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Full Length Research Paper

Strategic flexibility, entrepreneurial orientation and firm performance: Evidence from small and medium-sized business (SMB) in China

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This study aims to examine the interactive effect between strategic flexibility and entrepreneurial orientation on firm performance under fierce competition environment. Data from Chinese small and medium-sized business (SMB) in high-technology industries demonstrate that entrepreneurial orientation and strategic flexibility interact to influence firm performance in such a way that strategic flexibility enhances the positive relationship between entrepreneurial orientation and firm performance. We also observed the difference between Chinese and Western SMBs which showed on the relationship between strategic flexibility and firm performance. Theoretical and managerial implications of the findings are discussed.

Key words: Strategic flexibility, entrepreneurial orientation, firm performance, competition intensity.

INTRODUCTION

It has been long argued that if a firm possesses a risky and innovative entrepreneurial spirit, it can acquire its own position in the market, create its advantage, and obtain a good performance. The argument of a direct linear relationship between entrepreneurial orientation (EO) and firm performance has been widely examined in western countries. However, when applied to the unique institutional context, firms in China have to cultivate two sets of networks, that is, professional networks and political networking (Peng, 2003). In this complex institutional environment, coupled with limited resources, it is difficult to gain and keep extraordinary performance by venturesome and innovative spirit for SMBs. Thus, the positive relations between EO and firm performance demonstrated in USA is often not replicated in emerging economies since firms are operating in different contexts(Lee et al., 2011). Tang et al. (2008) argue that the relationship between EO and firm performance is best represented as curvilinear in China, and clearly pointed that high-EO firms in China may not obtain a competitive advantage because of the lack of institutional support and organizational formalization. Tang (2011) even suggests that entrepreneurial firms in China do not have to rely on their environment to change; they should employ proper strategies to alleviate the negative impact of high levels of EO on performance.

Apart from the unique institutional influence, market demand decline caused by USA subprime mortgage crisis brings about difficulties to Chinese SMB development. According to a report of the Chinese Academy of Social Sciences in June 2009, 40% of SMBs have run into bankruptcy, another 40% of SMBs are struggling on the deadline. Thus, how to face current challenges and survive in such a challenging market environment and complex institutional situation and how to better bring to play the positive linear relationship between EO and firm performance is an extreme crucial and urgent issue for SMB development.

Even though it is not new to discuss the relationship between EO and firm performance, literature in this area has been limited in two ways. First, the positive linear relationship between EO and firm performance has been widely discussed and examined by many western scholars (Keh et al., 2007; Lee et al., 2001; Lumpkin and Dess, 1996; Zahra and Covin, 1995). But, the relationship between EO and firm performance may be more complex than a simple main-effects-only relationship (Wiklund and Shepherd, 2005). The strength of the direct relationship

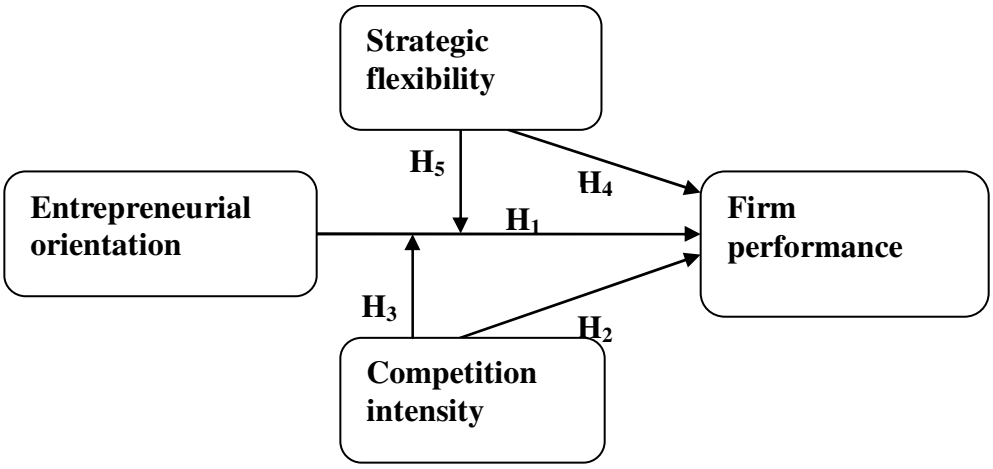

Figure 1. Conceptual model.

between entrepreneurship and performance is generally less robust than the normative belief would indicate (Lyon et al., 2000). Therefore, more researches are needed to test moderated effect and interactive effect on the EO-performance contingent rather than direct relationship, and provide more accurate explanations of performance outcomes.

