



A quantitative analysis of the characteristics of rapid-growth firms and their entrepreneurs in China

A quantitative
analysis

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Abstract

Purpose – This study aims to compare rapid-growth companies with slow-growth ones in order to provide fresh insights into the attributes of Chinese rapid-growth companies through an integrated research framework, which was adapted from the framework proposed by Wiklund and by Barringer.

Design/methodology/approach – To obtain data for analysis, the research selected the top 30 rapid-growth firms and the bottom 30 slow-growth firms from a data bank which contains complete financial data of 533 firms from 2001 to 2003. All data concerning rapid-growth were coded either one or zero, and were analyzed by Fisher's Exact Test to find out the frequency of important growth variables.

Findings – It is found that the major differences between rapid-growth and slow-growth firms lie in different favorite firm resources and capacities, task environment, and entrepreneurial strategies. They can create greater value for success with certain entrepreneurs, and might spur those entrepreneurs to push their firms onto a rapid growth road. In addition, the variable of creating unique value emerges as a strong predictor of rapid growth. Entrepreneur orientation strategy is not found to be significantly facilitating rapid growth. This illustrates that all growth companies value highly entrepreneurship-oriented strategy.

Practical implications – These research findings confirm that growth is not a random event and that entrepreneurs are not necessarily natural. These research findings will promote entrepreneurship education and entrepreneurship in China.

Originality/value – There are two originalities in this research. First, the authors developed a new integrated framework based on previous research achievements. Second, it is the first empirical study concerning company growth variables in China.

Keywords Business development, Entrepreneurs, Attitudes, Resources, Management strategy, China

Paper type Research paper



Research for this article was sponsored by the National Natural Science Foundation of China (No. 70732004). Comments and suggestions from referees have been very helpful. The authors thank Dr Jun Li and Dr Jiaoyong Gao for their valuable comments and editorial help.

1. Introduction

Only a small fraction of all firms aim for, or ever achieve rapid growth. Yet, it is those rapid-growth firms that make a disproportionate share of the creation of new jobs and employment. Despite the fact that the average firm in the USA grows only at rate of 3.5 per cent, there exists a subset of firms that grows in a more accelerated fashion (Barringer *et al.*, 2005). These rapid-growth firms are not only an important stimulus to national economy but also particular interest to academics and practitioners because rapid growth is often an indication of market acceptance and firm success (Fesser and Willard, 1990). Many rapid-growth firms in China, such as Lenovo, Haier, Mengniu Ltd., have spawned new industries and spearheaded the development of innovative products and services. By examining rapid-growth firms, researchers can help all firms better understand the attributes associated with firm growth in China.

Despite these positive outcomes, rapid growth is difficult to achieve and maintain. The growth rate of companies often comes to a halt because of the changing needs at different phases during the company life cycle. In fact, according to Zook and Allen (1999), only one in seven companies could generate and keep sustained, profitable growth. In an earlier study, Hambrick and Crozier (1985) suggested that coping with the stress imposed by instant size, sense of infallibility, internal turmoil, and extraordinary resource needs are persistent challenges that managers of rapid-growth firms have to face. Missteps in the management of any one of these challenges might lead to the failure of an otherwise successful rapid-growth firm. These unsuccessful rapid-growth firms in China were called as falling star firms (Yuli Zhang, 2001).

Despite the challenges associated with rapid growth, numerous surveys (e.g. Deloitte and Touche LLP, 1996) suggest that growth is a top strategic priority for a large percentage of firms. Rapid growth, however, is not a random or chance event, but is associated with specific firm attributes, behaviors, strategies, and decision-making. That is to say, to some extent, rapid-growth firms have unique characteristics among SMEs. Researchers across the world have done much work to recognize the specific characteristics of rapid-growth firms in many other countries, but very limited in the Chinese context, so the purpose of this study is to add research into rapid-growth firms in China to the literature. By using a quantitative analysis of 30 rapid-growth and 30 slow-growth firms surveyed in Tianjin City, China, this study hopes to draw distinction in the key attributes between rapid-growth and slow-growth companies in China and provide prescriptive advice to Chinese executives who wish to increase their firms' growth potential.

