Saporito 2006; Gielnik et al. 2012). If opportunity recognition requires EO and entrepreneurial alertness (De Carolis and Saporito 2006; Khodaei et al. 2016; Wiklund and Shepherd 2005), we can assume a mediated (indirect) effect of EO on a firm's performance.

Entrepreneurship theory also supports the notion that since opportunities are heterogeneous, the features of the opportunity may either empower or restrain the founder's distinctive information, which can influence a new firm's performance (Dencker and Gruber 2015). This logic can be transferred to the three dimensions of EO. Innovative firms can benefit from new opportunities (Day 2011; Lin and Wu 2014), if firms try to respond to external changes proactively, i.e. respond to external change—new opportunities—before competitors can respond. Proactiveness helps them to exploit the new opportunity ahead of competitors (Day 2014; Kozlenkova et al. 2014). Moreover, a firm must be a risk-taker to seize the benefits of new opportunities and attain high profitability (Zahra et al. 2001).

2.3 Hypothesis development

2.3.1 Entrepreneurial orientation and new venture performance

EO is a significant strategic factor for new ventures due to its key role in firm growth, success and financial performance (Donbesuur et al. 2020). It was originally conceptualized in three dimensions namely innovativeness, risk taking and proactiveness (Miller and Friesen 1978). However, two additional dimensions were later added. These new dimensions include competitive aggressiveness and autonomy (e.g., Lumpkin and Dess 1996). All these features are considered vital for new business success (Jin et al. 2017; Parida et al. 2016; Yang and Meyer 2019). While, most studies in the context of emerging markets, have highlighted the first three dimensions of EO for competitive advantage and business success (Ma et al. 2017; Su et al. 2011; Zhao et al. 2011).

Innovativeness is a crucial factor for a firm's performance. The innovative capability allows firms to innovate, which in turn, helps them develop competitive advantages and gain positive outcomes (Cooper 2000). Firms should emphasize both product innovation and firm innovation to sustain their position in emerging markets (Story et al. 2015). Guo et al. (2019a) shed light on building new and unique products and revealed that new ventures in emerging economies such as China need high innovative qualities to ensure their success. In such regions, innovative strategy is important for new ventures to meet the needs of operational activities (Singh and Gaur 2018). Anwar (2018) also demonstrated that an innovative business model is a substantial factor of competitive advantage and SMEs performance in Pakistani SMEs. Emerging markets are considered as volatile, turbulent and uncertain (Alam et al. 2019). Innovativeness is a strategic resource with which a firm deals with fluctuations in its internal life and external environment. In order to respond to a turbulent environment, it is vital to invest in innovativeness to be able to realize a competitive advantage and achieve high performance (Hult et al. 2004). In turbulent markets, innovativeness helps SMEs to enhance their performance and survive (Kraus et al. 2012; Rhee et al. 2010).

However, innovativeness alone might not be enough. Entry into a new market, new brand recognition, and new product development also require a high-risk-taking behavior (Brettel et al. 2015; Zahra et al. 2001). Empirical evidence indicates that CEOs with higher levels of risk propensity create higher value for their firms (Danso et al. 2016; Lumpkin and Dess 1996; Ferris et al. 2017). Furthermore, the risk-taking propensity is especially vital for owners and managers of SMEs who are competing in emerging markets because risk-taking activities enhance superior financial performance in such markets (Danso et al. 2016). Consequently, risk-taking is not only a part of the EO construct but also a requirement for entrepreneurs if they want to achieve a high degree of performance.

Finally, proactive firms gain benefits from early market entry and can thus acquire a competitive advantage, higher returns and profitability, and attain a stronger brand recognition than their main competitors (Wiklund and Shepherd 2005). In emerging markets such as China, new ventures use proactive approaches to scan the environment for potential activities that benefit them (Gao et al.

2018). Furthermore, discovering new opportunities is very crucial for newly born ventures in emerging economies. Proactiveness enables enterprises in exploiting new opportunities that result in satisfactory performance (Yang and Meyer 2019). Highly proactive ventures tend to achieve higher market returns and enjoy success in the industry by introducing new products and services before their competitors (Jalali et al. 2014). Overall, EO is very crucial for new process and value creation (Wales et al. 2020). In view of this we predict a positive association between high EO and firm performance.

Hypothesis 1 New ventures in emerging markets with high entrepreneurial orientation will have high performance.

2.3.2 Entrepreneurial orientation and opportunity recognition

In this study, we argue that EO allows not only for high performance but also for better opportunity recognition by new ventures. In fact, the empirical study of Wang and colleagues (2013) indicates that entrepreneurial efficacy and skills have a significant influence on opportunity recognition. To discover a new opportunity, new ventures need proactive, innovative and risky behaviors (Parida et al. 2016). A firm can exploit growth opportunities via innovation in the context of product development and process (Geroski 1990). Innovativeness helps firms to seize new opportunities through novel approaches or by offering new products in the present market (Berry et al. 2010). Empirical evidence indicates that there is a significant positive association between innovative new ventures and opportunity recognition in emerging economies (Chen and Yang 2009).

