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The relationship between resources and capabilities of new ventures in emerging economies

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Abstract Despite the fact that the resource-based view has drawn a great deal of attention in studying new ventures, our understanding on resource management in the emerging economies is limited and there are many unsolved issues. In this paper, theoretical reasoning approach is applied to analyze the relationship between the entrepreneurial resources and the organizational capabilities (including operating and dynamic capabilities) for new ventures. An empirical study in the context of emerging economy in China is conducted to verify the theoretical reasoning. As information technology becomes a key element for new ventures, the enterprise resources relevant to the network technology and e-commerce are especially focused, as well as the impact of information acquisition on the resource combination. The results from the theoretical and empirical study have shown that resource combination mediates the relationship of entrepreneurial resources and organizational capability. It is also found that the information acquisition affects the organizational capabilities significantly; however, there is an *inverted U-shape relationship* between the information acquisition and the resource combination in emerging economies .

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1 Introduction

Increasing work has appeared which applied the resource-based view (RBV) as a tool to investigate new ventures at different aspects such as the creation [27, 28, 46], the early growth phase [31, 36], the performance evaluation [22, 26, 41], and the organizational capabilities [3]. Using the RBV approaches, the researchers have found that a new venture is not just to acquire and gain new resources; it is also critical to utilize new resources to increase its organizational capabilities, and thus improve the venture's competitiveness [11, 56]. The study on the strategies and methods to combine new resources with existing ones helps ventures maximize the potential value from available resources.

The importance of the resource combination to enterprises has been well discussed in the literature [36, 56, 60, 62]. However, existing research is limited, in sense that only mature enterprises with abundant resources are concerned. Little study has done on the resource combination of new ventures. Due to their smallness and newness, new ventures face the severe scarcity of resources [31, 46]. Therefore, the study on the resource combination in new ventures is crucial. The limited resources must be utilized efficiently to enhance the capabilities of the ventures. Besides the availability of resources, resource combination in a new venture differs from that in a well-established enterprise at other aspects. For example, a new venture is more sensitive to the changes of the external environment, and the environmental factor is valued more on the resource combination in a new venture. To gain a

better understanding on the processes of resource combination, we focus on new ventures with insufficient resources.

In our empirical study, the emerging economics is selected to take into consideration of the environmental factors in the resource combination of new ventures. In the business environment with an emerging economy such as China, new ventures deal with even greater constraints of resources and face the immature markets due to the imperfection of legislations, regulations, and capital markets [12, 13, 15, 39, 50, 53, 69]. Previous research on RBV for the emerging economies has been focused on the acquisition of new resources rather than on the combination of resources. For example, Peng and Luo [47] and Li and Zhang [32] found that the managerial ties could be fully utilized to acquire resources for new ventures; managerial ties were treated as the informal institutions in the emerging economies. Managerial ties help enterprises in obtaining the access to business opportunities, the information on critical polices and other valuable resources controlled by governmental administrations [53, 66]. In addition, little work has been reported on how the information serves as the resources of new ventures to increase organizational capabilities in the emerging economies. The business environment in the emerging economies changes frequently and quickly [29, 34]. New ventures must be designed to respond the environmental changes promptly; the up-to-date information of marketing and governmental policies should be acquired and analyzed to merge available resources effectively and provide appropriate capabilities to meet the market needs.

Motivated by the identified limitations of existing theories on new ventures, we integrate the insights from RBV with the institutional theory. The goal of our study is to establish a relational model of the information acquisition with the resource combination and organizational capabilities. The innovations in this study lie at the following aspects. *Firstly*, the impact of entrepreneurial resources on organizational capabilities is analyzed. It leads to a conclusion that entrepreneurial resources acquired via new ventures are the foundations to enterprises' capabilities. Moreover, our empirical study has shown that the resource combination benefits greatly to overcome the resource shortages of new ventures in the emerging economies. *Secondly*, the importance of information acquisition is examined on the organizational capabilities (such as operating capabilities and adaptability). It is found that the acquired information about marketing and institutions affects organizational capabilities of ventures greatly. To our knowledge, little study has been reported at this aspect. *Thirdly*, the relation of the information acquisition and the resource combination is examined, and it is found that an invert U-shape model can be used to describe such a relation; it is aligned with the results of our empirical study in a group of new Chinese ventures.

