

## Review

# A general review of entrepreneurship research (1998 to 2010): Theoretical implications, management applications and future research directions

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**This article reviews entrepreneurship literature published in leading entrepreneurship journals from 1998 to 2010 and classifies 359 articles into time-sequential categories according to research design specifications: research theme, methodology, and level of analysis. This review evaluates recent trends and new developments in research content, methodology, and level of analysis under key themes. A range of theories applied in entrepreneurship research have been categorized under the academic discipline and research theme. As we reviewed the literature, we built a framework of entrepreneurship research based on venture resource. This article summarizes the research methodology system, discusses subjects of analysis within entrepreneurship domains, and proposes directions for future research.**

**Key words:** Entrepreneurship, methodology, level of analysis, literature review.

## INTRODUCTION

A great deal of theoretical research has been conducted and published on entrepreneurship over the past thirty years, and much of that research has borrowed popular theories from other field. Despite the creation of a disciplinarily specific theory, concepts from fields such as economics, management, psychology, and sociology have helped researchers to cultivate a better understanding of diverse entrepreneurial behavior and related phenomena. The application and evolution of cross-disciplinary perspectives has enhanced the current entrepreneurship theoretical system, adding layers of complexity and challenges to it. In addition, the complexity of entrepreneurial activities and specificity of research objects forces the entrepreneurship research system to evolve to become much more comprehensive.

Thus, new researchers need to establish a general framework even as they follow new directions and trends related to the dramatic worldwide increase in entrepreneurial activities. International scholars such as Timmons (1979), Gartner (1985), Low and MacMillan (1988), Shane and Venkataraman (2000), Gartner (2001), Davidsson and Wiklund (2001) have done much significant work in furtherance of a general research framework of entrepreneurship.

In this study, we employed the classic entrepreneurship model constructed by Timmons and Spinelli (1979), study variables such as entrepreneur, opportunity, resource, team, and environment. Other relevant areas of interest included information and resource exchange in the process of new venture creation. These transactions were related with the entrepreneur's individual network and emerging organization network. Larson and Starr (1993) defined the social connection formed with the emergence of a new venture as an entrepreneurial network, noting that entrepreneurial networks are useful to explain

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control and coordination in exchange structures (Larson, 1992). Therefore, in this paper we focus on six entrepreneurship elements: Entrepreneur, opportunity, resource/capability, team, environment and network. The current article is an attempt to build a clear Logical line in the entrepreneurship research field so future research directions can be profitably focused. This review paper therefore seeks to address the following questions:

- (1) What has been established in entrepreneurship research over the last 12 years?
- (2) What kinds of theories have been applied to differing research themes? What is the role of each? For related research themes, what kinds of theories have been applied? What is the role of each application?
- (3) What are the future directions and trends in entrepreneurship research?

This article is sub-divided as follows: Subsequently, this study presents the aforementioned basic research questions, after which it offers a brief introduction to the review method, including sources of literature and coding processes. This is followed by the general reviews of the literature and the summaries of all the relevant theories in the field of entrepreneurship. Afterwards, the study provides an explanation of the dynamic evolution of the entrepreneurship research theme from three dimensions: content, methodology and level of analysis - and then proposes future research directions under each theme. Finally, future directions and trends in entrepreneurship research are discussed.

## METHODS

### Searching and coding

For the purpose of this paper, the authors selected six leading entrepreneurship journals including journal of business venturing (JBV), entrepreneurship theory and practice (ET&P), international small business journal (ISBJ), small business economics (SBE), journal of small business management (JSBM), entrepreneurship and regional development (E&RD). These journals were selected because of their impact and importance in the field. The key words "entrepreneur" and "entrepreneurship" were used to search articles across the six mentioned journals from January 1998 and December 2010, thereby capturing the latest developments in the field. All the papers published in the period in these six leading journals were screened by author, year, research question, related theory, research context, methodology and level of analysis. Given our focus, we omitted book reviews, special issues' reviews, and case analysis. Ultimately, 359 articles were identified and selected for analysis.

It must be noted that these 359 articles by no means

encompass all articles published in this period on entrepreneurial research. Nevertheless, it captures a meaningful majority of the articles published because the selected journals are all leading journals on entrepreneurial research. As such, it enables us to delineate an emerging pattern of where we are in terms of research on entrepreneurship and what gaps may be apparent in that pattern. Searching by each journal selected and screening the papers that showed up proved to be a more reliable, though time consuming, method than using a keywords' search on a database. Each downloaded article was then read and coded by the authors. Each article was entered into the data-coding file only once. The coding categorization was created in order to address the research questions listed above, in keeping with the analytical purpose of this paper. Each paper was coded by "entrepreneur", "entrepreneurial opportunity", "resource/capital and capabilities", "entrepreneurial team", "social network/networking", and "environment". These thematic groupings emerged based on the established classic theoretical frameworks of entrepreneurship research (Timmons and Spinelli, 2003; Gartner, 1985) and deemed as the most relevant coding categories for the article. The logical connections of the coding criteria are presented in Figure 1.

## CONTENT ANALYSIS

### What has been established in entrepreneurship research over the last 12 years?

Within the six research themes, research on "Entrepreneurial Network" and "Resource and Capability" accounts for a fairly large proportion of 32 and 24%, respectively, "Entrepreneur", "Entrepreneurial Opportunity" and "Entrepreneurial Environment" account for 14, 11 and 10%, respectively. However, research on "Entrepreneurial Team" accounted for only 9% (Figure 2). With regard to methodology, there are conceptual, empirical and experimental research approaches in the entrepreneurship literature. Overall, empirical research is most extensively used, which accounts for a large proportion of the research on "Entrepreneur", "Resource and Capability" and "Entrepreneurial Network". Second, there is more conceptual research in "Entrepreneurial Opportunity" literature. Third, the newly emerging experimental approach has been applied in research on "Entrepreneurial Opportunity" and "Entrepreneur" (Figure 3).

At the three levels of analysis in entrepreneurship research - individual, organizational, and macro levels-, there are different concerns regarding different research themes. For instance "Entrepreneurial Opportunity", "Resource and Capability" and "Entrepreneurial Network" are related to all three levels of analysis. "Entrepreneur" research focuses on both the individual and

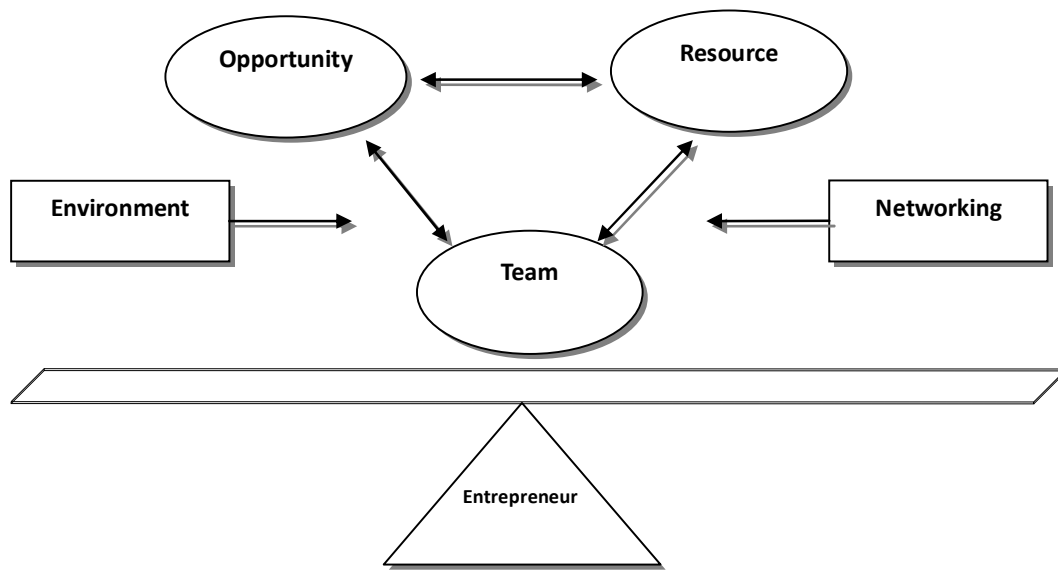


Figure 1. A model of new venture creation: A modification of Timmons's 1979.