2. Literature review

The literature on rapid-growth firms has focused on whether there are systematic differences between rapid-growth firms and their slow-growth counterparts, and what these differences are. In a review of 55 research articles on firm growth published between 1989 and 1996, Delmar (1997) concluded that there is little agreement on what factors affect growth. In a more recent article, Delmar and Davidsson (1998) remarked that despite increased research efforts, our knowledge about high-growth businesses is "still very limited." Similarly, after reviewing 68 studies on firm growth and performance, Wiklund (1998) characterized the literature as "highly fragmented" by analyzing 70 research articles on firm growth published between 1987 and 1997 and suggest an integrated research frame: entrepreneurial attitudes, resources, capabilities,

strategies, and task environment. Barringer *et al.* (2005) examined 106 articles, book chapters, and books on firm growth and performance from the entrepreneurship, management, and economics literatures between 1977 and 2003 and found that the literature is rather rich and mature on rapid-growth firms highlighting four major areas:

- (1) entrepreneur characteristics;
- (2) firm attributes;
- (3) business practices; and
- (4) human resource management (HRM) practices.

To review the literature, we compared key variables of the research review by Wiklund (1998) and by Barringer *et al.* (2005). A summary of our findings is provided (see Table I). Contrary to prior beliefs that the literature on firm growth is fragmented or limited, we found that Barringer has made a great progress for the study of firm

Characteristic and behaviors	Description	Representative study
<i>Entrepreneurial/entrepreneur attitudes</i>		
Relevant industry experience	Entrepreneurs with experience in the same industry as their new venture should have better established professional networks and management expertise than entrepreneurs without relevant industry experience	Siegel <i>et al.</i> (1993); Fesser and Willard (1990); MacMillan and Day (1987)
Higher education	Evidence suggests that important entrepreneurial skills are enhanced through higher education	Watson <i>et al.</i> (2003); Sapienza and Grimm (1997)
Entrepreneurial experience	Entrepreneurs with prior entrepreneurial experience are better accustomed to the entrepreneurial process and more likely to avoid costly mistakes than entrepreneurs with no prior entrepreneurial experience	Duchesneau and Gartner (1990); Stuart and Abetti (1987); Cooper <i>et al.</i> (1988)
<i>Firm resource or capabilities</i>		
Involvement of employee in decision making	Employee involvements help firm share cost, increase speed to market, gain access to essential resources, knowledge	Almus and Nerlinger (1999); Deeds and Hill (1996)
Planning	Planning help a firm organize for growth and address the relevant managerial and strategic issues necessary to main rapid growth	Roure and Keeley (1990); Duchesneau and Gartner (1990)
<i>Innovative business practices/ entrepreneurial innovativeness</i>		
Innovativeness	Innovation results in a constant supply of new product and service offerings, which increases a firm's revenues and business reputation	Deeds and Hill (1996); Heunks (1998); Roper (1997); Schoonhoven <i>et al.</i> (1990); Dosi (1988)

Table I.
Common characteristic
and behaviors of
rapid-growth firm in two
researches

growth. First, he found that growth is not a random event. A firm's growth-related attributes, its business practices, and its HRM practices make a difference in terms of its ability to achieve and sustain rapid growth. Second, implication of the study is that the personal characteristics of the entrepreneurs who start a firm have an impact on the firm's ability to achieve and maintain a rapid growth rate (Barringer *et al.*, 2005). Three similar factors in the two researches help us understand rapid-growth firms: entrepreneurial resources or capabilities/entrepreneur attitudes, firm resources or capabilities/ firm attitudes, business practices/ entrepreneurial innovativeness.