There is a broad agreement that quantifiable risk is also associated with opportunity recognition (Maine et al. 2015). Risk perception, for example, is one of the most crucial aspects in opportunity evaluation among firms (Dali and Harbi 2016). Risk-taking firms make high investments when pursuing opportunities, particularly if the environment is benevolent and opportunities are large (Stevenson and Jarillo 1990). Firms with a risk-taking propensity commence even more risky projects and show boldness when executing proactive strategies to exploit opportunities (Stevenson and Jarillo 1990). Risk-taking is shown to be associated strictly with opportunity recognition and exploitation (Runyan et al. 2008).

Related to risk-taking, proactiveness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand (Rauch et al. 2009). To achieve success in a market, entrepreneurs must proactively search for information, e.g., new opportunities, about their competitors, customers, and market conditions (Galbraith 1973). In highly competitive markets, proactiveness assists entrepreneurs in forward-looking orientation and opportunity-seeking that drive them ahead of major competitors (Covin and Wales 2012). New ventures should be proactive, so they will actively engage in new projects and services, discovering new opportunities and new product development (Ghosh et al. 2001). New ventures in emerging markets get advantages of the proactive alliance to discover new opportunities easily (Yang and Meyer 2019). For instance, in emerging economies such as China, SMEs

cannot survive and succeed in the market, if they are unable to proactively search and identify new opportunities (Guo et al. 2017). The ability to identify opportunities depends on the readiness and alertness to environmental changes (Stevenson and Gumpert 1985). It has been shown that proactive behavior on the part of SMEs has a significant direct influence on opportunities (Ojiako et al. 2015). Thus, we hypothesize a positive effect of EO on opportunity recognition capabilities.

Hypothesis 2 New ventures in emerging markets with high entrepreneurial orientation will have high capabilities of recognizing new opportunities.

2.3.3 Opportunity recognition and new venture performance

It has been shown that opportunity recognition a substantial predictor of SMEs' performance, success and growth in emerging economies (Guo et al. 2017). Due to resource constraints and poor support, the majority of SMEs in emerging economies look for favorable opportunities that present a low level of risks and costs (Guo et al. 2019b). Due to fast changes in market demands, customer preferences, and the strong competition in markets, firms increasingly rely on novel opportunities in order to survive and achieve success (Hamel 2012; Hansen et al. 2011). Ventures that can identify the presence and value of an opportunity can act upon them and profit (Shane and Venkataraman 2000). Such opportunities provide several benefits, including sustainable performance (Ojiako et al. 2015).

In SMEs, where owners and managers play a greater role, this is even more pronounced, since management characteristics influence OR, which in turn influences a firm's performance (Sambasivan et al. 2009). A higher degree of motivation among employees towards opportunity recognition might make them willing to participate in entrepreneurial activities. These activities are related to a higher frequency of opportunities recognized (Urban and Wood 2015). OR, in turn, significantly contributes to a new venture's competitive advantage and high performance (Gielnik et al. 2012; Guo et al. 2017). For instance, it has been shown that a firm's ability to recognize new opportunities can significantly increase performance (Sambasivan et al. 2009; Wasdani and Mathew 2014). Because of the foregoing discussion we predict that opportunity recognition capabilities will have a positive association with firm performance.

Hypothesis 3 Emerging market firms with high capabilities of opportunity recognition will have high performance.

2.3.4 Indirect effects of entrepreneurial orientation

We hypothesize about the influence of EO on a new venture's performance and on opportunity recognition. As a mediation mechanism, we also hypothesize about the influence of opportunity recognition on new venture performance. In fact, opportunity recognition is the explanatory variable that sheds light on why

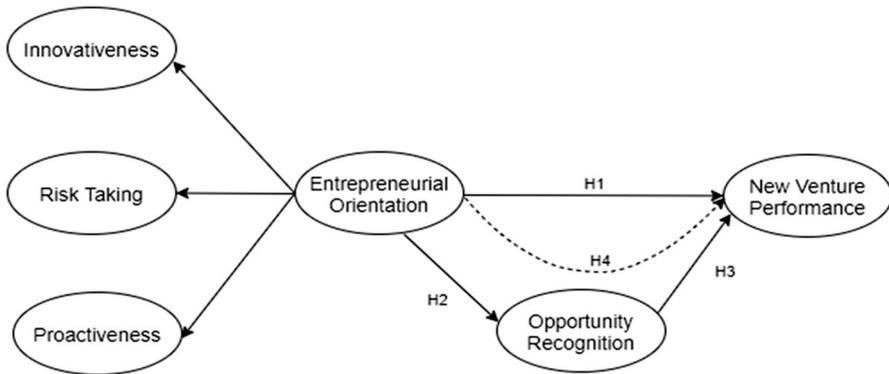


Fig. 1 Theoretical model

EO increases a new venture's performance. Prior studies have suggested several mediating mechanisms between EO and firm performance such as acquisitive learning (Gupta et al. 2020), financial performance (Kallmuenzer et al. 2018), competitive strategies (Lechner and Gudmundsson 2014), observed capacity (Khodaei et al. 2016) etc. Moreover, Adomako et al. (2018) identify EO as an important predictor of new venture success through increased use of networking capabilities. Similarly, Wang et al. (2017) also indicated that newly born ventures sustain their performance through EO but they also need support mechanisms to be competitive in the market. Furthermore, Donbesuur et al. (2020) demonstrate that EO assists the performance of new ventures through entrepreneurial actions (an act of searching and exploiting new opportunities). In emerging markets, top managers/owners of SMEs use their intangible skills and capabilities to build new products and develop new ideas that in turn contribute to the sustainable competitive position (Ali et al. 2020).