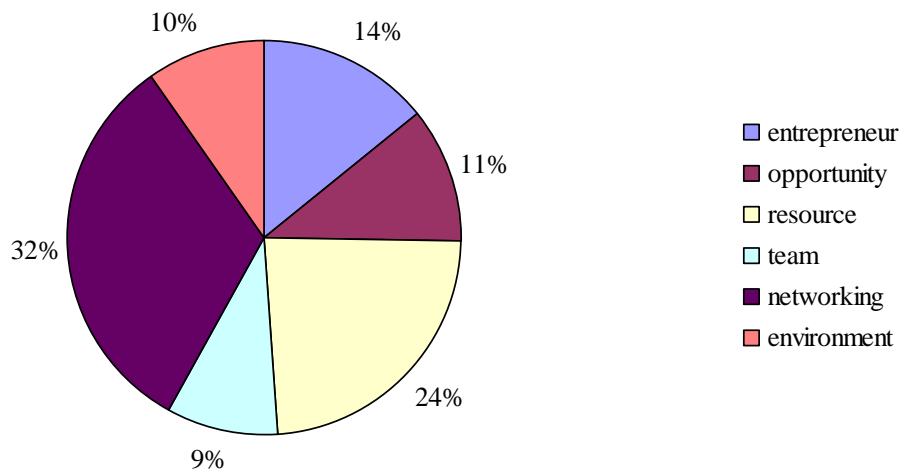


Figure 2. Proportion of each research theme.

organizational levels, though mainly at the individual level; “Entrepreneurial Opportunity” research is mainly at the individual level; “Resource and Capability” and “Entrepreneurial Network” are mainly at the organizational level of analysis; “Entrepreneurial team” is mainly at the team level of analysis; “Environment” research crosses both the organizational and macro levels (Figure 4).

**What theories have been applied to differing research themes? What is the role of each?**

Our overview of literature revealed that scholars brought

different disciplinary theories to entrepreneurship research on the above six themes, frequently taking the lens of economics, management, psychology or sociology (Table 1). Economics is undoubtedly a useful and powerful tool for interpreting the basic principles, regularities and practices of entrepreneurship. Through a summary of literature, we found that two schools of economics have been widely applied: (1) Theories rooted primarily in institutionalism, that is, institution theory, transaction cost theory and agency theory; (2) Neoclassical economics, as well as the theories grounded and developed upon it, including industrial organization theory, human capital theory, new growth

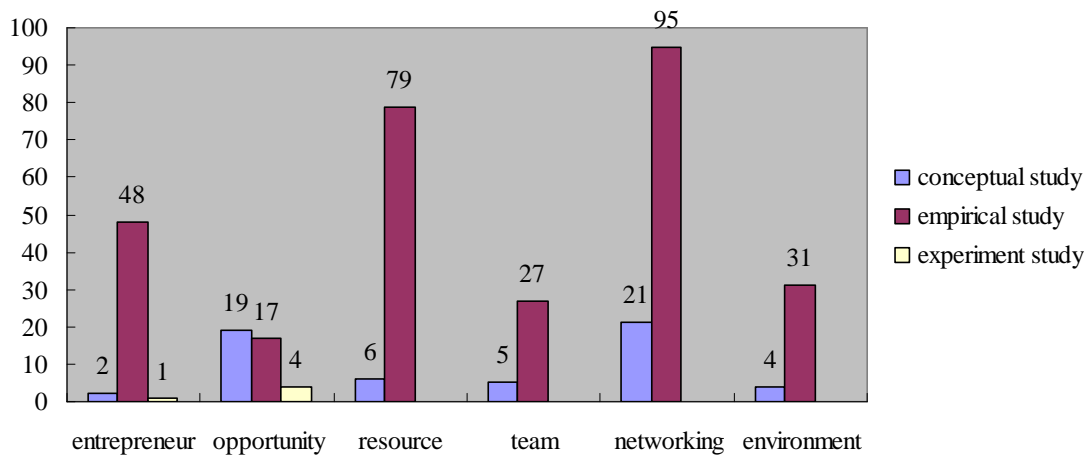


Figure 3. Discreption of research method on each research theme.

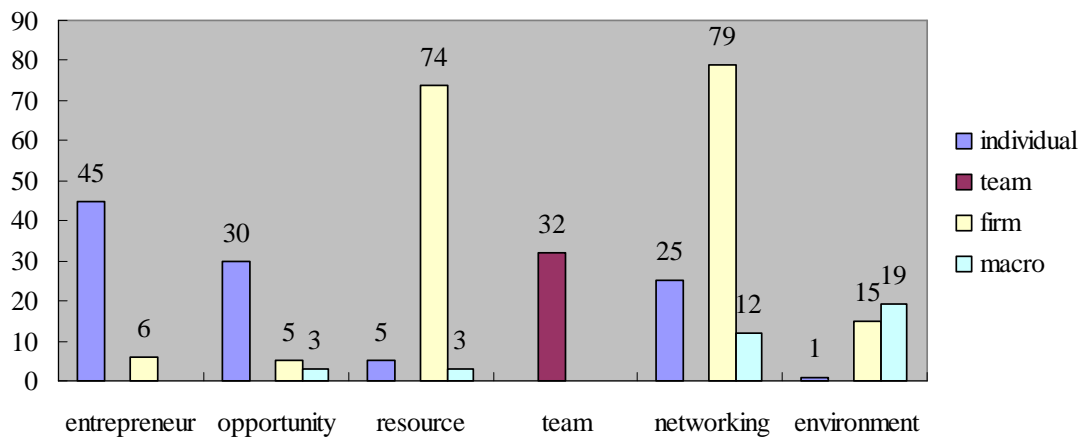


Figure 4. Discreption of level of analysis on each research theme.

theory and evolutionary economic theory. In addition, with the emergence of behavioral economics, their related theories were also gradually introduced to entrepreneurship research. In the six research themes above, all applied related theories of economics (Table 2). For example, research on “Entrepreneurial Opportunity” tended to apply transaction cost theory, industrial organization theory, human capital theory, new growth theory and evolutionary economic theory. Research on “Entrepreneurial resource and opportunity” tended to use agency theory. Research related to “Entrepreneur” and “team” tended to apply human capital theory and behavioral economics theory. Research on “Entrepreneurial Network” and “Entrepreneurial Environment” relied upon organization theory and agency theory, respectively.