But comparing key variables of the research review by Wiklund (1998) with that by Barringer *et al.* (2005), we found that the study of Barringer has some limitations:

- *The study concerned less with entrepreneurial strategy.* Miller and Friesen (1978) held the view that entrepreneurial firms highly valued innovation, and regularly considered risk in their product-market strategies. Innovation, risk-taking and pro-activeness are three main elements of entrepreneurship. Entrepreneurial strategy, therefore, is an important dimension for studying rapid-growth firms (Wiklund, 1998).
- *Environment seems to be ignored.* Environment is a key concept in the study of rapid-growth firms. Child (1972) argued that environment played a crucial role in determining performance of rapid-growth firms. If the perception of the environment is accurate, better strategy decisions will be made. Conversely, firms will face huge risk and be in danger of bankruptcy if the perception of the environment is inaccurate. Not only is there a fit issue between strategy and environment, but there also needs to be a fit between the objective environment and the perceived environment (Dess and Beard, 1984).
- *HRM was concerned too much in his research.* Undoubtedly, HRM is an important factor for SME's growth, but Wiklund (1998) believed that entrepreneur was even more important than the employees in SME, at the same time, entrepreneurial strategy and the task environment of entrepreneur was the core factor for SME's growth.

From this point, is it possible, or even desirable, to integrate two research frames? As suggested by Gartner *et al.* (1992), there is no need for the development of new theories. Instead, Existing theories can be used. So we integrated research frameworks of Wiklund (1998) and Barringer *et al.* (2005) (see Figure 1):

- entrepreneurial attitudes;
- entrepreneurial strategy;
- firms' resources and capabilities;
- environment; and
- rapid growth (see Table II).

2.1. Entrepreneurial attitudes

The relationship between entrepreneurial attitudes and firm growth is important for at least three reasons. First, it is widely believed that the entrepreneurs of a firm place a lasting stamp on their companies that influences the cultures and behaviors of their

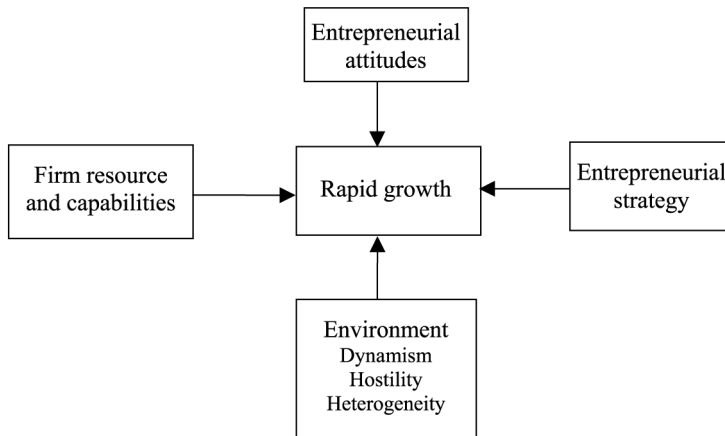


Figure 1.
The integrated theoretical
framework about key
attributes that
differentiate rapid-growth
firms from slow-growth
firms

Latent construct	Variables	Wiklund	Barringer
Entrepreneur attitudes	Relevant industry experience		✓
	Higher education		✓
	Entrepreneurial experience		✓
	Age	✓	
	Gender(male)	✓	
	Management or engineering	✓	
Resources and capabilities of the firm	Present size	✓	
	Rate of employees that hold university degree (0.3)	✓	
	Involvement of employee in decision making	✓	
	Formal professional cooperation	✓	
	Growth-oriented vision and mission		✓
	Day-to-day advisors cooperation	✓	
	Creating unique value for customers		✓
	Product superiority		✓
	Innovation		✓
Perceived environment	Dynamism	✓	
	Hostility	✓	
	Heterogeneity	✓	
Entrepreneurial orientation	Risk-taking	✓	
	Proclivity	✓	
	Innovativeness	✓	

Table II.
Characteristic and
behaviors of successful
rapid-growth firms in an
integrated frame

firms (Mullins, 1996). Second, investors and others often assess the potential of a new venture by evaluating the attributes of its entrepreneurs. One of the most important criteria used by venture capitalists, for example, in deciding whether to fund a firm is their perception of the entrepreneur's or the entrepreneurial team's ability to successfully launch the venture. Third, launching a new firm is a challenging process.

As a result, individual difference variables, such as educational attainment and prior industry experience, have in many instances been found to be critical in successfully launching a new firm (Barringer *et al.*, 2005).