Second, the factors that influence EO–performance relationship in extant research mainly include two broad categories, that is, environmental factors and organizational factors (Lumpkin and Dess, 1996). Environmental factors include dynamism, munificence, complexity (Covin and Slevin, 1989; Zahra, 1993), and industry characteristics (Eisenhardt and Schoonhoven, 1990; Lumpkin and Dess, 2001). The dimensions of environment, that is, dynamism, munificence and complexity proposed by Dess and Beard (1984) are largely consistent with many conceptualizations of the environment. These dimensions can clearly and completely depict the environmental effect on EO-performance relationship, but the moderated effect is unidirectional, and cannot reveal how a firm's EO should react to environment change in order to improve firm performance.

Organizational factors include internal contingencies such as size, structure (Bahrami and Evans, 1987; Jennings and Lumpkin,1989; Slevin and Covin,1990), strategy (Gupta and Govindarajan, 1984; Miller, 1988; Naman and Slevin, 1993; Tang and Tang, 2010), strategy-making processes (Burgelman, 1983; Jennings and Lumpkin, 1989; Miller and Friesen, 1982), firm resources utilization (Birley, 1985; Romanelli, 1987; Ramachandran and Ramnarayan, 1993; Rodrigues and Raposo, 2011), top management team characteristics (MacMillan et al., 1987), and learning orientation, style and capability (Wang, 2008; Li et al., 2011; Kreiser, 2011; Covin et al., 2009). But all these inner organizational factors seem separated and only partially explain the mechanism of EO effect on firm performance, and cannot completely and organically summarize organizational effect on the relationship between EO and firm performance.

Entrepreneurial orientation, attitude, and style, belongs to strategy level, and its relation to the firm performance is constrained to inner organizational context. However, strategic flexibility (SF) refers to a firm ability to adapt to environmental changes through continuous changes. As a multidimensional variable, SF focuses on resource flexibility and organization coordination flexibility, which integrate key inner organization factors that influence the relationship between EO and firm performance. Thus, due to Chinese SMB facing the more complex environment than western firms, they need quick response to uncertainties and changes and attach much more importance on playing the role of SF, in order to effectively have a positive linear effect of EO on the firm performance.

In order to wholly and deeply explain the EO effect on firm performance, we introduce a variable of SF and develop a conceptual model (Figure1) that integrates external environment factors (that is, competition intensity), internal factors (that is, strategic flexibility), EO, and firm performance in an attempt to contribute to the literature in the following two ways. First, although relationships of EO-performance and SF-performance respectively have been discussed widely, the interaction of EO and SF and its effect on the firm performance has not been examined before. In this study, we will illustrate why EO has a relation with SF, and use the data from the Chinese SMB to examine the proposed relations. Second, EO-performance has seldom been empirically tested by data from SMB in less-developed country, except Tang et al. (2008), Tang (2011) and Lee et al. (2011). This study will use the data from SMB in the eastern region of China to examine it and compare it with results from western countries.

THEORY AND HYPOTHESES

Entrepreneurial orientation, competition intensity and performance

EO refers to a firm's strategic orientation, which consists of decision-making styles, methods, and practices that can be described as aggressive, innovation, proactive, risk taking, or autonomy seeking (Lumpkin and Dess, 1996). Entrepreneurship can be applied to many different levels, which involve individuals, groups and whole organizations (Lumpkin and Dess, 1996). Autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness are salient dimensions of an EO (Lumpkin and Dess, 1996). Numerous researchers (Covin and Slevin, 1986, 1989) have agreed on Miller's (1983) measures of innovativeness, risk taking, and proactiveness.

"The innovativeness dimension of EO reflects a tendency to engage in and support new ideas, novelty, experimentation, and creative processes (Lumpkin and Dess, 1996: 142)", thereby departing from established practices and technologies. According to Schumpeter's (1934) entrepreneurial theory, innovation as an engine of economic growth, which means creating and introducing new technologies and products, can generate extraordinary economic performance. Thus, a firm with high rate of R&D spending and product innovation will create new customer need and gain a good performance.