Management theory is one of the mainstreams of the entrepreneurship theoretical system. It includes resource based theory, resource dependent theory, contingency theory and organization learning theory and so on; more

than ten respective theories being widely used in entrepreneurial themes, especially in “Entrepreneur”, “Entrepreneurial Opportunity”, “Resource and Capability”, “Team” and “Entrepreneurial Environment” (Table 2). From the RBV perspective, firms are heterogeneous collections of resources that lead them to distinct market performance. RBV is designed to analyze new ventures’ resource management process (identification, acquisition, combination, leverage). RDT is used to analyze the relationship between strategic alliances and firm performance. Contingency theory is widely used in the research of relationship between external environment and firm performance. Organization learning theory suggests the influence of learning behaviors within the organization on new venture performance.

The sociological theories applied in entrepreneurship research include social exchange theory, structure theory, social network and social capital. They are frequently used in the research of “Entrepreneurial Network”, “Entrepreneurial Opportunity”, “Resource and

**Table 1.** List of related theories applied in entrepreneurial literatures.

<b>Economics (7)</b>	<b>Management (12)</b>	<b>Sociology (5)</b>	<b>Psychology (3)</b>
Agency theory	Behavior decision Theory	Structure theory	Social cognitive theory
Transaction cost theory	Contingency theory	Social network	Experiential learning theory
Industry organization theory	Dynamic capabilities theory	Social capital	Social learning theory
New growth theory	Human resource theory	Social exchange theory	
Human capital theory	Organization behavior	Institutional theory	
Evolutionary economics theory	Organization learning theory		
Behavior economics	Real option		
	Resource based view		
	Resource dependent theory		
	Strategy alliance		
	Strategy management theory		
	Upper echelon perspective		

Capability” and “Team”. Social exchange theory and social structure theory are two important sub-branch theories of sociology. Social exchange theory is widely used in the research of entrepreneurial resource acquisition, for instance to discuss the requisite network form of a new venture. Social structure theory is applied in the network research theme, for instance to analyze characteristics of a social network’s structure. Social network and social capital are relatively widely used by scholars, such as in the use of “weak ties” theory and “structural holes” theory to analyze the roles of entrepreneurial networks in new venture creation, using social capital theory to analyze a given entrepreneur’s cognitive bias as well as opportunity identification and exploration.

The psychological theories applied in entrepreneurship research include social learning theory, experiential learning theory and social cognitive theory. These theories have been used in the related research of “Entrepreneurial Opportunity”, “Entrepreneur” and “Resource and Capability”. For example, social learning theory has been applied in the research of “the correlation between social capital and entrepreneur, and their influence on opportunity exploration”. Experiential learning theory and social cognitive theory are applied to the acquisition and formation mechanism of knowledge /experience (that is, learning) in the process of opportunity identification. Thus, this article is able to summarize the relationships of theories within and between different themes (Table 3).

## Entrepreneur

Research on the entrepreneur focused on aspects that included entrepreneurial demography, personality, human capital, human resources, as well as the entrepreneur’s behavior and decision-making (Table 4). Three characteristics of research are evident in literature

as follows:

- (1) Research on the entrepreneur’s demography and personalities based on trait approach (Gartner, 1989). This kind of research concluded that the entrepreneur has certain personality and demographic characteristics that differ from those of other populations, like general managers (Utsch et al., 1999; Stewart. et al., 1999; Forlani and Mullins, 2000; Tan, 2001). In this field, most research has employed theoretical views about personality and demography derived from psychology.
- (2) Most research has focused on the entrepreneur’s behavior and decision-making. Gartner (1989) noted that entrepreneurial activity was a dynamic process, and one of the most significant characteristics is entrepreneurial behavior. As a result, a great deal of researches since 2000 has studied the entrepreneur’s cognition, decision-making, and behavior. At the same time researchers combined trait theory and behavior theory to explore new research approaches: the study of the entrepreneur’s traits and strategic decision-making in new ventures (Kisfalvi, 2002), the effect of entrepreneurial personality on innovation (Robson and Obeng, 2008), and on types of entrepreneurs and the decision-making behavior they display (Dewa et. al., 2008). 2) Others have studied the effects of internal factors (like motivation, intention, and cognition) and external environmental factors on entrepreneurial decision-making and behavior (Reid, 1999; Gundry and Welsch, 2001; Kisfalvi, 2002; Burmeister and Schade, 2007; Levesque et. al., 2009).
- (3) Research on the entrepreneur’s human capital is another important entrepreneurial theme. Researchers in this area uses the resource-based view (RBV) and human capital theory to compare differences in human capital (Honig, 2001; Colombo and Delmastro, 2001; Davidsson and Honig, 2003), and the effect of an entrepreneur’s human capital on performance (Haber and Reichel, 1998; Wright et. al., 2008). However, whether the human capital of the entrepreneur plays a direct

**Table 2.** Categories of theories in each research theme.

	<b>Economics (8)</b>	<b>Management (11)</b>	<b>Sociology (4)</b>	<b>Psychology (3)</b>
Entrepreneurial opportunity	Transaction cost theory Industry organization theory New growth theory Human capital theory Evolutionary economics theory	Real option Resource based view Organization learning theory	Structure theory Social network theory Social capital theory	Social cognitive theory Experiential learning theory Social learning theory
Resource and capability	Agency theory Industry organization theory	Human resource theory; Dynamic capabilities theory; Resource dependent theory; Resource based view; Organization learning theory Contingency theory Strategy alliance	Social network theory Social capital theory	Social cognitive theory
Entrepreneur	Human capital theory Behavior economics	Behavior decision theory		Social cognitive theory
Team	Human capital theory	Upper echelon perspective Organization behavior Strategy management theory Organization learning theory	Social capital theory	Social cognitive theory
Entrepreneurial networking	Agency theory		Social network theory Social exchange theory Social capital theory	
Entrepreneurial environment	Institutional theory	Contingency theory Resource dependent theory		

influence on new venture performance still needs further exploration. Honig (1998) found that the entrepreneur's experience, education and commitment directly affect organizational performance and profit. But Edelman et al. (2005) argued that human capital did not play a direct role except when combined with a suitable strategy.