2 Theoretical backgrounds

Resources and capabilities are the assets of ventures and bring the competitiveness of ventures in the RBV [3, 5]. To achieve its high performance and sustain its competitiveness, a venture should possess the unique resource stocks [36, 56]. The process of how resources are utilized and turned into the profits is very complex. By all means, it is beneficial for a venture to seek specific capabilities by combining different kinds of resources [36, 56, 62]. The relationship of a venture's resources and capabilities can be examined from two different perspectives. Some researchers suggested that two concepts are equivalent while others thought the resources are totally different from capabilities [39]. In the conventional theory of resource management, a venture is obligated to identify resources, acquire resources, bundle resources into its capabilities. The capabilities should be leveraged to meet customers' needs and add value to the venture [36, 56]. From this point of view, resources and capabilities are treated differently. The capabilities are the results of synergizing the resources; capabilities in turn should be utilized to enrich the resources of enterprises [39].

Organizational capabilities are considered as primary measures for ventures' performance [7, 14]. A higher utilization rate of organizational capabilities leads to the cost reduction, a high productivity, and the adaptability to accommodate uncertainties [21]. In particular, new ventures are more sensitive to the dynamic environments, and they require unique capabilities to compete with other ventures [19, 45]. Nevertheless, the capabilities of an organization can be divided into many categories such as the capabilities of technological innovations, financial management, marketing, and responsiveness. All of these capabilities are crucial to the growth of new ventures in one way or another. From the perspectives of enterprise operations and knowledge management, the capabilities can be classified into operating capabilities (or organizing capabilities) and dynamic capabilities [14, 21]. The operating capabilities ensure the fulfillment of the normal functions of an enterprise; while the dynamic capabilities are used to modify or expand operating capabilities [25, 43, 67]. These two types of capabilities are relied on each other so that an enterprise can be evolved in the dynamic environment.

An enterprise's resources are the stocks of tangible or intangible assets such as financial resources, material resources, technology resources, and market resources [24, 64, 65]. For a new venture, the resources owned by an entrepreneur decide whether or not an enterprise is qualified to exploit venturing opportunities [2–4, 52]. On the other hand, it is extremely important for an entrepreneur to acquire enough resources by any possible means. Generally speaking, the resources possessed by a new venture are very limited [68].

According to the institutional theory, the institutional environment consists of three dimensions; i.e., *normative*, *regulatory*, and *cognitive* environments, and institutions are typically situation specific; the institutions in different countries have different characteristics [42]. Under the emerging economies, the changes happened in the institutions are more frequently and quickly than the institutions in the developed economies. This difference argues the managers of new ventures to acquire and utilize the information of the business environments accurately. Even though a new venture manages to survive in the undeveloped capital markets, the harsh business environment forces it to manage resources strictly [55]. Available resources to enterprises are scare in the emerging economies; the development of a new venture needs more valuable information to acquire, develop and utilize resources.

In new ventures, the resources and capabilities should be managed to accommodate the changes of their business environments [25, 56]. Especially in the emerging economies, the institution system is instable and the market system is imperfect [32, 47]. The information about the institutions and markets greatly affects the ventures' behaviors such as combining the resources and expanding the capabilities. As shown in Fig. 1, a theoretical model has been developed to analyze the relationships among entrepreneurial resources, the information acquisition, the resource combination, and the organizational capabilities.

3 Proposed hypotheses

3.1 Resources and capabilities

The favorable impact of the resources on the organizational capabilities has been discussed by many researchers. In the emerging economies, as the external business environment changes quickly, a new venture should possess its unique capabilities to cope with the complexity. For example, the complexity rises from the difficulty in predicting market demands and a quick change of industry norms in the emerging economies. In such a situation, a venture with the higher adaptability is more likely to survive. Therefore, the possession of invaluable and unique resources helps the venture to outperform other competitors [25, 38].

Resource combination can be treated as an effective mechanism to transform the ventures' resources into its capabilities [36, 60]. Resource combination in a venture can be classified into *stabilization*, *enrichment* and *pioneering*, and each type corresponds to a different type of capability [56]. Different approaches of combination affect the new capabilities of ventures differently; ventures should be flexible to adopt these approaches based on the environmental changes [25, 40]. Especially in the emerging economies, the ventures should combine the limited resources appropriately to expand or create new capabilities. The above discussion leads to our first hypothesis as below.

Hypothesis 1 Resource combination mediates the relationships of entrepreneurial resources and organizational capabilities in a new venture.