2.2. *Entrepreneurial strategy*

Entrepreneurial strategy is an important factor for difference between rapid-growth firms and lower-growth firms (Wiklund, 1998). First, SME strategy is different from the strategy taken by large firms. Entrepreneurial strategy may affect all business activities in the progress of firm growth. Second, after a firm gets established and starts growing, the smaller firms usually are under bigger influence from entrepreneurs. And larger firms are in need of more professional management. Entrepreneurial strategy functions all the time. Hence, it is important for entrepreneurship researchers to recognize the importance of entrepreneurial dimensions of strategy in addition to individual level entrepreneurship (Miller, 1983). Wiklund (1998) suggests that entrepreneurial dimensions of a firm's strategy are seen as a combination of risk-taking, proclivity, and innovativeness.

2.3. *Firms resource and capabilities*

Resources are basic inputs in the production process, whereas capabilities refer to the capacity for coordinating resources to perform certain tasks or activities. However, it is difficult from a measurement perspective to separate resource availability from the capacity to utilize these resources (Chandler and Hanks, 1993). The resource typology used in this research is the one outlined above: present size, number of employees that hold university degree, involvement of employees in decision making, present size (sales), formal professional cooperation, day-to-day advisors cooperation, decision making, and creating unique value for customers, product superiority, innovation (Wiklund, 1998; Barringer *et al.*, 2005).

2.4. *Environment*

Wiklund suggests that task environmental characteristics in terms of dynamism, hostility and heterogeneity have been argued to be critical for suitable strategic choices, i.e. particular strategies are likely to lead to better performance depending on the level of environment dynamism, hostility and heterogeneity. These dimensions are frequently used in small business growth and performance literature (Brown and Eisenhardt, 1996; Covin *et al.*, 1990; Miller, 1983; Miller and Toulouse, 1986). Furthermore, Zahra (1991) suggests that each of these three dimensions should influence entrepreneurship orientation (EO), i.e. depending on the degree of environmental dynamism, hostility and heterogeneity; firms with a higher or lower degree of EO may perform better or worse. So the present study about environment includes dynamism, hostility and heterogeneity.

3. Methodology

3.1. *Sample*

The data used in this study came from a randomly selected set of high-growth firms developed in close cooperation with experts at Tianjin Municipal Science and Technology Committee (TJMSTC) in 2004. Sample population consisted of small and middle businesses in Tianjin City in 2003. As noted above, growth and performance

dates were to be assessed over three years interval, and 2001-2003 were the most recent three years available. Thus, the population did not consist of all SMEs in Tianjin City. The population represent a subset of a larger database of SMEs that were regional winners of the most growth potential SMEs. The selection of the programme recognizes firms with growth potential in seven different industries, ranging from manufacturing to health care. The cases had been surveyed by a questionnaire and include questions about growth firms in the following areas:

- business environment;
- types of business and current activity;
- management team;
- innovativeness;
- future planning;
- performance and growth in 2001-2003.

Before a firm is designated as a subject, it must submit an officially audited financial statement. Each of the received questionnaire was accompanies by sufficient financial information for us to compute a three-year compound annual growth rate.

The questionnaire took the form of a five-point Likert scale. All data which reflected the basic situation of those enterprises are objective. The research took "Quantitative content analysis" method in order to survey the differences between rapid-growth and low-growth firms. We sorted all data into the category of "1" or "0", and made the analyses by Fisher's Exact Test (Barringer *et al.*, 2005).

For the purpose of this study, we define a rapid-growth firm as one with a three-year compound annual growth rate of 40 per cent or higher, and a slow-growth firm as one with a three-year compound annual growth rate of 5 per cent or lower. To obtain data for analysis, we selected top 30 rapid-growth firms and bottom 30 slow-growth firms based on the data bank in which there were 533 firms with complete financial data for previous two years (2001 to 2003). The total number of the firms in the data bank is 1,044. From these firms in Tianjin City, multiple criteria were used to define a sample of high-growth firms ($N = 31$). Each questionnaire was addressed to a top executive of the selected firm, and anonymity was assured. Questionnaires were mailed to SMEs in Tianjin City. Table III contains demographic statistics pertaining to the sample along with t tests to compare the rapid-growth firms against the slow-growth firms on number of employees, annual sales, three-year compound annual growth rate, and firm