### **Entrepreneurial opportunity**

Entrepreneurial opportunity (EO), as one of the research subjects/objects in the field of entrepreneurship, is concerned with three sets of research questions as Shane and Venkataraman (2000) have mentioned: (1) Why, when, and how

opportunities for the creation of goods and services come into existence; (2) Why, when, and how some people and not others discover and exploit these opportunities; and (3) Why, when, and how different modes of action are used to entrepreneurial opportunities. Based on these questions and other focal points exploit in the

**Table 3.** Connection between different themes on theory.

Research theme	Entrepreneur	Opportunity	Resource and capability	Team	Entrepreneurial networking
Entrepreneurial opportunity	Human capital theory Social cognitive theory				
Resource and capability	Social Cognitive theory	Resource based view Organization learning theory Social network theory Social capital theory Social Cognitive theory			
Team	—	—	Organization learning theory Social capital theory Resource based view		
Entrepreneurial networking	—	Social network theory Social capital theory	Agency theory Social network theory Social capital theory	Social capital theory	
Entrepreneurial environment	—	—	Contingency theory Resource dependent theory	—	—

**Table 4.** Summary of research question, research method, and level of analysis on entrepreneur (1998 to 2009).

Entrepreneur	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
<b>Research question</b>													
Personality and demography	1	2	1	1		1		1		2	2	5	16
Decision making and behavior		1	2	1	1	3	2	1	1		6	1	19
Human capital	3	1		2		1		1	2	3	2	1	16
<b>Research method</b>													
Conceptual			1									1	2
Empirical	4	4	2	4	1	5	2	3	3	4	10	6	48
Experiment										1			1
<b>Level of analysis</b>													
Individual	1	3	2	4	1	5	2	2	3	5	10	7	45
Firm	3	1	1					1					6
Macro													
Total			3	4	1	5	2	3	3	5	10	7	51

literature, we classify the research as: (1) The process of entrepreneurial opportunity development; (2) The impact factors of opportunity development; (3) The relationship between EO and environment as well as entrepreneurial outcomes: new venture start-ups, growth and regional

economic growth (Table 5).

(1) The process of opportunity development, which consists of discovery, identification/recognition, evaluation and the exploitation of entrepreneurial opportunity, is

**Table 5.** Summary of research question, research method, and level of analysis on entrepreneurial opportunity (1998 to 2009).

Entrepreneurial opportunity	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
<b>Research question</b>													
Opportunity exploration			2	1			1	4	2	5	2		17
Influential factors of opportunity exploration					1	1		3	2	2	4	3	16
Opportunity, environment, strategy, and firm growth	1					1		1		3		1	7
<b>Research method</b>													
Conceptual			1	1		1	1	4	4	4	2	1	19
Empirical	1		1		1	1		3		3	4	3	17
Experiment								1		3			4
<b>Level of analysis<sup>a</sup></b>													
Individual	1		2	1	1	1	1	5	4	5	5	4	30
Firm						1		2		1	1		5
Macro										3			3
Total	1		2	1	1	2	1	8	4	10	6	4	40

<sup>a</sup>There are three qualitative summarizing articles which are not classified by analysis level.

always one of the key issues in the field of entrepreneurship. Some scholars have defined this process as opportunity identification/opportunity recognition. Concerning the question of “Why some people and not others set up the firm successfully”, a model of the opportunity recognition process has been proposed that builds on the idea of discovery and evaluation (Lumpkin et al, 2004; Hills et al, 1999). Since 2005, however, scholarly attention has been diverted from “What is occurring at the process of opportunity development” to “How and why the process occurs”. In addition, contemporary researchers try to explore these questions based on organization learning theory and structure theory.

(2) The impact factors of opportunity development have also become a research focus. Shane and Venkataraman (2000) suggested two broad categories of factors that influence the probability of opportunity exploitation: “Nature of the opportunity and individual differences”. This perspective on the nature of opportunity helps us understand entrepreneurial action observed in practice. The type of opportunities affects the approach used in the opportunity identification process. Smith et al (2009) applied the concept of tacitness and codification knowledge to distinguish the nature of the opportunity (that is, its degree of tacitness), finding that more codified opportunities were more likely to be discovered through systematic search, whereas more tacit opportunities were more likely to be identified due to prior experience. At this point, study on the question of the characteristics of opportunities themselves and measurement is lacking

focalization and systematic analysis (Lin, 2007).

Much research has focused on the latter, namely, the characteristics of entrepreneurs, in explaining their willingness to exploit opportunities. For instance, factors mentioned include “alertness” (Gaglio and Katz, 2001), “cognitive biases” (Carolis and Saporito, 2006 ; Kickulet al., 2009), “risk perception” (Keh et al, 2002), “personality traits” (Ardichvili et al., 2003), “prior knowledge” (Shepherd and DeTienne, 2005), “social network” (Arenius and Clercq, 2005) and so on. Scholars take this analysis a step further with the application of diverse theories, such as those devoted to social cognition, experiential learning, social capital and social networks. In addition, it is worth mentioning that these factors are not independent, but correlated with each other to some extent. Consistent with this view, Ardichvili et al., (2003) observed the correlation opportunity exploitation with factors of personality traits, prior knowledge, social network, and alertness. Carolis and Saporito (2006) discussed the impact of social capital, cognitive biases and risk perception on opportunity exploitation, and examined whether cognitive biases of entrepreneur have a negative effect on risk perception.

(3) Although the individual differences of entrepreneurs affect their perceptions and decisions about opportunities, the impact of different environments on the sources/creation of entrepreneurial opportunity should not be ignored. Mitchell and Shepherd (2008) explored how a broader opportunity environment and two images of self-vulnerability and capability-affect entrepreneurs’



opportunity images as they relate to the entrepreneurs' decisions to act on opportunities. Furthermore, it is inappropriate to investigate entrepreneurial opportunity in an isolated way from an integrated perspective of entrepreneurship, since opportunity exploitation is closely related to new venture start-ups, growth, and regional economic growth. Studies falling under this topic have emerged since 2003, gradually attracting increased scholarly attention.

Mueller (2007) argued that the exploitation of entrepreneurial opportunity means the creation of a firm, which would facilitate the spillover and use of knowledge, thereby drive regional economic growth. Plummer et al. (2007) surveyed five extant theories of strategy (i.e. the structure-conduct-performance paradigm, transaction cost economics, the resource-based view, evolutionary theory, and real options reasoning), and equated the exploitation of an entrepreneurial opportunity to the execution of a competitive strategy, characterizing the outcomes of strategy execution as a function of the match between strategy and environment. However, the relationship between impact factors and opportunity recognition is more complicated. For example, a person with entrepreneurial experience might be more sensitive to market opportunities, enabling the generation of ideas (Gaglio, 1997). However, Baron and Henry (2006) argued that the relationship between business ownership experience and subsequent opportunity identification behavior should not be assumed to be simply linear. Beyond a certain level, entrepreneurial experience might lead to the identification of fewer opportunities (Ericsson and Lehman, 1996; Ucbasaran et al., 2009).

In addition, social ties were another important factor shown to affect the information of business transfer. Granovatter (1973) believed that weak ties played a more effective role in unique information transfers than strong ties, but Coleman (1988) pointed out that close interactions with others were valuable in terms of the quality of the information. Therefore, it is important to have the right mix of strong and weak ties, and of dense and sparse network elements, for neither sparse nor closed networks by themselves offer optimum solutions (Rowley et al., 2000; Elfring and Hulsink, 2003).

On the theoretical application of entrepreneurial opportunity research, scholars have emphasized that entrepreneurial opportunity already existed in the market. Specifically, some have observed, using Austrian economic models and combined industrial organization theory and new growth theory, that there is a certain kind of profitable opportunity in the market. Subsequently, some authors have viewed the entrepreneurial process through social structure theory, suggesting that while "entrepreneurial opportunities do not exist independently of the entrepreneur", the proper co-alignment of entrepreneur with external environment helps to create and exploit opportunities (Sarason et al., 2006). Essentially, opportunity identification is a subjective behavior (Lin et

al., 2005). The individual characteristics of an entrepreneur play an important role, which makes the application of psychology, sociology, and organizational behavior understandable.