Lumpkin and Dess (2001) differentiate proactiveness from competitive aggressiveness, and argue that proactiveness suggests an opportunity-seeking, forward-looking perspective characteristic of a marketplace leader that has the foresight to act in anticipation of future demand and shape the environment. Similarly, Lumpkin and Dess (1996) conceptualize proactiveness as a pioneer posture of anticipating and acting on future consumer wants and new needs, thereby creating a first-mover advantage. With such a forward-looking posture, proactive firms have the desire to be pioneers, and capture all the potential opportunities. Zahra and Covin (1995) argue that proactive companies can create competitive advantage by first move, target new needs and market and charge high prices. Thus, there is a clear positive relationship between proactiveness and firm performance.

Risk taking means a tendency to take bold actions such as venturing into unknown new markets, committing a large portion of resources to ventures with uncertain outcomes, and/or borrowing heavily (Lumpkin and Dess, 2001). It means plunging resources to projects where the outcomes are unknown. Generally speaking, the positive relationship between risk taking and firm performance is not clear. However, having a risk taking attitude stimulates firm innovation, which leads to high performance, suggesting that a risky strategy and trial and error method may bring more profit in the long-term (March, 1991; Child and McGrath, 2001). Therefore:

H_1: Entrepreneurial orientation is positively related to SMB performance.

External environment acts as a moderated role in EO-performance relationship. Most scholars examine the effects on the relationship of specific environmental characteristics, such as dynamism, munificence, complexity, and industry characteristics, (Covin and Slevin, 1989; Karagozoglu and Brown, 1988; Khandwalla, 1987; Miller, 1983; Miller and Friesen, 1978; Zahra, 1993; Zahra and Covin, 1995). Competition intensity depicts the degree of competition that a firm faces. Munificence refers to environmental capacity that permits organizational growth and stability and allows the organization to generate slack resources in order to provide a buffer to overcome relative scarcity (Starbuck, 1976; Cyert and March, 1963). The situation of high competition means high competitor hostility (Slater and Narver, 1994) and low munificence. High competition is characterized by aggressive competitors that attack each other on pricing, promotion, product development and distribution. Kohli and Jaworski (1993) argue that under greater and more aggressive competition, a business must discover customer wants and create superior customer value to satisfy them. Thus, a high competition environment is indicative of scarcity and aggressively seeks for more environmental resources to exceed other competitors.

Firms in highly competitive environments generally focus considerable attention on other competitors in the same industry. Firms often think that competitors' actions are optimal and mimic them (Day and Nedungadi, 1994; Day and Wensley, 1988). From the perspective of product supply and demand, when products offered are of the same value, intensified competition undoubtedly causes producers and product supplies to increase under the same demand, correspondingly, the profit gained by every producer decreases. Due to limited financial capital, SMBs have to undertake applied innovation of products and do not have the capability to do basic and fundamental innovation, which requires huge amount of R&D spending. Thus, they usually supply similar products and rely on low prices to compete, which are easy to imitate and intensifies market competition. All these cause SMBs low profit and decrease in firm performance. Thus:

H_2: Competition intensity is negatively related to SMB performance.

Because SMBs are constrained to limited resources and lack of scale advantage, EO seems to provide an important and unique advantage for SMBs to survive and compete under fierce market competition. Under high intensity competition, innovation orientation helps SMBs

get rid of violent price competition and gain extra profit return, thereby creating new products and satisfying customer new needs. In highly competitive environments, proactive firms can rapidly introduce new products and services, lead and exceed other competitors by novel and forward thinking, and become the first entrant. Beyond that, under fierce market competition, firms with risky strategy and venturesome spirit have an easier time overcoming obstacles and constraints brought by highly competitive environments. They are more likely to get good outcomes and returns by continuing to try new ideas and projects. Therefore, we suggest:

H_3: Competition intensity stimulates the relationship between EO and firm performance: EO will be more strongly related to high firm performance when competition intensity is high than when it is low.