Nambisan and Zahra (2016) argue that the recognition of an opportunity strongly relies on entrepreneurial abilities. Indeed, recent studies in this field have shown that firms with high EO and with high alertness can recognize new opportunities in the market (Lumpkin and Dess 2001; Renko et al. 2012; Su et al. 2011; Tang et al. 2012). Nevertheless, there might be other explanatory variables. For instance, a manager's decision-making characteristics could influence OR, which in turn affects the success and growth of the firm (Davidsson 2015). Similarly, when firms perceive greater opportunities for technological progress, they tend to put more effort into R&D investment and innovation (Nieto and Quevedo 2005). EO enable new ventures in entrepreneurial activities such as developing new ideas, developing new markets, searching for opportunities, managing resources and new way of doing things needed for growth and survival of new ventures (Cardon et al. 2013; Yitshaki and Kropp 2016). A recent empirical study about Taiwanese ventures reveals that entrepreneurial features assist new ventures in perceived and actual opportunity recognition that in turn influence

performance (Chen et al. 2020). Therefore, we expect a partial mediation and hypothesize that:

Hypothesis 4 The impact of entrepreneurial orientation on new venture performance in an emerging market is mediated by the ability of a firm to recognize new opportunities.

Figure 1 presents the theoretical framework of our study.

3 Methodology

3.1 Sample

The research hypotheses were tested on empirical data collected from SMEs operating in Pakistan. We considered Pakistan to be an interesting place to collect data because it is an emerging market with structural market problems that requires a high degree of entrepreneurship (Hyder and Lussier 2016). Data were collected in the joint cities; Islamabad (capital of Pakistan) and Rawalpindi (the industrial center). Firms were obtained from the Rawalpindi Chamber of Commerce and Industry (5408 firms) and the Islamabad Chamber of Commerce and Industry (3751 firms). We focused on owners and managers since they can identify new opportunities with the help of market information and motivational intention (Hulbert et al. 2015). Moreover, owners and managers are more concerned and responsible for the strategic planning and performance of firms (Anwar 2018).

In this study, the paper and pencil questionnaire was sent to the selected firms. We wrote a cover letter, stressing the anonymity of the data collection and asking participants to answer alone without the help of their colleagues. We asked them to give the first answer which came to their mind and reminded them that there were no right or wrong answers, in order to avoid socially desirable answers. Before sending our questionnaire, we pretested it with academic peers. The average time of filling the questionnaire was 9 min. All questions were in English, which is one of the official languages in Pakistan, and since all participants were managers or business owners with a relatively high level of education, we could assume that language would not be an issue.

Excluding micro firms, we contacted firms with 20–250 employees and asked the owners and managers to fill out the questionnaire. In addition, we focused only on those firms that can be considered as new ventures, meaning those that started their operation in the last 10 years. We sent out questionnaires to 700 newly established ventures and 358 responses attained a response rate of 51%. However, some of the questionnaires were filled incorrectly or did not fulfill the criteria of the study, resulting in 316 usable questionnaires. Details of participant owners/managers are presented in Table 1. In our research, we focused on three business fields: manufacturing, trading, and services. Overall, 118 manufacturing

Table 1 Sample characteristics

Description	Frequency	Percentage
Owners/managers		
1. Owner	74	23.4
2. Manager	238	75.3
3. Missed	4	1.30
Education of owners/managers		
1. Bachelor and below	74	23.4
2. Master	226	71.5
3. Post-doctoral	14	4.4
4. Missed	2	0.60
Experiences of business		
1. 5 years and less	101	32.0
2. 6–10 years	72	22.8
3. 11–15 years	66	20.9
4. 16–20 years	36	11.4
5. 21 and above years	39	12.3
6. Missed	2	0.60
Firm age		
1. 3 years and less	72	22.8
2. 4–7 years	148	46.8
3. 8–10 years	91	28.8
4. Missed	5	1.60
Size of firms		
1. 20–50 employees	90	28.5
2. 51–100 employees	141	44.6
3. 101–250 employees	83	26.3
4. Missed	2	0.60
Nature of industry		
1. Manufacturing	118	37.3
2. Trading	119	37.7
3. Services	74	23.4
4. Missed	5	1.60
N=	316	100