### Resource and capability

Entrepreneurship as an academic field of study is still in the early stage of development. However, the emergence of the resource-based view (RBV) has brought new insights into this field, and the application of RBV has offered an objective perspective on entrepreneurial studies both within and outside the firm (Fang and Liu, 2008). The RBV asserts that firms gain and sustain competitive advantages by deploying valuable resources and capabilities (Barney, 1991; Wernerfelt, 1984). More recently, scholars have begun emphasizing the resources approach in their studies of entrepreneurial activities, wherein the resource-based view was gainfully deployed. Looking at the most current research, we found that the research focus is changing from one centered on the contribution of static resources to one centered on analysis of dynamic management of resources. Based on this observation and a summary of the literature to date, we categorized the research questions under this research theme as follows: (1) the effect of resources on outcomes (new venture start-up\survival\growth\performance\competitive advantage); and (2) the management of new venture resources (Table 6).

### Effect of resources on outcomes

There has been great interest in the study of new ventures creation\survival\growth. From a practical perspective, the question of "how to attain and sustain a competitive edge/superior firm performance" is also significantly important to enterprises. We also found a recurring focus: persistence in the time-sequential studies about the effect of resources on outcomes. Early studies mainly focused on the contributions of human resources, financial resources, physical resources, organizational resources, and knowledge resources to new firms. For instance, Kim et al. (2005) discussed the importance of financial capital, human resources, and culture capital in new venture creation. Rauch et al. (2005) explored the effects of human resource development and leverage on small-scale businesses growth. Haber and Reichel (2007) studied the contributions of physical capital, human capital, and organizational capital to small venture performance; they found that entrepreneurial human capital and unique management skills are the most contributing variables.

West and Noel (2009) posited that a new venture's strategy, and ultimately its performance, is based upon the possession and utilization of knowledge about the

**Table 6.** Summary of research question, research method, and level of analysis on entrepreneurial resource and capability (1998 to 2009).

Resource and capability	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
<b>Research questions:</b>													
<b>Resource-outcomes</b>													
Creation	1	1						1	2	1			6
Survival				1			1	1	1		1		5
Growth	1	1			1			2	1			2	8
Performance	2		2	1		1	4	1		3	3	3	20
Competitive advantage	1			1	1		2	1				1	7
<b>Resource management</b>													
Resource management process model				1		2		2			1		6
Resource acquisition		1					1		5	3	1	1	12
Human resource management	2	1	5	3			2	1	6			1	21
<b>Research methods</b>													
Conceptual					1	1		1	2			1	6
Empirical	7	4	7	7	1	2	10	8	13	7	6	7	79
<b>Level of analysis<sup>a</sup></b>													
Individual I	1	1							1			2	5
Firm	4	3	7	7	2	3	9	8	13	6	6	6	74
Macro							1		1	1			3
Total	7	4	7	7	2	3	10	9	15	7	5	8	85

<sup>a</sup>There are three qualitative summarizing articles which are not classified by analysis level.

firm's industry, the type of products, and starting up of new ventures. They investigated the relationship between knowledge sources and new venture performance in technology-based firms. However, the mechanism(s) by which resources influence entrepreneurial activities is still not fully clear. For example, existing studies implied that family capital and culture capital were important resources needed to encourage entrepreneurial activities (Holtz-Eakin et al., 1994; Western, 1994). Kim et al. (2006), however, conducted studies through panel study of entrepreneurial dynamics (PSED), and found that financial resource and culture were not necessary conditions for entrepreneurship. On the contrary, the entrepreneur with high level human capital might have more of a competitive advantage.

Zahra et al. (2004) examined organizational culture in family vs non-family businesses and entrepreneurship, finding that "organizational culture is an important strategic resource that family firms can use to gain a competitive advantage." Edelman et al. (2005) noted that "neither resources nor strategies alone explain firm performance", rather, "human and organizational resources in combination with a strategy of quality/customer service enhance firm performance." Therefore, there is increasing focus on the effects of the

configuration of resource and other factors, such as strategy, environment, network and culture, on entrepreneurial outcomes.

### Management of new venture resources

The aforementioned studies named mainly focused on the contribution of resources themselves to enterprises, while Lichtenstein and Brush (2001) explored the changes of resources and resource bundles longitudinally by tracking salient resources in three rapidly growing new ventures.

In addition, some scholars began to realize the dynamics of resources and put forward the concept of "Resource Management" (Sirmon and Hitt, 2003), with many subsequent researchers working towards a better delineation of the resource management process (Kellermanns, 2005; Sirmon et al, 2008). Until recently, most studies in resource management were based on a conceptual model.

However, some scholars have explored the process of resource acquisition, mainly the acquisition of financial and human resources. In terms of financial resources, some studies have examined its influence on the choices

of new firms' financing strategies given the factors of entrepreneurial types and age, etc. (Schwienbacher, 2006; Orser et al., 2006); Furthermore, Leung et al. (2006) discussed the effects of the social network in the process of human resource acquisition.

Meanwhile, considering the characteristics of new ventures and the important roles of human resource in start-ups, we conducted a brief overview of the literature and conclude that human resource management practices in new ventures have sparked worldwide research interest. Scholarly focus on it mainly concerns three questions.

1) The characteristics of human resource management practices in new ventures. For example, Heneman et al. (2000) argued that much management literature continued to emphasize large firms, neglecting the specificity of HRM practices in small businesses. While large firms have more resources to cover development costs, small firms are more likely to use informal and flexible human resource management practices (Kok and Uhlaner, 2001). Kickul (2001) investigated the role of the psychological contract in attracting and retaining reliable and competent employees in small business organizations. He identified five types of promises made and communicated by small business organizations (autonomy and growth, benefits, rewards and opportunities, job security and work responsibilities, work facilitation). His results demonstrated that "perceived unfulfilled promises can have a considerable impact on workplace attitudes, commitment, and intentions to leave the organization".

2) The effect of new venture human resource management practices on firm performance (e.g., Nguyen and Bryant, 2004). 3) The unique human resource management practices in family firms. For example, Barnett and Kellermanns (2006) explored how family influence and HR practices affect non-family employee's justice perceptions; Kok et al. (2006) argued that family-owned firms make less use of professional HRM practices, mainly due to their organization characteristics (organizational complexity and resource richness) compared to non-family owned firms.

### **New venture team**

The new venture or entrepreneurial team as a significant entrepreneurial element was a focus for many researchers. Based on existing studies, we conclude five research questions: (1) research on team entrepreneurship theory; (2) study of new venture team formation and influence factors; (3) research on team dynamic management process; (4) influence of new venture team on performance or growth; (5) effect of new venture team on venture capital decision making (Table 7).

### **Research on team entrepreneurship theory**

These studies are driven by the phenomenon of team entrepreneurship, and focus on developing the basic theory of entrepreneurship on a team level. Although some early research was not included in our study, authors published prior to twelve years ago made significant contributions on the development of team entrepreneurship theory. Timmons (1975), for example, argued that the entrepreneurial team should be considered to be a very important entrepreneurial phenomenon. Kamm et al. (1990) referred to team entrepreneurship as an important research field, and reminded the other authors that team entrepreneurship theory should be developed in future. Until 2008, Harper had taken the lead in developing team entrepreneurship theory: he created the new theory based on agent-neutral and institution-neutral.