Strategic flexibility and performance

"Success in the 21st century organization will depend first on building strategic flexibility (Hitt et al., 1998: 22)." In highly dynamic competitive environments, a firm can achieve competitive advantage with quick response to the environment and renewed strategic orientation. SF refers to a firm's ability to act or respond quickly to changing competitive conditions by adjusting its objectives to develop and maintain competitive advantage (Hitt et al., 1998). SF is closely linked to environmental uncertainty (Abbott and Banerji, 2003) and focuses on the capability of altering and adapting. Sanchez (1995) uses SF perspective and a resource-based view of competition to develop the concept of SF into two dimensions, that is, resource flexibility and coordination flexibility. Resource flexibility refers to product creation resources available to a firm, while coordination flexibility of the firm illuminates applying its available resources in product markets. Likewise, Harrigan (1980) regards SF as a firm's ability to redeploy its assets without friction. Similarly, Shimizu and Hitt (2004) refer to SF as a kind of organizational capability, which includes identifying changes and uncertainties, quickly committing resources to new projects in response to changes, and acting timely to halt or reverse existing resource commitments.

According to the afore definition, SF can definitely improve effectiveness of plans, decisions and strategies. In addition to offering products and services adapted to changing environments, SF also enhances firm performance (Miles and Snow, 1978). Empirically, Grewal and Tansuhaj (2001) demonstrate the contingent nature of the influence of market orientation and SF on firm performance after economic crisis. Similarly, Worren et al. (2002) regard modular product and process design as key enablers of SF and propose that product modularity is positively related to SF, which in turn should positively influence firm performance. Therefore, we expect that SF can enhance SMB performance:

H_4: SF is positively related to SMB performance.

The interaction of entrepreneurial orientation and strategic flexibility

As discussed, SF reflects the capability of quick response and resource deployment under uncertain environments and rapid changes. Entrepreneurial orientation essentially refers to entrepreneurial process, which includes experimenting with promising new technologies, being willing to grab new opportunities and undertaking risky ventures (Lumpkin and Dess, 1996). Realization of these entrepreneurial processes significantly influences firm performance and are firmly connected with organization coordination flexibility and depended on resource commitment and deployment flexibility.

Organization coordination refers to integrating or linking different parts of an organization together (Van de Ven et al., 1976). Through coordination mechanism within organization, managers from top to bottom level can communicate and exchange different opinions and important decision information. They can also share knowledge between different functional sections. In dynamic and competitive market context, coordination flexibility involves redefining strategies, reconfiguring chains of resources and redeploying or resynthesizing resources effectively (Sanchez, 1995).

First, organization coordination flexibility can facilitate firm innovation. Centralization negatively affects exploratory innovation, while formalization positively influences exploitative innovation. Connectedness (informal coordination mechanism) within units appears to be an important antecedent of both exploratory and exploitative innovation (Jansen et al., 2006). In the process of firm innovation, knowledge sharing between different functional sections within organization is also subject to the influence of organization coordination flexibility. Tsai (2002) finds that formal hierarchical structure has a significant negative effect on knowledge sharing, while informal lateral relations have a significant positive effect on knowledge sharing. Second, coordination flexibility can facilitate the firm's proactiveness. The relationship between proactiveness and firm performance may be enhanced if a quick-response strategy enables the firm to successfully introduce new products or services (Lumpkin and Dess, 1996).

Thus, if a firm possesses high organization coordination flexibility, it not only smoothes and ensures the implementation of new strategic orientation, but can also strengthen resource sharing and knowledge integration. This is critical to enhance organizational capabilities (Kogut and Zander, 1996), therefore, enhances firm performance.

When faced with challenges and forced to launch new courses of action in a competitive environment, it is extremely crucial to SMB survival and development to know when and how much to commit to resources. Resource flexibility cuts across functional boundaries and dynamically matches available resources to the project requirements (Tatikonda and Rosenthal, 2000). Resource flexibility can facilitate innovation under limited resource conditions. Tatikonda and Rosenthal (2000) propose that projects with a greater degree of resource flexibility provide more possibilities for success in project execution, and this positive relationship will be enhanced by a higher technology novelty. Secondly, resource flexibility can also reduce risk and loss brought by risky and venturesome ideas and activities. If a firm focuses on resource integration and redeployment, the same resource utilized generally can serve for multiple uses and therefore lighten the risk and loss caused by a trial. Therefore, we expect that SF will moderate the positive EO-performance relationship:

H_5: SF enhances the positive relationship between EO and firm performance. Specifically, the EO-performance relationship will be more positive at a high level of SF than at a low level of SF.