firms, 119 trading firms, and 74 service firms participated in our survey, with 5 participants who did not indicate the field of their firm's activity. Ninety small firms (20–50 employees), 151 small to medium-sized firms (51–100 employees), and 83 medium-sized firms (101–250 employees) completed our questionnaire, with 2 participants who did not indicate their firm's size. The age of the firms also varied: 72 firms were 3 years or younger, 148 firms were active for 4–7 years, 91 firms had been in the market for 8–10 years. Five participants did not indicate

their firm's age. 238 participants held managerial positions in their firms and 74 participants indicated that they own the firm, with 4 participants not indicating their position. In our data collection, we also obtained a good coverage of participants working experience—101 participants had less than 5 years of working experience, 72 participants worked for more than 6 but less than 10 years, 66 worked for 11–15 years, 36 worked for 16 to 20 years, and 39 participants had worked for more than 21 years.

3.2 Measures

3.2.1 Independent variables

In our research, we focused on three independent variables—innovativeness, risk-taking, and proactive behavior. These variables were aggregated into a reflective-reflective second-order construct. Each of these variables was measured with three items which can be found in Table 1. Our study relied on measures used in prior studies (Covin and Slevin 1989; Shirokova et al. 2016) using a 5-point Likert scale, ranging from “strongly disagree” to “strongly agree”.

3.2.2 Dependent and mediating variables

Our main dependent variable—a new venture's performance—was measured using a 5-point Likert scale ranging from “extremely declined” to “extremely improved”. We used 6 items (adopted from Anwar 2018), which had a very good Cronbach's α and showed a very high composite reliability (see Table 4).

The opportunity recognition measure was adopted from the study by Guo et al. (2016). The items can be found in the “Appendix”. Meanwhile, the validity and reliability statistics are presented in Table 4.

3.2.3 Control variables

We controlled for the firm size and firm age effects, as well as industry effects, which is in line with what Shirokova and colleagues (2016) suggest for SMEs.

3.3 Empirical method

We utilized SmartPLS 3.0 (Ringle et al. 2015) to test our model structure. Recently, studies showed that PLS is an established and robust state-of-the-art method for studies in business (Carrión et al. 2016) and strategic management research (Hair et al. 2014).

We use the path weighting scheme. To obtain the standard errors for our structural model testing, we used nonparametric bootstrapping with 2000 replications and mean replacement of missing values. The type 1 reflective-reflective

Table 2 Correlations coefficients

Variables	Mean	Kurtosis	Skewness	1	2	3	4	5	6	7
1. Firm age	2.0611	-1.074	-0.092	-						
2. Firm size	1.9777	-1.183	0.036	-0.064	-					
3. Innovativeness	3.8054	1.115	-0.493	-0.103	-0.068	-				
4. OR	3.7903	-0.650	-0.650	-0.023	-0.025	0.394	-			
5. Proactiveness	3.8038	1.997	-0.520	-0.019	-0.023	0.327	0.424	-		
6. Risk taking	3.6804	1.740	-0.719	-0.046	-0.024	0.145	0.459	0.267	-	
7. NVP	3.7981	1.431	-0.394	0.022	-0.057	0.390	0.568	0.413	0.316	-

OR opportunity recognition, NVP new venture performance

Table 3 Items and factor loadings

Cross loadings	Innovativeness	Risk-taking	Proactiveness	Opportunity recognition	Venture performance
inn1	0.855	0.154	0.291	0.351	0.367
inn2	0.904	0.144	0.291	0.381	0.373
inn3	0.868	0.081	0.275	0.300	0.281
rt1	0.146	0.874	0.274	0.416	0.355
rt2	0.140	0.838	0.209	0.347	0.195
rt3	0.059	0.742	0.160	0.365	0.213
pro1	0.273	0.231	0.892	0.398	0.381
pro2	0.193	0.231	0.725	0.276	0.266
pro3	0.342	0.215	0.888	0.383	0.381
or1	0.336	0.388	0.331	0.787	0.410
or2	0.229	0.292	0.339	0.676	0.397
or3	0.312	0.341	0.278	0.712	0.404
or4	0.260	0.356	0.291	0.712	0.394
or5	0.334	0.348	0.356	0.858	0.519
nvp1	0.327	0.295	0.374	0.484	0.868
nvp2	0.232	0.186	0.336	0.335	0.741
nvp3	0.331	0.270	0.336	0.510	0.799
nvp4	0.337	0.284	0.353	0.463	0.867
nvp5	0.383	0.222	0.319	0.508	0.764
nvp6	0.259	0.267	0.289	0.429	0.818

higher-order construct for EO was specified using the repeated indicator method (Ringle et al. 2012).