### **Formation process of new venture team and influence factors**

This is a particular hot topic in the research field of entrepreneurial team analysis. It evolved from theoretical studies to normative analysis and empirical analysis (Clarysse and Moray, 2004; Forbes et al., 2006). Ubasaran et al. (2003) concluded that team scale, age, heterogeneity and tenure play significant roles on the entry and departures of team members. Additionally, resource seeking and interpersonal attraction are important influence factors of team formation (Forbes et al., 2006). Therefore, analysis of existing studies allows us to conclude that the complementation on resources and social interactive capability will influence the formation of new venture teams (Lechler, 2001).

### **Study of the process of team dynamic management**

Ensley and Pearson (2005) compared the top management teams in family and nonfamily new ventures, and found different dynamics on team cohesion, conflict, potency, and consensus. Packalen (2007) developed a framework that explored the interaction between the founding team's industry status, demographic features and social capital.

### **The relationship between new venture team and performance or fast growth**

Entrepreneurial team is a significant factor on improving new venture performance (Kamm et al., 1990), and promoting new venture fast growth (Cooney, 2005). Existing studies found that human capital, social capital, etc., such heterogeneous resources are important factors

**Table 7.** Summary of research question, research method, and level of analysis on new venture team<sup>a</sup> (1998 to 2009).

Resource and Capability	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
<b>Research questions</b>													
Team entrepreneurship theory											1		1
Formation process and influence factors						1	1	2	2	1			7
Team dynamic management and governance	1				2			1		2			6
New venture team and performance/growth								1	1	2	1	3	8
New venture team and venture capital decision					1			2	2	1	2	2	10
<b>Research methods</b>													
Conceptual					2				1	1	1		5
Empirical	1				1	1	1	6	4	5	3	5	27
Total	1				3	1	1	6	5	6	4	5	32

<sup>a</sup>Level of analysis of all studies is on the "team" level.

**Table 8.** Summary of research question, research method, and level of analysis on entrepreneurial network (1998 to 2009).

Entrepreneurial Network	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
<b>Research question</b>													
Network as an influence factor	2		3	3	0	7	4	4	8	5	10	7	53
Network dynamic evolutionary			2	2	2	4	3	2	2	3	3	2	25
Network governance	1				1	2			1	3	5	2	15
Social capital	1	1				3	2	2	5	5	3	1	23
<b>Research method</b>													
Conceptual			1			4	1		4	5	4	2	21
Empirical	4	1	4	5	3	12	8	8	12	11	17	10	95
<b>Level of analysis</b>													
Firm	2	1	4	5	2	12	6	2	13	10	13	9	79
Individual	2		1			3	1	4	3	4	4	3	25
Macro					1	1	2	2		2	4		12
Total	4	1	5	5	3	16	9	8	16	16	21	12	116

on new venture performance.

#### **Influence of new venture team on venture capital decision-making.**

Some studies on the relationship between new venture team and venture capitalists found that entrepreneurial team is an important factor should be a point of concern when venture capitalists make decisions (Shepherd, 1999). Through a survey of venture capitalists, MacMillan et al. (1987) found that half of those entities that failed,

did so due to the absence of a high quality entrepreneurial team. According to Zacharakis and Meyer (2000), the conflict between team members and venture capitalists will influence the decision regarding the solicitation of venturing capital.

#### **Entrepreneurial network**

Western scholars began to study social networks in the field of entrepreneurship beginning in the late 1980s, but it had been a particularly hot topic in the late 1990s. After

more than 20 years' development, the research on entrepreneurial networks has become an important branch in the field of entrepreneurship. Furthermore, studies of entrepreneurial networks that combine sociology, psychology and management theory have made it a luminescent spot in entrepreneurship research. In particular, the development of "social network theory" has provided a theoretical support for entrepreneurship research. Looking through the entrepreneurship research over last ten years, we divided the research contents under this theme into three aspects (Table 8).

1. Entrepreneurial networks as an impact factor, and discussion of its function in the process of new venture creation and growth. Scholars applied the "weak ties theory" (Granovetter, 1973) and the "structural hole theory" (Burt, 1992) to explore its function (Watson, 2007; Premaratne, 2001; Le et al, 2009). Premaratne (2001) noted that entrepreneurial networks help to bring firms more resources: since no single small business enterprise has all the resources required in the creation process, entrepreneurial networks should play an important role. For the entrepreneur with access to critical information and resources with cost advantages accessed through entrepreneurial networks, most research suggests a positive relationship between entrepreneurial networks and firm performance (Hoang and Antoncic, 2003). However, recent studies find that developing and maintaining networks costs a great deal and requires substantial time. Therefore, some scholars believe that the impact of entrepreneurial networks on firm performance is not always positive. For example, research of Australian SMEs by Watson (2007) found that there is an inverted U-shaped relationship between entrepreneurial networks and firm performance. Relationships with each other can be divided into strong and weak ties, and their impact on firm performance is different. Strong ties can be easily accessed to reliable information and tacit knowledge (Uzzi, 1996). However, entrepreneurs have been known to overestimate their ties. Entrepreneurs can access a number of information flows even in relationally weak ties, using a variety of resources quickly to gain value and strengthen ties. Of course, there is a time cost to developing new ties. Therefore, either strong or weak ties impact firm performance, but in different ways. Entrepreneurial networks can be more effective when strong and weak ties are relationally configured (Elfring and Hulsink, 2003).

2. Network as a research object, mainly focusing on two aspects. First is the dynamic evolutionary process of the entrepreneurial network. Larson and Starr (1993) observed that individuals and the organization are not isolated from each other, but exists within an overall system. Both exchange behavior and the economic organization are influenced by network structure. Based on this, Larson and Starr (1993) used the social exchange theory to discuss the network form of

organizational formation process. As the organization grows, the entrepreneurial network structure changes as well and the size and range of the network become larger (Milanov and Fernhaber, 2009). In order to meet the development of enterprises, entrepreneurs need to explore relations with various business networks, intermediaries and government, all of which are beneficial to the establishment of a diverse entrepreneurial network (Leung, 2003; Leung, et al., 2006). For example, new enterprises form strategic alliances with business partners in order to enhance technological and competitive advantage. This in turn, allows them to rapidly acquire resources from partners and integrate different knowledge (Das and Teng, 1998). The second network aspect related to this part of Table 8 is entrepreneurial network governance, which can be defined as how to undergird and coordinate the network exchange relationships. Hoang and Antoncic (2003) revealed that trust between network partners is a critical element of network governance; it can in turn enhance the quality of resource flows. For example, the enterprise could establish trust with banks and establish relations with customers: this cooperation, based on trust will bring the firm reliable information and technology, thus reducing perceived risk (Carolis and Saporito, 2006; Carolis et al, 2009).

3. The effect of social capital on new ventures. Social capital is the social resource embedded in networks (Burt, 1992; Loury, 1977). Some scholars regard networks as entrepreneurial social capital (Madsen, 2004), applying social capital theory to examine its positive role in opportunity exploitation (Marie et al, 2006) as well as new venture creation (Liao and Welsch, 2005).