METHODS

Sample and data collection

To test the mentioned five hypotheses, we surveyed firms operating in high-technology industry in East China. Due to the unique geographic position and economic development background, provinces and cities in the Chinese eastern region consist of a large number of SMBs. They also possess a highly dynamic and intensified competitive market environment, which provides a rich and suitable setting to test our model. To exceed the competitors and sustain its competitive status, SMBs must continuously and timely, change strategies according to its existing capabilities and rapidly changing market environment.

First, we developed an English version of the questionnaire. Then, two independent translators translated it into Chinese and back-translated it into English to ensure conceptual equivalence (Hoskisson et al., 2000). We discussed any understanding differences or conflicts with the translators until an agreement was reached.

Secondly, we did a pilot study with 20 senior managers with titles such as CEO, Vice President, and General Manager. We asked them to answer all the items in the questionnaire. We also asked them to provide feedback about design and to give revising suggestions. The results of the pilot study reflected that the items were well understood by the respondents. Based on the results, we further refined the questionnaire and finalized the survey.

We selected a random sample of 500 firms from a list of high-tech companies located in Shanghai, Jiangsu and Zhejiang provinces provided by a marketing research firm. The marketing research company located in Shanghai, is a professional marketing research and consulting company founded in 2004. It is one of fastest growing research companies in China. It maintains a list of SMEs in Northeast China, and has direct or indirect business connections with most of these firms. It mainly adopted the survey by appointment, and sent questionnaires by a random selection method. It had a strict quality control process, which, interview department, quality control department and research department will strictly review in a number of occasions to test the authenticity of the respondents. So, the data collected by this company is real and effective.

We successfully obtained responses from 195 firms. After dropping 3 cases with excessive missing data, we arrived at a sample of 192 firms, for an effective response rate of 38.4%. According to the standard of Chinese small and middle-sized business temporary regulations, an industrial firm with 2000 or fewer employees is considered as a small and middle-sized business, so we dropped 11 cases and got a final sample of 181 small and middle sized firms in total. Among them, 32.1% were Chinese firms, 33.1% were international joint ventures, and 34.8% were wholly foreign-owned firms. The largest industry segment was information technology (21.5%), followed by electronics (21%).

Measures

In the Appendix, we provide the measurement items and their validity assessments. Our measure of *entrepreneurial orientation* is based on Matsuno et al. (2002), which focuses on three aspects, including entrepreneurial proclivity, entrepreneurial risk taking and entrepreneurial proactiveness. To develop the measure of *strategic flexibility,* we use Sanchez's (1995) theoretical work, which focuses on flexible allocation and coordination of resources in response to changing environments. Based on Jaworski et al. (1993) and Gatignon et al. (1997), we synthesize all the items and develop the measure of *competition intensity* that completely revealed the intensity of industry competition.

Finally, we rely on Slater and Narver (1994) and Zhou et al. (2005) to develop the measure of *firm performance* by asking respondents to assess their firm's sales growth, return on investments, and profit level and market share relative to that of their major competitors.

Control variables

Previous researches on EO-performance relations suggest that EO is strongly linked with organizational and market environmental characteristics (Lumpkin and Dess, 1996; Tang, and Tang, 2010). In this paper, I argue that firm age, firm location and market growth were needed to be controlled in order to clearly explore the EO-performance relations. To account for the effects of extraneous variables, we include *firm age*, *firm location*, *and market growth* as control variables. Different firm's age means different experience of business operation and different social networks. Compared to a young venture, a firm with a long history usually has a low level of EO and avoids taking risk, since it had many past experiences to draw from and more network ties to help it solve problems safely. A firm with an old age may lead to a low level of EO, but still obtains a good performance. Thus, firm age may alleviate the strong positive relations between EO and firm performance. Firm age equals the number of years the firm has been in operation, which exerts an influence on firm performance. Different locations of firms have totally different entrepreneurial environments, especially cultural environments, which has a direct effect on the relationship between entrepreneurial orientation and firm performance. Tang et al. (2008) pointed out that firms in Tianjin were more entrepreneurial than firms in other regions, since Tianjin was one of the four centrally administered municipalities and the largest industrial and port city. Among the survey, locations of the firms investigated are Zhejiang, Shanghai and Jiangsu. Anecdotally, firms in Zhejiang are more entrepreneurial than firms in other provinces and cities as Zhejiang has its unique geographical environment, which forms its venturesome entrepreneurial spirit. For firms' location, we introduce

Table 1. Discriminant validity of constructs.