Table 4 Reliability and validity statistics

Reliability and validity	MSV	Cronbach's alpha	Composite reliability	AVE	Discriminant validity
Innovativeness	0.198	0.848	0.908	0.767	0.876
Risk taking	0.250	0.756	0.860	0.672	0.820
Proactiveness	0.205	0.785	0.876	0.703	0.839
Opportunity recognition	0.299	0.805	0.866	0.565	0.752
Venture performance	0.299	0.895	0.920	0.658	0.811

Table 5 Heterotrait-Monotrait ratio of correlations (HTMT)

Factors	EO	Firm age	Firm size	Innovative	OR	Proactiveness	Risk taking	NVP
EO								
Firm age	0.098							
Firm size	0.068	0.064						
Innovativeness	0.875	0.112	0.073					
OR	0.765	0.077	0.067	0.473				
Proactiveness	0.863	0.031	0.032	0.394	0.531			
Risk taking	0.855	0.055	0.033	0.174	0.590	0.342		
NVP	0.629	0.030	0.063	0.440	0.660	0.489	0.374	

EO entrepreneurial orientation, OR opportunity recognition, NVP new venture performance

3.4 Measurement assessment

Our data show an acceptable approximation to the normal distribution of the constructs as mean values the main constructs range between 3.6804 and 3.8054 and skewness and kurtosis measures were below $|2|$ (George 2011). Table 2 shows the descriptive statistics and inter-construct correlations of the used variables.

To ensure the quality of our measures, we assessed the psychometric properties of our reflective measures in SmartPLS relying on commonly agreed indicators for reliability and validity (Hair et al. 2011). We assessed indicator reliability by calculating the standardized factor loadings of all reflective items (Table 3).

We further assessed t Cronbach's α and composite reliability, finding consistent support for the internal consistency of our constructs. Convergent validity was substantiated since all constructs exceeded an average variance explained (AVE) of 0.5 (Fornell and Bookstein 1982). Since all AVE values exceeded the highest squared inter-construct correlations, discriminant validity according to the Fornell–Larcker criterion was confirmed. Additionally, we calculated the heterotrait–monotrait ratio (HTMT), which is a new criterion for testing discriminant validity. A value lower than 0.90 indicates that the discriminant validity has been established (Franke and Sarstedt 2019). In our research, we have achieved the goal as all the constructs have desirable HTMT values. The results of our measurement model assessment are summarized in Tables 4 and 5.

Table 6 Variance inflation factor/multicollinearity

Factors	Opportunity recognition	Venture performance
Entrepreneurial orientation	1.010	1.567
Firm age	1.011	1.012
Firm size	1.008	1.008
Opportunity recognition		1.553

3.5 Common method bias

To test whether there was a common method bias since all data were collected using a paper and pencil questionnaire, we first performed Harman's single factor test (Podsakoff and Organ 1986). The test revealed that all reflective items put into one factor explained 37.36% of the variance. This test showed that the common method should not be an issue. Nevertheless, Harman's single factor test provides no statistical control for method effects, hence we used a marker variable approach to test the potential bias. A marker variable is defined as "a variable that is theoretically unrelated to the substantive variable and for which is expected correlations with this substantive variable is zero" (Williams et al. 2010, p. 478). Lindell and Whitney (2001) were the first researchers who demonstrated the concept of marker variable in a cross-sectional data set by describing that the marker variable should be theoretically unrelated to at least one focal variable. We used the previous business experience of the owners/managers as a marker variable that was used in the survey. Five options were given that show (1) 5 years and below experience, (2) 6–10 years, (3) 11–15 years, (4) 15–20 years and (5) 21 and above years of experience. We compared the zero-order correlations of our focal constructs to the results of a partial correlation in which the marker variable was partialled out (Lindell and Whitney 2001). After adding the marker variable, all the correlations values among the focus variables were significant. Moreover, the highest difference between the adjusted correlations and zero-order construct was very low—confirming the absence of common method bias.

4 Results

Our structural model assessment showed that the model could explain a substantial degree of the variance of endogenous constructs. We checked the multicollinearity to ensure the absence of overlapping in the constructs due to high order constructs of the EO. Multicollinearity evaluates overlapping between independent variables that are loaded over dependent variables in a model. According to Hair et al. (2010), Variance Inflation Factor (VIF) values lower than 3 ensures the absence of multicollinearity problem in results. The values of our results as presented in Table 6

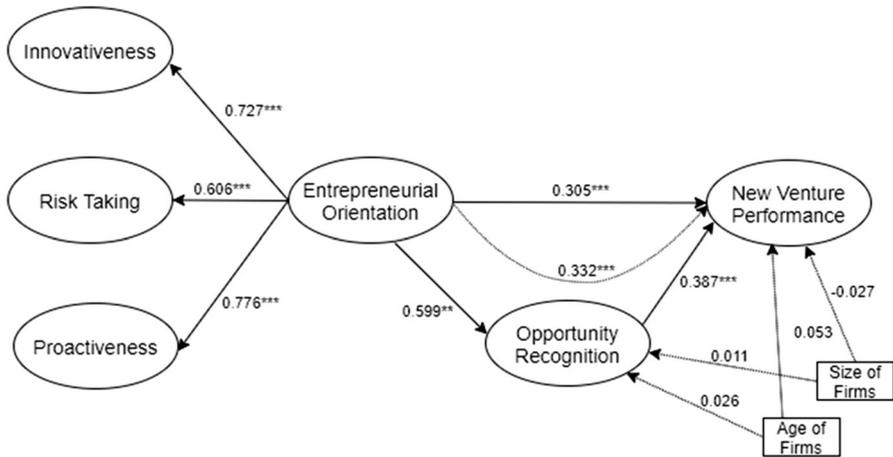


Fig. 2 Structural model

indicate that there is no overlapping among the independent variable and towards the dependent.