### Entrepreneurial environment

In the literature of organizational theory, there exist two schools of environmental perception. One is environmental determinism, which considers environment to be a series of external conditions into which organizations need to fit (Aldrich and Pfeffer, 1978); the other is strategic selection which considers environment to be the "object" with which organizations perceive themselves. In the entrepreneurship literature, these two opinions of environmental perception have both been covered, and the definition of entrepreneurial environment has played an important role in entrepreneurial activity (Grundstén, 2004). Research into entrepreneurial environment mainly focuses on the three aspects of environmental elements, environmental characteristics, and institutional environment (Table 9).

Previous research on entrepreneurial environment paid more attention to environmental elements which include the impact of single environmental elements on entrepreneurial activities and the system of environmental elements. Some scholars have done systematic

**Table 9.** Summary of research question, research method, and level of analysis on entrepreneurial environment (1998 to 2009).

Entrepreneurial environment	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
<b>Research question</b>													
Institution			1	2		1	2	3	1		1	2	13
Characteristics of environment		1	4	1	2	1	1	2	2		2		16
Factors of environment	1		1	2			1			1			6
<b>Research method</b>													
Conceptual				1			1				1	1	4
Empirical	1	1	6	4	2	2	3	5	3	1	2	1	31
<b>Level of analysis</b>													
Individual										1			1
Firm		1	4	1	2	1	1	2	2		1		15
Macro	1		2	4		1	3	3	1		2	2	19
Total	1	1	6	5	2	2	4	5	3	1	3	2	35

summaries of entrepreneurial environment elements. Gnyawali and Fogel (1994, 2001) suggested that entrepreneurial environments are organic combinations of various factors in the entrepreneurial process, including socioeconomic conditions, entrepreneurial and managerial skills, governmental policies and regulations, entrepreneurial financial support and entrepreneurial nonfinancial support. The role that culture and cultural differences play on new venture creation should be strengthened. Davidsson and Johan (1995) found that cultural difference had less influence in new venture creation than did economic factors in Sweden. Basu and Altinay's (2001) study implied that Asian traditional culture could be an obstacle to business entry; however, when the business culture was accepted in families, it positively influenced the entrepreneurial activities of the next generation. Research on environmental characteristics has mainly focused on the firm level, referring to a contingency theory. Many early scholars suggested that firms in different environments would choose different strategies or orientations and thus influence the firm's performance. Later, Tan (1994) and Luo (1999) adopted an environment-strategy-performance framework in their research. In addition, many scholars studied the relationship between strategic orientation and performance using environmental characteristics as a mediating variable. According to resource-dependent theory, organizations always depend on their environment for support, and if firms can acquire sustainable resources, then these resources would ensure the survival of the firms. Thomas (2005) suggested that environmental munificence as perceived by entrepreneurs (or whether entrepreneurs feel it is easy to acquire resources) will influence entrepreneurial decisions. Dess and Beard (1984) normalized the entrepreneurial dimensions, which included munificence, complexity and dynamism. Many current scholars emphasize the high dynamism and complexity of transitional economies when researching the

entrepreneurial environments of transitional economies.

Institutional theories are applied within more and more studies (Garry et al., 2005). Kostova (1997) introduced a three-dimensional "country institution profile" composed of a regulation dimension, a cognitive dimension and a normality dimension, which has been adopted by many later scholars. Research on institutional environment has become a hot topic since 2001, especially among those who study characteristics, including measures and scales, of institutional environments in emerging and transition economies. Scholars inevitably observe that there are different distinctions of entrepreneurial activities in different institutional environments: for example, Garry and David (2003), Garry et al (2005), David and Garry (2006) compared venture capital and behavioral differences of venture capitalists under different institutional environments.

## LITERATURE GAPS AND FUTURE RESEARCH DIRECTIONS

We reviewed the relevant studies on the six target research themes, reporting on the research questions, method and level of analysis of each theme. Overall, we find that the existing studies in each theme were not yet completed in exploring the mechanism of new venture creation. Therefore, in this section we locate gaps in the literature and discuss potentials for future research directions.

### Entrepreneur

Although abundant research exists on entrepreneurs, the following topics should be addressed further:

- (1) The mechanism of interaction between the

entrepreneur and new venture creation merits further investigation. Although there were significant studies of entrepreneur's traits, characteristics and human capital on new venture creation, the mechanism between and among these relationships were not clarified enough (Davidsson and Honig, 2003). With the emergence of social entrepreneurship as a theme, the phenomenon of how social entrepreneurs discovered opportunities for creating new ventures merits further exploration (Zahra et al., 2009). Therefore, how entrepreneurs integrate and leverage personal characteristics and resources in the entrepreneurship process needs further study.

(2) More researches is needed on the influenced of entrepreneurial characteristics on the resource development process. Resource development as an important resource strategy will be influenced by the entrepreneur's characteristics, including human capital, personality, and so on.

(3) Further study is also needed on the contextual factors that influence an entrepreneur's human capital. Although most research has studied the relative importance of an entrepreneur's human capital, considering human capital as a unique resource (Davidsson and Honig, 2003), research contexts (e.g. the economic and industrial environment) should be more carefully considered in this field of study.

(4) More study is needed regarding the implications of experimental study. Research into entrepreneurial behavior will enhance studies of the entrepreneurial dynamic process (Gartner, 1989). However, the entrepreneur's behavior is complexly affected by internal and external factors. Therefore, when we focus on the effect of one factor, we need to control for the effects of other factors on the outcomes of behavior. This will be challenging. The internal validity of statistical survey could be improved by consideration of the implications of experimental study (Burmeister and Schade, 2007).

### **Entrepreneurial opportunity**

Analysis of entrepreneurship opportunity literature reveals several trends and new directions for future research.

1) Regarding the process of opportunity development, there is a relative shortage of systematic, comprehensive study on the process of opportunity evaluation and exploitation. The measurement of opportunity identification also needs to be refined.

2. Among the influential factors of opportunity development, it should be noted that the interaction of individual differences in entrepreneurs affects the processes of opportunity exploitation. Too, the impacts of social capital, human capital or other factors from a network perspective on opportunity exploitation have also become a focal point. Thus, researchers should study the effects of contextual factors such as industry or culture

when they focus on the relationship between factors and opportunity recognition.

3. Based on the statistical results, we found that there are few studies on the relationship between opportunity and environment as well as on entrepreneurial outcomes (mainly dating from 2002); therefore, there is substantial space for exploration. Although scholars always highlight the importance of entrepreneurial environment, further explorations of the processes of opportunity exploitation from an environmental perspective are still needed.

### **Resource and capability**

In light of the review and analysis of resource and capability literature, several areas deserve further attention.

1. Current studies on the impact of resources on outcomes should be continued and broadened to include other resources, such as information, knowledge, etc. Discussions of this topic should go beyond the static effect of resources on outcomes. For example, some scholars have examined the various resource accumulation choices across the different phases of entrepreneurial processes (Haber and Reichel, 2007). Further study concerning "how to integrate the dynamic relationship between resource management process and outcomes together" is called for. Meanwhile, we need to pay more attention to the relationship between the configuration of resources and entrepreneurial outcomes, especially how resource configuration plays different roles when the organizational environment changes.