Construct	No. of items	AVE	Construct				
			1	2	3	4	5
Entrepreneurial orientation	3	0.522	**0.743**				
Competition intensity	4	0.514	0.197**	**0.717**			
Strategic flexibility	5	0.681	0.185**	0.199**	**0.825**		
Firm performance	4	0.674	0.210**	-0.127*	0.153*	**0.821**	
Market growth	3	0.621	0.085	-0.143*	0.374**	0.182**	**0.788**
Mean			4.895	5.086	5.086	4.129	5.514
Standard deviation			0.954	1.126	0.890	1.055	0.866

N=181, $^{**}p < .01$, $^{*}p < .05$, AVE (average variance extracted) = $(\Sigma\lambda_i^2)/n$; Diagonal elements (in bold type) represent the square root of the AVE, off-diagonal elements represent the correlations among constructs.

a dummy variable to control for potential variations between firms in Zhejiang (coded "1") versus firms in other regions (coded "0"). In the environment of market growth, both firms with low or high level of EO will obtain good business performance. We adapt items from Im and Workman (2004) to measure market growth.

Reliability

In accordance with Anderson and Gerbing's (1988) recommendations, we firstly run exploratory factor analyses for each multi-item scale (that is, entrepreneur orientation, strategic flexibility, competition intensity, and firm performance), which resulted in theoretically expected factor solutions. Reliability analyses also show that these measures possess satisfactory reliability coefficients. Second, we estimate an overall, five-factor confirmatory measurement model using AOMS 17.0 software. After dropping one item that possessed low factor loadings, the model provides a satisfactory fit to the data (confirmatory fit index = 0.948, incrementtal fit index = 0.950; root mean square error of approximation = 0.059). Furthermore, all factor loadings are highly significant ($p < 0.001$), and Cronbach's alpha values of all constructs (0.750 to 0.881) were well above 0.70, so the results are acceptable.

Construct validity

Convergent and discriminant validity are considered to be facets of construct validity in the social sciences (Ping Jr., 1996). Convergent validity exits if a group of indicators are measuring one common factor. It is a criterion to identify whether every measurement item is convergent to the latent variable. It can be assessed by two ways, that is, examining individual item loadings and the average variance extracted (AVE) at construct levels (Fornell and Larcker, 1981). In our measurement, all average variances extracted (AVE) are greater than 0.50. These measures demonstrate adequate convergent validity (Fornell and Larcker, 1981).

Discriminant validity was assessed by comparing the AVE related to individual constructs to the correlations among constructs (Netemeyer et al., 2003). The calculations from the discriminant validity analysis are given in the Table 1. Diagonal elements represent the square root of the AVE, while the off-diagonal elements represent the correlations among the constructs. In order to demonstrate discriminant validity, diagonal elements should be bigger than any correlations among constructs. The results presented in Table 1 show that our measures possess adequate reliability and construct validity. We also present basic descriptive statistics and correlations of the measures.

RESULTS AND HYPOTHESIS TESTING

Because the hypotheses suggest some interaction terms composed of entrepreneurial orientation, competition intensity and strategic flexibility, a moderated regression analysis is appropriate for testing the effects (Aiken and West 1991). In order to avoid the multicollinearity, we may center the scales that constitute interaction terms and report the results of one model including only one interaction term (David et al., 2001). We first include the control variables in the model, then add focal variables, and finally include the interaction terms. We tested the theory model using SPSS 13.0. Table 2 presents the relationship between EO and firm performance, and the moderating effects of CI and SF on the relationship between EO and firm performance.

H_1 examines the effect of entrepreneurial orientation (EO) on firm performance. As shown in Table 2, EO positively affects firm performance (M2: b=0.231, p<0.01), in support of H_1. H_2 accesses the effect of competition intensity (CI) on firm performance. As we predicted, CI has a negative relationship with firm performance (M2: b=-0.195, p<0.01).

H_3 discusses the moderating role of CI on the relationship between EO and firm performance. The interaction between CI and EO is positively related to firm performance (M3: b=0.398, p<0.01), in support of H_3. H_4 considers the effect of strategic flexibility (SF) on firm performance, and the results show that SF is not associated significantly with firm performance (M2: b=0.138, p>0.05), which provides no support for H_4. H_5 explores the moderated effect of SF on the relationship between EO and firm performance. The interaction between SF and EO is positively related to firm performance (M4: b=0.419, p<0.01), in support of H_5.