We calculated the effects sizes (f^2) of all tested effects in the conceptual model. It shows that EO has a small effect ($f^2=0.096$) while opportunity recognition has a medium effect ($f^2=0.156$) on new venture performance. Moreover, EO has a large effect on opportunity recognition ($f^2=0.551$) in the model. We assessed the predictive relevance of our model with the Q^2 statistics calculated through an omission distance of 7. As in our results, all exogenous constructs show values greater than 0, predictive relevance is given.

We ran the full model including the mediator with all control variables and the results are given in Fig. 2. We found EO having a significant impact on opportunity recognition ($\beta=0.599$, $t=11.956$, $p=0.001$) and on new venture performance ($\beta=0.305$, $t=4.370$, $p=0.000$). At the same time, opportunity recognition had a statistically significant impact on a new venture's performance ($\beta=0.387$, $t=5.453$, $p=0.000$). Consequently, we supported our hypotheses 1, 2, and 3. The control variables produced no significant effects ($p>0.1$).

The path between EO and a new venture's performance (C-path) remained significant ($\beta=0.232$, $t=4.770$, $p=0.000$). We performed a Sobel test as proposed by Lowry and Gaskin (2014). The Sobel test supported a significant mediation: $t=2.208$, $p=0.027$. Nevertheless, the introduction of the mediator did not make the C'-path insignificant. Based on the approach by Baron and Kenny (1986) we conclude a partial mediation. Thus, we hold our hypothesis 4 for partially supported.

R square illustrates that in the presence of the control variables; age and size of firms, EO explains 35.6% variance in opportunity recognition and 38.5% variance in new venture performance (through opportunity).

Table 7 First order constructs and new venture performance

Paths	Direct effects	Indirect effects	Total effects
Control variables effects			
Age of firms → NVP	0.050	–	–
Size of firms → NVP	– 0.021	–	–
Age of firms → Opportunity recognition	0.026	–	–
Size of firms → Opportunity recognition	0.010	–	–
Main effects			
Innovativeness → NVP	0.191**	0.102***	0.293***
Risk taking → NVP	0.075	0.138***	0.213***
Proactiveness → NVP	0.182**	0.093**	0.275***
Innovativeness → opportunity recognition	0.267***	–	–
Risk taking → opportunity recognition	0.360***	–	–
Proactiveness → opportunity recognition	0.243***	–	–
Opportunity recognition → NVP	0.382***	–	–

NVP new venture performance

** $p \leq 0.01$, *** $p \leq 0.001$

4.1 Post hoc analysis

In addition to the first-order construct, we assessed the influence of the second-order constructs; innovativeness, risk-taking and proactiveness on new venture performance through the opportunity recognition as a mediator. We found little difference between the results of second-order and first-order constructs.

We found (see Table 7) that innovativeness has an indirect significant influence on new venture performance ($\beta=0.102$, $t=4.190$, $p=0.000$), and the direct impact is also significant ($\beta=0.191$, $t=2.625$, $p=0.009$). It demonstrates that opportunity recognition partially mediates the relationship between innovativeness and new venture performance. However, risk taking has a significant indirect effect ($\beta=0.138$, $t=4.419$, $p=0.000$), but did not show a direct significant impact on new venture performance ($\beta=0.075$, $t=1.370$, $p=0.171$). It reveals that the relationship between risk taking and new venture performance is fully mediated by opportunity recognition. Proactiveness significantly influences new venture performance directly ($\beta=0.182$, $t=3.291$, $p=0.001$) and indirectly ($\beta=0.093$, $t=3.256$, $p=0.001$). It describes that the relationship between proactiveness and new venture performance is partially affected by opportunity recognition. We further found that innovativeness, risk taking and proactiveness have a significant influence on opportunity recognition ($\beta=0.267$, $t=7.556$, $p=0.000$, $\beta=0.360$, $t=2.625$, $p=0.009$ and $\beta=0.243$, $t=4.338$, $p=0.000$) respectively. Additionally, the total effects of innovativeness, risk taking and proactiveness on new venture performance are significant ($\beta=0.293$, $t=4.311$, $p=0.000$, $\beta=0.213$, $t=3.673$, $p=0.009$ and $\beta=0.275$, $t=4.575$, $p=0.000$) respectively. The controlled factors; size and age of firms have no significant role in the model.