Variable	Rapid-growth firms		Slow-growth firms		t statistic	P value
	Mean	SD	Mean	SD		
Number of employees	163	187	215	200	1.03	0.308
Annual sales	4930.9	7507.9	5124.5	6536.4	0.108	0.914
Three-year compound annual growth rate	152.7%	181.2%	4.6%	9.2%	-4.47	0.0005*
Age of firm	5	4.4	9	7.3	3.07	0.004*

Note: * $p < 0.01$

Table III.
Summary statistics and statistical tests for differences between the rapid-growth and slow-growth firms in the sample

age. As shown, the three-year compound annual growth rate for the 30 rapid-growth firms ranged from a low of 43 per cent to a high of 998 per cent, with an average growth rate of 152.7 per cent. In contrast, the three-year compound annual growth rate of the 30 firms in the slow-growth group ranged from a low of – 25 per cent to a high of 15 per cent, with an average growth rate of 0.28 per cent. Furthermore, there are no significant differences between the two samples on number of employees or annual sales. As expected, the rapid-growth firms are younger (see Table III).

Data were collected by mail questionnaire survey. Responses were received (23 per cent response rate). There were 13 blank questionnaires and 67 questionnaires with a high proportion of missing data (25 per cent or more) and they were excluded. Thus, 80 firms gave responses that were usable for analysis. In addition, answers to the performance items were well distributed across the answer range. Non-response bias was assessed on the basis that later respondents could be more like non-respondents (Armstrong and Overton, 1977). The responses of later respondents were found not to be statistically different (sig. 0.05) from responses of earlier respondents for all questionnaire items for both samples. In addition, response bias was assessed by comparing the structure of the firm size of respondents with the database population. As expected, because of the randomness of the sample, the selected firms and all firms matched in terms of size distribution in Tianjin City.

3.2. Method of analysis

Table IV presents the categories and variables that emerged from the study. Throughout the analysis, we were interested in the extent to which the firms in the sample emphasized these variables. The frequency of emphasis for each variable, broken down by rapid-growth versus slow-growth firms, is shown in Table IV. We chose this method of frequency analysis to ensure that “vivid, but false impressions” (Eisenhardt and Schoonhoven, 1990; Barringer *et al.*, 2005) were not regarded as more meaningful and pervasive than otherwise might be inferred without such frequencies.

A one-tailed, Fisher’s Exact Test was used to test the differences between the frequencies for the rapid-growth and slow-growth firms. As shown in Table IV, the rapid-growth firms differed from the slow-growth firms with regard to their intensity of emphasis on 14 of the 21 variables identified. The data were analyzed with the assistance of the statistics software program SPSS 11. Through the analysis, several variables were significantly different between the rapid-growth firms and the slow-growth firms in our sample.

In an effort to increase confidence in the reliability of the analysis, we surveyed a randomly-selected subset of ten firms with same questionnaire, and analyzed the results. The results were then compared with the original one. The reliability scale of the early analyzed is 0.63. The reliability scale of the original questionnaire is high ($\text{Alp} = 0.71$).

4. Discussion of the results of the analysis

These variables including relevant industry experience, entrepreneurial experience, age, present size, rate of employees that hold university degree, growth-oriented vision and mission, day-to-day advisors cooperation, creating unique value for customers, product superiority, innovation, dynamism, hostility, heterogeneity, and proclivity were higher than other variables in our study. The rapid-growth firms in the sample

				A quantitative analysis
Variables	Normal and slow growth	Fast growth	P value (Fisher exact test)	
<i>Entrepreneur attitudes</i>				683
Relevant industry experience	10	18	0.016**	
Higher education (college, master and PHD)	29	25	0.718	
Entrepreneurial experience	2	9	0.021**	
Age (below 40 ages)	3	10	0.013**	
Gender (male)	28	24	0.569	
Management or engineering (management)	13	15	0.5	
<i>Resources and capabilities of the firm</i>				
Present size (below 50 employees)	12	23	0.004***	
Rate of employees that hold university degree (0.3)	10	22	0.018**	
Involvement of employee in decision making	23	24	0.5	
Growth-oriented vision and mission	12	22	0.009***	
Formal professional cooperation	27	22	0.182	
Day-to-day advisors cooperation	11	18	0.06*	
Creating unique value for customers	12	21	0.025**	
Product superiority	15	22	0.055*	
Innovation	18	26	0.07*	
<i>Perceived environment</i>				
Dynamism	22	27	0.09*	
Hostility	17	25	0.024**	
Heterogeneity	14	20	0.059*	
<i>Entrepreneurial strategy</i>				
Risk-taking	16	20	0.159	
Proclivity	15	20	0.097*	
Innovativeness	19	14	0.147	
Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$. Number of cases affected ($n = 30$ for both growth rates)				Table IV. Variables identified in content analysis with Fisher's Exact Test for significance across growth rates