To gain deep understanding of the interaction effects of H_3 and H_5, we can decompose the interactive terms. In

Table 2. Standardized regression estimates: H_1 to H_5.

Parameter	Firm performance			
	M1	M2	M3	M4
Constant	2.885 (0.000)	2.260 (0.002)	2.819 (0.000)	2.693 (0.000)
Control variable				
Firm age	-0.014 (0.852)	-0.004 (0.957)	0.011 (0.874)	0.012 (0.860)
Location of firms	0.016 (0.828)	0.098 (0.203)	0.105 (0.156)	0.102 (0.168)
Market growth	0.188* (0.014)	0.103 (0.199)	-0.011 (0.895)	-0.013 (0.874)
Direct effects				
H_1: Entrepreneurial orientation(EO)		0.231** (0.003)	0.398** (0.000)	0.413** (0.000)
H_4: Strategic flexibility(SF)		0.138† (0.097)	0.057 (0.487)	-0.099 (0.326)
H_2: Competition intensity(CI)		-0.195*(0.013)	-0.445** (0.000)	-0.254** (0.001)
Moderate effects				
H_3:EO ×CI			0.398** (0.000)	
H_5:EO × SF				0.419** (0.000)
F	2.064 †	3.635**	5.378**	5.485**
R^2	0.034	0.112	0.180	0.182
ΔR^2		0.078	0.068	0.071
All VIFs<	1.050	1.322	2.342	2.493

**$p < 0.01$, *$p < 0.05$, †$p < 0.10$.

the tests, we split both CI and SF variables into two groups, that is, low (below the mean) and high (above the mean), and estimate the effect of EO on firm performance for the above two levels respectively. Firstly, EO has a stronger influence on firm performance when SF is high (b=0.436, p<0.01) than when it is low (b=-0.109, p=0.344). This result reveals that SF enhances the positive relationship between EO and firm performance. Secondly, EO has a stronger impact on firm performance when CI is high (b=0.273, p<0.05) than when it is low (b=0.202, p<0.10). This result suggests that CI stimulates the relationship between EO and firm performance.

DISCUSSION

Extant studies have examined the single direct impact of EO and SF on firm performance, but very rarely have discussed the interaction of SF and EO with firm performance. Previous studies have attached much importance to the moderate effect of environmental factors and organizational factors on EO-performance relationship, but all these factors have been discussed separately and seldom wholly and organically illustrate outer and inner environmental factors' effect on EO-performance relationship. Furthermore, EO-performance has been widely examined by data from western countries, but seldom empirically tested by data from SMB in less-developed countries. In order to fill this gap, we introduce a multidimensional variable SF, develop an integrated model, and examine the moderated effect of CI and SF on EO-performance of small and medium-sized firms in the eastern region of China.

Revealed from the results, our study generally offers strong support for the conceptual model presented in Figure 1. First, we find that EO positively and significantly affects firm performance of small and medium-sized firms, which shows the same results from firms in western countries (Keh et al., 2007; Lee et al., 2001; Lumpkin and Dess, 1996; Zahra and Covin, 1995). Following the method and steps taken by Tang et al. (2008), the result shows that the linear EO was significantly and positively related to firm performance (b=0.204, p<0.01), while the squared EO term was still positively but not significantly associated with firm performance (b=1.084, p=0.072). This result reveals that complex institutional context does not change linear and positive EO-performance relations, which is different from the curvilinear relationship examined by Tang et al. (2008). This difference is due to the location difference of samples chosen. In this study, we choose SMB from the southeast part of China including Jiangsu, Zhejiang and Shanghai, which has a more open and supportive institutional environment, compared with samples from the northeast region, such as Tianjin, Shandong and Inner Mongolia chosen by Tang et al. (2008). Thus, in a fair and supportive institutional

environment, environmental factors can't impede EO positive influence on firm performance.

Secondly, our findings show that CI has a significant moderated role on the relationship between EO and firm performance. Specifically, CI stimulates EO-performance positive linear relationship. This result is consistent with external environment characteristics' moderating effect on the linkage between EO and firm performance examined by many scholars (Covin and Slevin, 1989; Karagozoglu and Brown, 1988; Khandwalla, 1987; Miller, 1983; Miller and Friesen, 1978; Zahra, 1993; Zahra and Covin, 1995).