2. Research on the resource management process is a promising area. We all know that the resource management process is a complex, dynamic and multi-phased process, one within which entrepreneurs make highly complex decisions. Recent studies mainly adopted case study and there is a lack of resource management process measures. Further empirical studies should be encouraged.

3. Although human resource management in new ventures has attracted scholarly attention, there are still more questions open for discussion. For example, "how human resource management practices affect organizational performance in new ventures"; additionally, dynamic human resource management analysis and related studies of the lifecycle of new ventures also need further study.

4. The role of environment and social network on the resource development process needs to be explored further. Since the resource base of new ventures is very limited, new ventures need to acquire environmental resources through their social networks.

### **New venture team**

Summary and analysis of existing studies on new venture

team research leads us to conclude that following research questions should be considered in the future.

1. Further research that explores the dynamic process of team formation is needed, including research on how members' entry or departure will influence the formation of new ventures (Chandler et al., 2005).
2. Research is needed on the management processes of new venture teams. Studies should pay attention to the actual management of new venture teams, including focuses on how to coordinate and control functional and dysfunctional conflict, as well as how to build cohesive teams (Ensley et al., 2002).
3. Research is needed on the relationship(s) between new venture team, entrepreneurial performance and fast growth. Many existing studies found that the new venture created by a team could compete more successfully than could individually founded ventures (Cooper and Bruno, 1977; Teach et al., 1986).
4. Research is needed to explore how to manage the interaction between new venture teams and venture capitalists. MacMillan et al., (1987) found that the entrepreneurial team is a significant factor influencing the venture capita decisions. Therefore, more studies are needed to explore the relationship between venture teams and venture capitalists.
5. The governance of the new venture team should be considered in the future. Turnover is an adaptation mechanism of new venture team membership. Existing studies imply that there is a tendency toward significant changes in membership in new venture teams during the early stages of new venture development (Chandler et al., 2005).
6. Additionally, the relationship between the new venture team and the resource development process should be considered in the future, since team entrepreneurship is a special activity.

### **Entrepreneurial-network**

Research on entrepreneurial-network is still quite new. Trends in at least five areas are worthy of future research effort.

1. The influence of networks on the venture creation process and growth process will continue to receive scholarly attention. However, some scholars have begun to realize that the influences of networks on enterprises or entrepreneurs are not necessarily positive ones, which would be a logical focal point for continuing study. For example, Watson (2007) discovered the relationship between networking and SME performance (survival, growth and ROE), and found that the relationship resembled an inverted U-shaped function.
2. We expect that study of the dynamics of networks will gain more and more attention. Scholars will overcome the

bottleneck of the longitudinal study, and explore the dynamic evolutionary process of the network.

3. Entrepreneurial network research should focus on both the organizational and individual levels. Carolis and Saporito (2006) observed "there is little discussion regarding the possibility that social capital and personal factors interact and influence entrepreneurial behavior." Therefore, we propose that research on entrepreneurial networks from the individual level will be a new trend. For instance, research on the influences of network on entrepreneurial decision-making as well as opportunity identification has potential.
4. Research on network orientation (NO) as well as the application of NO in entrepreneurship domain is on the rise. For instance, Sorenson, Folker and Brigham (2008) discovered that a cooperative network orientation (CNO) was positively associated with firms' performance.
5. More research is needed on the interactive mechanism between entrepreneurial environment and entrepreneurial networking. Studies of entrepreneurial network imply the connectedness of actors in the environment (Burt, 1992).

### **Entrepreneurial environment**

Summary and analysis of the current research situation of entrepreneurial environment allows us to suggest that research on entrepreneurial environment needs to be deepened: at least five potential fruitful directions can be identified.

1. Those who study entrepreneurial environment need to consider the effects of contextual factors, such as nation, region, etc., and try to isolate different roles of environmental factors on entrepreneurial activities through contrasting study. Current research on institutional environment tends to focus on the distinctions between different countries, so research on the impacts of institutional environment on firm innovation, resource integration and firm performance from a micro level needs to be carefully plotted (Tan, 2001). Little entrepreneurship research has been conducted on the issue of how actors attempt to change the rules (of institutions) and introduce new ones. On the other hand, it has been pointed out that one of the major drawbacks of institutional theory is the lack of a theory of action (Hirsch and Lounsbury, 1997); study of this gap might help in providing an answer to the questions of why and how institutions come into existence and are de-institutionalized (Mair and Marti, 2009).
2. Research is needed on the effect of environmental characteristics on new ventures. Most of the current research is about the moderating or mediating impact of environmental characteristics on venture performance. In the future, the factors that will influence environment should be more carefully studied.
3. From the individual level, research on the distinctions



between environment perceived by entrepreneurs and realistic environment need to be deepened.

4. More thoughtful research is needed on what measures could be adopted given the environmental characteristics in different countries, such as transitional economies.

5. The comparative study of regional environment deserves great attentions.

## CONCLUSIONS

This paper surveys entrepreneurship literature published in six leading entrepreneurship journals from 1998 to 2010. We highlighted six key themes from within the 359 articles surveyed: “entrepreneur”, “entrepreneurial opportunity”, “resources and capabilities”, “entrepreneurial team”, “entrepreneurial network”, and “entrepreneurial network”. On the basis of this categorization, we summarized the theories, research questions, methodology and level of analysis in each theme and proposed future directions. Through the aforementioned review of the entrepreneurship literature, we found that research into different themes is not isolated. Although several theoretical relations have been built between them, we observe that there are not enough systemic studies focused on entrepreneurship. On the contrary, more and more studies conducted a “deconstruct” program, and many empirical studies tried to exploit the relationships between and among variables. These research “fragments” might be helpful for describing the different characteristics of entrepreneurial activities and the integrating different views of a large and complicated phenomenon (Garner, 2001). However, we found that there are plenty of deviations in these studies. Therefore, we still need to create a synthesis mechanism to direct how we integrate these discrete studies together, and then promote the development of entrepreneurship research, even if we cannot see the entirety of the complicated phenomenon of entrepreneurship.

On the level of analysis, we summarized the existing research within three levels: individual, organizational and macro levels. However, since new venture creation is a dynamic process, its characteristics can hardly be delineated by the afore three levels. Additionally, scholars seem to be more engaged in the impacts of environment on the mechanism of entrepreneurial activities, paying less attention to internal impact factors. Therefore, we suggest here a new level of analysis in entrepreneurship domain, that is, team level research, with consideration of how entrepreneurial team structure, the quality of entrepreneurial teams, institutions of entrepreneurial teams, or how other team factors affect venture creation.

As to methodology, although it is meaningful and significant to recognize the venture creation process as an analysis object, the collection of data is not easy (Davidsson and Wiklund, 2001). Therefore, we need to develop new methods in entrepreneurship research. Most empirical studies were taken by statistical surveys in the

field of entrepreneurship; however, the start-ups and growth phases are complex, non-linear processes. Different characteristics and regularities present themselves in different contexts, creating extraordinary difficulties for exploration by ordinary investigative or analytical methods. Nevertheless, this shortcoming can be offset by applying a new experimental method.

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