5 Discussion and conclusion

5.1 Discussion

We examined the mediating role of opportunity recognition between EO and new venture performance in a single model within the context of an emerging market. Emerging markets provide a setting that allows us to elucidate the mediating role of EO, which is used as a first and second-order reflective construct built upon the dimensions of innovativeness, risk-taking, and proactive behavior. The empirical results support our theoretical predictions that high EO in new ventures is associated with increased opportunity recognition and new venture performance. We also found empirical support for our prediction that opportunity recognition is associated with increased performance in new ventures. This research reveals that EO spurs new venture performance in emerging markets. This is in line with Kraus and colleagues (2012), who observed that EO is an important antecedent of firm performance.

We find partial support for our prediction about the mediating effect of opportunity recognition between EO and venture performance. The observed partial mediation could mean either a missing mediator, or both a direct and an indirect impact. Interestingly, the partial mediation observed in our study does not fully match Donbesuur et al. (2020) who have shown that entrepreneurial opportunity discovery fully mediates the path between EO and new venture performance. However, our findings align with Anwar et al. (2018) who observed a partial mediating role of competitive advantage between entrepreneurial strategy and new venture performance. Also, our findings align with Soekotjo et al. (2001) who scrutinized that SMEs use EO to configure market performance, but in the meantime, EO helps them in building new products for the market. Our findings also display equal importance of EO for opportunity recognition and new venture performance in emerging markets. In other words, the findings argue that the dimensions of EO contribute to the recognition of opportunities and in the meantime help in securing performance. To summarize, our research did find the full mediating role of OR, but we suggest that the relationship between EO and new venture performance in emerging markets is partially affected by opportunity recognition. Consequently, it opens a new door for future researchers and policymakers to investigate what factors fully mediate or moderate the paths.

However, the post hoc analysis revealed little change in our results indicating a fully mediating role of opportunity recognition between risk-taking and new venture performance. While the outcome of the post hoc analysis does not invalidate our main results, the findings are in consonance with Helm et al. (2010) who demonstrate that managers/owners with high-risk propensity engaged in innovative and novel ideas to enhance the performance of their new ventures. Similarly, our findings are related to Zehir et al. (2015) who showed that risk-taking indirectly contributes to firm performance through differentiation strategy as a mediator. Our findings show that risk-taking managers/owners are persistently engaged in the recognition of new opportunities to spur their profitability. In other words, our research states

that new ventures with risk-taking propensity significantly recognize new opportunities in the market to survive for the long run.

Our study reveals that EO is a significant predictor of opportunity recognition in new ventures (Wang et al. 2020). It is also in consonance with the notion that holds opportunity recognition as a key characteristic of an entrepreneur who shapes and exploits opportunities for profitability (Shane and Venkataraman 2000). Firms with proactive, innovative and risk-taking abilities have high potential of discovering opportunities in new markets (Patel et al. 2015). Indeed, entrepreneurial firms need innovative, proactive and risky behaviors to exploit new opportunities in a dynamic market (Alvarez and Busenitz 2001). Our research has shown that in turn, opportunity recognition significantly contributes to new venture performance in emerging markets. Our findings are in line with Miocevic and Morgan (2018) who observed that strong abilities of opportunity recognition ensure high growth and efficiency in emerging markets. Moreover, our findings align with Guo et al. (2019b) who observed that small ventures are engaged in discovering opportunities to compete in emerging markets and respond to external pressures.

5.2 Contribution to theory and literature

Our study provides important contributions to the literature on EO, opportunity recognition and new venture growth. First, the main contribution of this study advances our understanding of the relationship between EO, opportunity recognition and new venture growth concerning emerging economies or markets. Previous studies have explored fragmented results (weak, significant, or insignificant relationship) between EO and new venture performance. However, our research finds that EO is a significant predictor of opportunity recognition and new venture performance in emerging economies.

Second, regarding new ventures in emerging markets, previous studies have neglected opportunity-seeking behaviors through EO. This in turn leads to poor policy implications and perhaps causes a higher failure ratio of new ventures in emerging markets. Therefore, our study provides insights for new ventures on the sensing, shaping and seizing of entrepreneurial opportunities in order to gain sustainable growth in emerging markets (Barreto 2010; Teece 2007).

Third, our research used empirical data of newly born ventures in an emerging economy and executed SmartPLS while using EO as a first and second-order construct (post hoc analysis). It advances the existing body of knowledge in two ways. First, most of the previous studies are limited to developed markets while emerging markets have been rarely touched. Second, using EO as first and second-order constructs in PLS takes us ahead of previous research studies where EO has been used as a first-order construct in a simple regression.

Fourth, previous studies have shown fragmented results on the relationship between EO and performance namely significant, insignificant, positive, or no relationship. This is because of some missing potential predictors in the apparent

empirical disjunction. We found that opportunity recognition as a mediator increases EO impact on new venture performance. It advances our understanding of the relationship between EO and performance and favors the prediction of Lumpkin and Dess (1996) who claimed entrepreneurial actions and especially opportunity discovery could be a potential mechanism. Additionally, related to the emerging market context, our study shows the most influential dimensions of EO on opportunity recognition in emerging markets. These dimensions include innovativeness, risk-taking and proactiveness. They are considered less expensive and more convenient for SMEs in emerging markets. Therefore, rather than applying extra financial resources that are often expensive, our study shows that less risky and convenient resources such as the three dimensions of EO can be utilized by new ventures in emerging markets.