3.2 Impact of information acquisition

A venture must adapt its behaviors or strategies to its external environment, so that it can gain competitive advantages over its competitors [44, 58]. The adaptability to the changes in the business environment is essential to a new venture. To achieve such adaptability, acquiring up-to-date information from the environment is very important [9, 30, 48]. Reliable and accurate information helps decision-makers to adjust the capabilities to meet the changes of markets' needs adequately.

The information from the business environment is even more important to new ventures in the emerging economies. The most significant characteristics of the emerging economics is frequent and unpredicted changes of administrative policies and regulations [6, 53]. In China, even though attempts are made to transform the planning economies into the market-based economies, the current economic entity is still strongly controlled by the government [33, 47]. It is the common practice that the governmental administration makes or modifies the policies and regulations to interfere markets or industries [16, 35]. If a

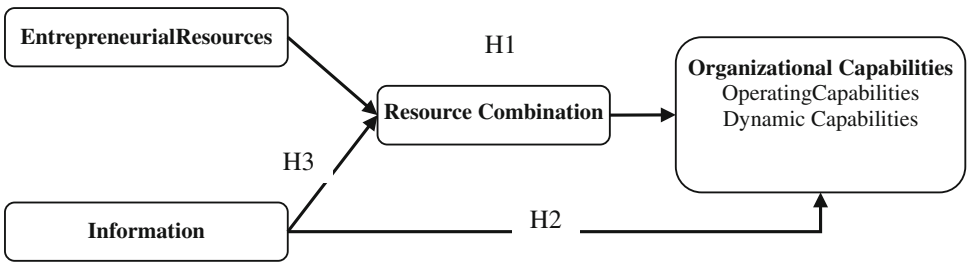

Fig. 1 Theoretical model

new venture can obtain the changes of economic policies and regulations at the earliest time, it turns into the competitive advantages in exploring new business opportunities and avoiding risk through the adjustment of capabilities. Beside the changes of the immature market economics interfered by the government, the changes of the customers' demands are also hard to be predicted in the emerging economies. Both factors bring the challenges for new ventures to develop their capabilities, such as the capabilities of manufacturing, logistics, and marketing. By all means, the prompt information acquisition will affect ventures on adjusting their capabilities dynamically to meet turbulent markets.

Hypothesis 2 Reliable and prompt information acquisition affects positively on planning organizational capabilities in new ventures.

3.3 Information acquisition versus resource combination

Resource combination refers to allocate and coordinate resources controlled by enterprises [36, 56, 60, 62]. A new venture generally possesses relative scarce resources in contrast to well-established enterprises [31, 54]. Therefore, it is extremely important for a new venture to utilize resources efficiently. Resource combination provides a possible means to create organizational capabilities and improve the value from the limited resources. However, the positive effect from resource combination should be established upon the condition that the venture's administrator is able to acquire the information on available resources and residential environment accurately and timely. For example, if a venture obtains the information that the markets' demands in a regional market will increase in near future, the venture should obviously seek and combine all possible resources quickly to expand their capabilities to meet the increased demand. Conversely, the unavailability of reliable information implies a loss of the business opportunity in gaining the competitive advantages. The activities depend on the availability of market information.

Note that the information acquisition is not necessary to affect the resource combination positively. Too abundant information brings the challenges in making effective decisions timely [8, 20], therefore it has a negative influence on the resource combination. For example, it is the common sense that the information of policies plays a critical role in the operations of new ventures; while it leads to an extreme that the ventures' administrators tend to maintain too close contacts with central or local government officials [66]. This will make a venture rely too much on the government officials rather than focusing on the resource combination itself. Meanwhile, the resources used to acquire information could be dramatically increased [18]. Therefore, overemphasizing on the information acquisition may affect the resource combination adversely.

Hypothesis 3 An inverted U-shape relation can be used to represent the relationship of the information acquisition and resource combination in new ventures.

4 Methods for empirical study

4.1 Samples and characteristics

To verify the proposed hypotheses in Sect. 3, a number of new ventures in three representative municipalities, Changchun, Beijing, and Tianjin, are selected for sampling purpose. Beijing and Tianjin are among the most developed cities in China. These two cities attract many new ventures to invest and the entrepreneurial activities there are very active. Changchun is a typical city in the inland areas of China. Its economy is underdeveloped and its entrepreneurial activities are relatively inactive.