create unique value for their customers to a higher degree than their slower-growth counterparts. This result is the same as the result of Barringer *et al.* (2005).

4.1 Entrepreneurial attitudes

The rapid-growth firms differed from the slow-growth firms on relevant industry experience, entrepreneurial experience, age. No differences were found for prior industry experience, high education, entrepreneur gender and management ground.

Entrepreneurs with prior experience in the same or a closely related industry were found in 60 per cent of the rapid-growth firms in the sample and only in 30 per cent of the slow-growth firms. Apparently, related industry experience provides an entrepreneur with critical knowledge plus the advantage of access to a network of contacts that can help a firm overcome liability of newness and build a growth-oriented business.

The study was not affirmed the importance of higher education, though we suggest that higher education can provide an entrepreneur with the skills necessary to launch a venture, particularly if the venture is in a technology-oriented industry such as biotechnology or computer science. But the result of the analysis seems to suggest that

entrepreneurs between rapid-growth firms and lower-growth firms are not different at higher education in China.

As expected, entrepreneurs of the rapid-growth firms are younger versus the slow-growth firms in the sample. As the proverb in China is “Life begins at 40”, we used 40 years of age as a dividing line to measure the youth of entrepreneurs. We found that entrepreneurs are younger in rapid-growth firms than in lower-growth firms.

4.2. Firms resource and capabilities

The rapid-growth firms in the sample differ from the slow-growth firms on firm size, rate of employees that hold university degree, growth-oriented vision and mission, day-to-day advisors cooperation, creating unique value for customers, product superiority, and innovation. No differences between the two groups were found in involvement of employee in decision making or formal professional cooperation.

In terms of employee scale of growth firms it was found that 77 per cent of the rapid-growth firms in the sample had less than 50 employees in comparison of only 40 per cent in lower-growth firms. Apparently, smaller firms may grow more rapidly than larger firms. Rapid-growth firms had a higher percentage of employees who hold university degree than lower-growth firms.

With regard to vision to growth, we have found that growth is an important objective for most firms and that lack of growth can be attributed to both external and internal factors, including motivational issues. As a result, the intensity of a firm's vision to growth may motivate the members of a firm to make growth a reality. A growth-oriented vision may crystallize the activities of a firm and lead to the implementation of purposeful growth-oriented activities (Kim and Mauborgne, 1997). The final firm attribute that was emphasized to a significantly higher degree by the fast-growth firms in the sample was day-to-day advisors cooperation. Relationships of day-to-day advisors cooperation co-opt a portion of their resource needs from their growth process.

The rapid-growth firms in the sample differed from the slow-growth firms with regard to creating unique value for customer, product superiority, and innovation. Creating unique value is defined as helping a customer maximize utility, reduce costs, and/or increase organizational effectiveness in a unique manner (Barringer *et al.*, 2005). Although the variable creating unique value is rarely discussed in the rapid-growth literature, it emerged as a strong discriminator between the rapid-growth and the slow-growth firms in the sample. This result is the similar to that of Barringer *et al.* (2005). Another two variables that differentiated firms in the sample were product superiority and innovation. Fast-growth firms were more likely to make a keen sense of product superiority and innovation.

4.3 Perceived environment

The rapid-growth firms in the sample differed from the slow-growth firms with regard to dynamism, hostility, heterogeneity in task environment (Wiklund, 1998).