Fifth, the boundaries of the RBV had earlier been extended by considering entrepreneurial ability as a resource that helps ventures in the recognition of new opportunities to enhance performance (see Alvarez and Busenitz 2001). Thus, our study adds an empirical contribution to this model by showing that new ventures use EO as a resource to discover new opportunities and for performance gains particularly in the context of emerging markets.

5.3 Implications for practitioners

Regarding implications for practitioners, we observe that managers of new ventures in both emerging and developed markets should promote or employ entrepreneurial activities to exploit new opportunities as a means of sustaining performance. An enduring entrepreneurial culture can be a more viable growth strategy as compared to investment in other activities (Anwar and Shah 2020). This is even more important for new and small ventures in emerging economies with significant resource constraints (Cai et al. 2016).

5.4 Limitations and further research

We acknowledge a few limitations of our study. First, our model is based on the empirical evidence gathered from newly born ventures that are categorized as SMEs. Future studies may investigate other types of firms matured firms using the second-order construct of EO that we have applied in our study. This may provide useful insights for both practitioners and researchers.

Second, we reiterate that prior studies have shown a mediated relationship between dimensions underlying the EO construct and performance (e.g., Chrysochoidis et al. 2016; Kantur 2016). We also hypothesized on a partial mediation. Given this, we suggest that a study including a set of mediators would indicate the weight of these mediators and, thus, their role in explaining how EO influences performance. Future research may also examine the relationships between these mediators since a more complex relationship may be observed, e.g., a mediated or a moderated mediation.

Third, although we obtained all items from the established literature, in our analysis risk-taking produced a good but weaker loading on the second-order construct than the other dimensions. As argued above, we assume that it may be due to the difference in the effects of risk-taking on SMEs in comparison to larger firms. This underlines the need for further factor analyses with different samples. Furthermore, the data was collected in an emerging market which may not be representative of all markets especially in advanced economies. We did not adduce any argument as to why this may differ in other settings. Therefore, our model should be tested not only between new and established ventures but also between emerging and developed economies, which would provide a more generalizable insight for the topic of EO.

Fourth, instead of working with each separate dimension of the EO construct, we decided to incorporate different dimensions and work with them as a single second-order construct. This was successful as our results showed that a second-order model worked as expected (external validity). Moreover, it shifts the focus from separate dimensions to a holistic view of EO. Nevertheless, we encourage researchers to elaborate on the completeness of this second-order construct. Are there more dimensions in this construct? Can it also be approached with formative sub-constructs? These questions will help researchers to investigate EO and the mechanisms of its influence on a firm's performance.

Fifth, apart from the differences in emerging and established market contexts, concepts such as risk-taking or proactiveness may strongly differ between countries (Henrich et al. 2010).¹ In the event of international cooperation, interactions might be biased through value differences between individuals in teams (Kirkman and Shapiro 2005). Consequently, future research may perform similar analyses including countries of wide different cultural backgrounds. This may lead to differences in EO and its relationship to opportunity recognition and venture performance.

6 Conclusion

Our research examined and tested predictions about the mediating role of opportunity recognition between EO and new venture performance in emerging markets. The study also examined the effect of opportunity recognition on venture performance. Even though we found empirical support for the derived hypotheses, this line of inquiry also opens an opportunity for theory building regarding which dimension of EO is more appropriate in opportunity recognition concerning newly born enterprises in emerging market settings.

¹ Note that Hofstede's Uncertainty Avoidance dimension explicitly does not measure risk taking behavior (de Mooij 2013; Hofstede 2006).

Appendix

Item number	Constructs
Entrepreneurial orientation	
Innovativeness	
Item 1	In general, the top managers of my firm favor a strong emphasis on R&D, tech. leadership, and innovations
Item 2	My firm has marketed many new lines of products or services in the past 5 years
Item 3	Changes in product or service lines have usually been quite dramatic
Risk taking	
Item 1	In general, the top managers have a strong proclivity for high-risk projects (with chances of very high returns)
Item 2	In general, the top managers of my firm believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives
Item 3	When confronted with decision-making situations involving uncertainty, my firm typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities
Proactive behavior	
Item 1	In dealing with its competitors, my firm typically initiates actions, which competitors then respond to
Item 2	In dealing with its competitors, my firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc
Item 3	In dealing with its competitors, my firm typically adopts a very competitive, undo-the-competitors posture
Opportunity recognition	
Item 1	Searching and identifying opportunities from changes in customer demands and preferences
Item 2	Searching and identifying opportunities from changes in economic environment
Item 3	Searching and identifying opportunities from changes in political environment
Item 4	Searching and identifying opportunities from changes in technological environment
Item 5	Searching and identifying opportunities from changes in regulatory environment
New venture performance	
Item 1	Return on investment
Item 2	Return on assets
Item 3	Return on equity
Item 4	Sale growth
Item 5	Employees satisfaction
Item 6	Employee loyalty

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