To tell if a venture is new or not, the criterion by Shrader and Simon's [54] is used. Basically, an enterprise that has been established 8 years or less is treated as a new venture. In August 2010, 600 new enterprises were selected from various industries in three cities, and the questionnaires were sent out. The response rate was 46.33 %. Among 278 responses, 216 of the questionnaires were valid.

The statistics on the enterprises with valid questionnaires showed that 112 enterprises have been established 3 years or less, which accounted for 51.85 % of the entire samples. 104 enterprises were between 3 and 8 years, which accounted for 48.15 %. From the perspective of the business domains, 106 enterprises, or 49.7 % of the sample, were the suppliers of technologies such as electronics, biologics and pharmaceutics, and computer hardware and software. 110 enterprises, or 50.93 % of the sample, were the suppliers of services such as finances and transportation. Among them, small or medium size companies with less than 200 employees took 91.67 % of the samples.

4.2 Measures

The main variables of the empirical study were entrepreneurial resources, resource combination, and organizational capabilities (operating and dynamic capabilities). To ensure the validity of the questionnaire, the well-developed analysis tools were used to measure these variables. The questionnaires were designed with a reference of the literature [23]. The original questionnaires in the literature were translated and modified in the Chinese context. All variables were measured by 5-point Likert scales.

4.2.1 Acquisition of entrepreneurial resources (ER)

Senior managers or entrepreneurs were asked about the availability of the entrepreneurial resources from outside. The availability is classified from 'very scarce' to 'extremely abundant' in scale. According to Premaratne [49] and Witt et al. [63], the following four items were applied to measure ER (Cronbach's a = .626):

- *Item 1*: financial resource acquired by a venture (the weighting factor of 0.644);
- *Item 2*: material resources acquired by a venture (the weighting factor of 0.751);
- *Item 3*: technology resources acquired by a venture (the weighting factor of 0.751);
- *Item 4*: market resources acquired by a venture (the weighting factor of 0.576).

4.2.2 Information acquisition (IA)

The study by Lu et al. [39] has shown that the critical information for new ventures includes the information of policies, market opportunities, and customers' demands. Therefore in our empirical study, senior managers or entrepreneurs were asked about the level of accessible information. The following four items were used to measure information acquisition (IA) (Cronbach's a = .766).

- *Item 1*: the information to understand policies (the weighting factor of 0.533);
- *Item 2*: the information to understand market opportunities (the weighting factor of 0.856);
- *Item 3*: the information to understand customers' needs (the weighting factor of 0.866);
- *Item 4*: the information to understand the changes of industry (the weighting factor of 0.832).

4.2.3 Resource combination (RC)

Taking a reference of the work by Wiklund and Shepherd [62], Tolstoy and Agndal [59] and Tsai and Ghoshal [60], six items as follows were adopted to measure RC (Cronbach's a = .721):

- *Item 1*: Evaluation of internal resources to understand the strengths and weakness of existing resources (weighting factor of 0.667);
- *Item 2*: Accumulation and complement of unique resources (weighting factor of 0.735);
- *Item 3*: Continuation of acquiring new resources (weighting factor of 0.542);
- *Item 4*: Development of comprehensive resources plans (weighting factor of 0.734);
- *Item 5*: communication and cooperation to smooth resource flow (weighting factor of 0.603);
- *Item 6*: communication and cooperation to acquire external resources (weighting factor of 0.575).

4.2.4 Organizational capabilities (ORC)

Organizational capabilities are classified into operational capabilities and dynamic capabilities. The approach by Cepeda and Vera [14] was adopted to measure operating capabilities (OC) (Cronbach's a = .811). Senior managers or entrepreneurs were asked about the levels of the following capabilities.

- *Item 1*: the financial management capabilities (the weighting factor of 0.759);
- *Item 2*: the marketing capabilities (the weighting factor of 0.782);
- *Item 3*: the customer management capabilities (the weighting factor of 0.606);
- *Item 4*: the procurement capabilities (the weighting factor of 0.771);
- *Item 5*: the technological innovation capabilities (the weighting factor of 0.783);
- *Item 6*: the manufacturing or service capabilities (the weighting factors of 0.614).

The dynamic capabilities (DC) were measured by the following three items based on the researches of Chen et al. [17] and Cepeda and Vera [14] (Cronbach's a = 0.807):

- *Item 1*: the ability to apply new commercially-available technologies and invent new product (the weighting factor of 0.871);
- *Item 2*: the ability to understand, analyze and interpret know-hows and technologies from external sources (the weighting factor of 0.822);
- *Item 3*: the ability to combine existing resources with new ones (the weighting factor of 0.855).