With regard to SF, we anticipate SF is significantly positively related to SMB performance, but the result shows this relation is not significant. A plausible explanation lies in a firm's scale. First, we find that the significantly positive relationship between strategic flexibility and firm performance mainly exists in samples of firms with relatively large scales. For example, Abbott and Banerji (2003) choose 227 US based transnational corporations from Fortune 500 list as the sample, and find that strategic flexibility is significantly positively related with profitability. As a small and medium sized firm, when the environment rapidly and violently changes, even if SMB has a high SF, it still cannot change completely and freely adapt to the environment because it can only utilize very limited visible and invisible resources. Thus, firms with high SF cannot directly increase firm performance. Lack of scale advantage and resource limits impede SF's positive and significant effect on firm performance.

Furthermore, one of the most important findings is that SF significantly enhances the positive relationship between EO and firm performance. This result reinforces the argument of the importance in building strategic flexibility in the 21st century organizations. Through resource flexibility and coordination flexibility within the organization, strategic flexibility seems to enable SMB to fully play the role of EO on firm performance. Strategic flexibility acts a moderated role, which is also consistent with the previous empirical results of inner organizational factors' moderated role on EO-performance (Burgelman, 1983; Jennings and Lumpkin, 1989; Ramachandran and Ramnarayan, 1993).

In light of the empirical results presented in the study, some managerial implications are revealed. The key of our study demonstrates that SF can enhance the positive EO-firm performance for small and medium-sized firms in China. Under the current dynamic and overall adverse financial environment, top managers or entrepreneurs of small and medium-sized firms should attach much more importance on building strategic flexibility inside organizations. They should not only enhance knowledge sharing and coordination between different vertical and horizontal departments, but also actively create modular products and invent produced processes to maximize resource flexibility. All these practices can smooth impediments and reduce risk brought by changing environments, and facilitate EO-performance significant and positive relationship. In addition, our study also finds that EO helps to overcome the negative effect of CI on firm performance, and EO will be more strongly related to high firm performance when competition intensity is high than when it is low. This result strongly implies that entrepreneurs in Chinese SMB need to continuously explore new markets and create new products and rapidly grab new opportunities under the current tough competitive environment. SMB can gain an increase on firm performance and obtain sustainable competitive advantage through these practices relevant to high EO.

Finally, this study also raises more questions that need to be dealt with in the future. The results of the current study are limited to high-tech industry from the southeast part in China and should be extended to other industries and regions in China to enhance the generalization of this study in the future. Although I give some explanations on why the EO-performance relationship in China shows difference and the SF-performance relationship in small and medium-sized firm shows difference from other empirical results before, this speculation still needs to be demonstrated by further research.

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APPENDIX

Measurement items and validity assessment.

Overall model fit: χ^2 (142) = 235.769, p < 0.001; CFI = 0.948, IFI = 0.950; RMSEA = 0.059	Standard factor loading
Entrepreneurial orientation: α= 0.750,	
1. We value the orderly and risk-reducing management process much more highly than leadership initiatives for change.	0.713
2. Our top managers like to "play it safe".	0.839
3. Our managers like to implement plans only if they are very certain that they will work.	0.597
Competition Intensity: α= 0.800,	
1. Competition in our industry is cut-throat.	0.721
2. There are many "promotion wars" in our industry.	0.830
3. Price competition is a hallmark of our industry.	0.751
4. There are many competitors in our industry.	0.534
Strategic flexibility: α= 0.868,	
1. The flexible allocation of marketing resources (including advertising, promotion and distribution resources) to market a diverse line of products.	0.839
2. The flexible allocation of production resources to manufacture a broad range of product variations.	0.952
3. The flexibility of product design (such as modular product design) to support a broad range of potential product applications.	0.945
4. Re-defining product strategies in terms of which products the firm intends to offer and which market segment it will target.	*
5. Re-configuring chains of resources the firm can use in developing, manufacturing, and delivering its intended products to targeted markets.	0.675
6. Re-deploying organizational resources effectively to support the firm's intended product strategies.	0.668
Firm performance: α= 0.881,	
1. Return	0.873
2. Sales	0.878
3. Profit	0.821
4. Market	0.698
Market growth: α= 0.801,	
1. The growth rate of this industry in the past three years is very high	0.795
2. The market demand in this industry is growing rapidly	0.916
3. There are many potential customers in this industry to provide mass-marketing opportunity	0.625

*Item deleted from further analysis due to low factor loading.