Environment dynamism refers to the amount and unpredictability of change in customer preferences, products or service technologies, and method of competition in firm's principle industry. Heterogeneity is evidenced by the differences in competitive markets. Hostility is manifested by distribution competition. The environment is the

major determinant of firm development. This study revealed that the environment was different between rapid-growth firms and lower-growth firms.

It is interesting to note that there are bigger differences among the rapid-growth firms and lower-growth firms. It is possible to speculate that this could be because firms with more of an entrepreneurial orientation, to a larger extent, aim at environment which allows greater growth opportunities. A contradictory interpretation is also possible. It may be that growth is pulled along by the environment (Wiklund, 1998).

4.4. Entrepreneurial strategy

The rapid-growth firms in the sample differed from the slow-growth firms with regard to proclivity in entrepreneur orientation strategy. No differences were found between two groups in terms of risk-taking and innovativeness.

In small business firms the strategy orientation of CEO is likely to be the same as the strategic orientation of the firm. In line with the majority of reviewed research, entrepreneur orientation strategy consists of three separate dimensions: proclivity, risk-taking and innovativeness. But unexpectedly, we could find no difference in risk-taking and innovativeness and this result may be attributable to the small sample of this study.

5. Conclusions

Most of the findings in this research affirm the statements in existing literature on rapid-growth firms. The characteristics of the entrepreneur of a firm, along with firm resources and capacities, task environment, and entrepreneurial strategies, are important in helping a firm achieve rapid growth. The results of the study are important because they confirm the results in existing literature based on quantitative analysis on larger scale survey in China.

First, different variables were identified, based on evidence in the integrated research frame and a large scale survey in China, 2004. For example, favorite firm resources and capacities, task environment, and entrepreneurial strategies can create greater value for success with certain entrepreneurs, which might spur them to push their firms onto a trajectory of rapid growth.

Second, the variable creating unique value emerged as a strong predictor of rapid growth. Although Barringer regards this variable conceptually similar to Porter's (1985) concept of product differentiation, the results of this study suggest that unique value is a separate concept, and it refers to an ability to offer good products or service to help customers maximize utility, reduce costs, and/or increase organizational effectiveness in a unique manner. This result is the similar to the result of Barringer *et al.* (2005).

Finally, the results of this study draw attention to the importance of entrepreneur orientation strategy in facilitating rapid growth researches. But not as expected, risk-taking and innovativeness were not different. We think that our data may be limited and this will need further exploration in the future.

6. Implications and observation

First, it has been confirmed that growth is not a random event (Barringer *et al.*, 2005; Wiklund, 1998). A firm's growth-related attributes, namely, entrepreneur attitudes,

resources and capabilities of the firm, task environment, and entrepreneurial strategies make a difference in its ability to achieve and sustain rapid growth. The growth-facilitating variables identified in this study are shown in Table IV. Entrepreneurs who lead growth-minded firms may benefit by taking into account these factors and considering the extent to which their firms have addressed these variables. For example, one of the strongest findings in the study is that firms that have made a proclivity growth are more likely to achieve rapid growth than low-growth firms. The same important finding is that firms with growth-oriented vision and mission are more likely to achieve rapid growth than low-growth firms. The research findings show that growth-orientated firms are more entrepreneurial. Growth-oriented vision and mission are important indicators for measuring firm growth.

A second implication of the study is that entrepreneurs are not necessarily naturally born. The most important variables in this research are relevant industry experience. Entrepreneurs who start a firm have an impact on the firm's ability to achieve and maintain a rapid growth rate by acquired experience and learning.

To conclude the paper, we would like to make two observations about the present study. First, all of the categories of variables examined in the study came from a narrow point of view. For instance, although the literature on rapid-growth firms is converging, there is a need for more integration across the categories of variables that are associated with rapid growth, but our conceptual models was only depicted by integrating the research frameworks of Wiklund (1998) and of Barringer *et al.* (2005). So cross-integration of topics, like firm attributes and business practices, will push the literature on rapid-growth firms forward and enrich the debate. Second, although our research is based on a big sample in China, the adopted Fisher's Exact Test is only a frequency analysis (Eisenhardt and Schoonhoven, 1990). So we suggest that a more reliable research method could be used in future.

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