4.2.5 Control variables

According to Schwienbacher [51] and Brush et al. [10], the activities of resource combination of a new venture vary significantly with the size and stage of its development. These two factors are treated as control variables in developing a new venture. To evaluate the impact of the progress of the development, the formation of a new venture is divided into creation stage (0: age $\leq$ 3 years) and early growth stage (1: age >3 years and age $\leq$ 8 years) [31, 37]. To measure the impact of the venture's size, new ventures are classified into six levels based on the number of employees [70] as 1: 1–20, 2: 21–50, 3: 51–200,

Table 1 Descriptive statistics and inter-correlation matrix

	1	2	3	4	5	6	7	8
Stage	1							
Size	.218**	1						
Industry	.000	.111	1					
ER	.018	.011	−.069	1				
IA	−.038	−.125	−.069	.406**	1			
RC	.115	.028	−.036	.517**	.353**	1		
OC	.016	−.014	.031	.367**	.311**	.438**	1	
DC	.090	.172*	.094	.279**	.169**	.336**	.283**	1
Mean	.482	2.33	.49	3.065	3.302	3.86	3.753	3.676
SD	.501	1.039	.501	.991	1.362	.727	.848	.97

* $p < .05$, ** $p < .01$

4: 201–500, 5: 501–1,000, 6: more than 1,000. In addition, the development of a new venture differs from one industry to another. A new venture in technology based industries is more sensitive to the changes of knowledge and information, which affects its resources combination. Therefore, an indicator variable is used to tell the difference of technology-based from non-technology-based industries; where the values of 0 and 1 correspond to the non-technology based industry and technology based industry, respectively.

5 Results

Table 1 has shown the results of the descriptive statistics and inter-correlation matrix. The means of ER, IA, RC, OC, and DC are 3.065 (SD = .991), 3.302 (SD = 1.362), 3.86 (SD = .727), 3.753 (SD = .848), and 3.676 (SD = .97), respectively. To verify if a significant multicollinearity exists, the variance inflation factors (VIF) is calculated. The result of VIF is below 2.0, which shows that no significant multicollinearity is found.

The regression analysis is applied to verify the proposed hypotheses, and the results are summarized in Table 2 and discussed as below. *Firstly*, the effects of control variables on organizational capabilities are observed in the results of model 1 and model 4. *Secondly*, model 2 and model 5 were established to verify the main effect. The results have shown that ER is positively related to OC, (model 2: $\beta = .304$; $p < .001$); so is ER to DC (model 5: $\beta = .217$; $p < .01$). In other words, the entrepreneurial resources can benefit both of operating capabilities and dynamic capabilities. However, Hypothesis 2 on the relationship of IA and ORC is partially valid: the relationship of IA and OC was positive for model 2 ($\beta = .225$, $p < .01$); but it is negative for model 5 ($\beta = .067$, n.s.). Model 3 and model 6 were established to analyze the mediating role of RC described in Hypothesis 1. The positive influence of RC on OC and DC can be found in model 3 ($\beta = .313$, $p < .001$) and model 6 ($\beta = .227$, $p < .01$). By a comparison of the ER in model 3 ($\beta = .153$, n.s.) and model 6 ($\beta = .116$, n.s.), the coefficients for ER are lower than those in model 2 ($\beta = .304$; $p < .001$) or model 5 ($\beta = .217$; $p < .01$). The positive influence of ER on RC can be found in model 7 ($\beta = .439$; $p < .001$). As a summary, the empirical study has concluded that Hypothesis 1 on resource combination mediates the relationships of entrepreneurial resources and organizational capabilities is strongly supported. Hypothesis 3 on an invert U-shape relationship of the information acquisition on the resource combination is also supported; in sense that the coefficient value for IA^2 in model 7 is −0.153, and $p < .05$.

6 Conclusions and future research

6.1 Conclusions

In this paper, the relationships among ER, IA, RC and OC in new ventures are investigated. The theoretical reasoning approach and empirical studies are applied to reveal these relations; the emerging economics in China is specially taken into consideration. Resource acquisition, resource combination, and capability developments are three important activities in the resource management [56]. The outcomes from those activities determine the competitive advantages and the productivity of a new venture. Existing studies on this subject are mostly limited; the empirical studies on the relationships among these activities are scarce. Besides, the importance of the information to a new venture' management has not been well recognized in the literature.

From the perspective of RBV, a venture is formed by the resource bundle [3, 5, 56]. The resources owned by a venture determine the competitive advantages it possesses over its opponents, the value it can create, and the process in which the resources are transformed into the venture's value [56]. Resource management in a new venture differs from that in a well-developed enterprise greatly, in sense

Table 2 Results of regression analysis

	OC			DC			RC
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Stage	.011	−.001	−.022	.047	.041	.027	.058
Size	.011	.026	.012	.217**	.195**	.184*	.058
Industry	.008	.036	.034	.061	.081	.077	.024
ER		.304***	.153		.217**	.116	.439***
IA		.225**	.176*		.106	.067	.104
IA^2							−.153*
RC			.313***			.227**	
R^2	.000	.202	.268	.061	.137	.173	.331
Adjusted R^2	−.016	.179	.243	.046	.113	.145	.309
F value	.023	9.05***	10.842***	3.911*	5.655***	6.171***	14.929***

* $p < .05$, ** $p < .01$, *** $p < .001$

that the latter usually has abundant available resources, and be able to acquire more resources from its established business network. In contrast, a new venture faces more challenges in its resource management due to various factors such as (1) limited business relations with others; (2) vulnerable to changes and uncertainties; and (3) information asymmetry. Therefore, the resource combination is extremely crucial for new ventures to gain competitive advantages and create value.

Our empirical study has shown that the resource combination mediates the relationship of resource acquisition and organizational capabilities. Organizational capabilities, including operational capabilities and dynamic capabilities, represent the potential of a venture to add value on its products. The dynamic capabilities are particularly important when a venture is at its creation or early development stage. New ventures must acquire the resources by all possible ways to obtain sufficient capabilities to meet markets' needs.

In a developing country such as China, the conflictions between capabilities and markets' needs in new ventures are generally severer than those in developed countries. The ventures in China should seek internal and external resources continuously. Resource acquisition from external environment is the most important means to new ventures [57]. However, for emerging economies, acquiring external resources effectively is not a simple task. The challenges are caused by various factors such as imperfect markets [39, 53] and governmental control on scarce resources. What new ventures can do is the optimization of all possible resources accessible by ventures.

Based on the institutional theory, the business environment of an organization shapes the behaviors of the organization. In a developing country such as China, the policies are administrated by the government and change frequently. The laws and regulations applicable to new ventures are imperfect, and the society lacks the culture to encourage entrepreneurship and adventure. New ventures generally lack legitimacy and must be able to deal with a very complex environment. These factors force the administrators of new ventures to think and act more creatively, so that the ventures can survive in tough business environments. The resource management also requires creativity in the emerging economies; in particular, the informal network must be fully utilized to acquire the information and resource.

It is seen that the business environment has an adverse impact on entrepreneurial behaviors. However, the characteristics of the emerging economies also create numerous entrepreneurial opportunities. Political and economic policies are frequently changed, and the needs of social markets are growing dramatically, both factors are in favor of new ventures. While the main constraints are the limited resources, investors must combine all possible resources to form new ventures and capture valuable investment opportunities. Resource acquisition and combination are crucial to develop organizational capabilities for their businesses.

The importance of information acquisition to resource management of a new venture is discussed systematically. It is found that the prompt information about the changes of policies and markets' needs affects resources management greatly, while the relevant studies in developed countries ignored this factor. From the perspective of strategic management, a new venture should be in aligned with its external environment in terms of its business strategies, capabilities, and activities. The environmental changes lead to essential changes of these elements in the new venture. Under the circumstance of frequent and rapid changes in the business environment, a new venture should have is an appropriate mechanism to observe the environment closely and capture the information of changes promptly to adjust its strategies, capabilities, and activities at the earliest time.

The empirical studies have confirmed the positive impact of the information acquisition on operating

capabilities. The customers' demands change quickly, and a venture's capabilities are directly related to customers' demands. In the emerging economies, the information of the markets' changes is not transparent. Ventures have their own obligations to collect the relevant information, so that its resources and capabilities can be tuned into the most appropriate level to the changed markets' needs [61].

Dynamic capability reflects the ability of enterprises to cope with the change of external environment. It was found that the impact of information acquisition on a venture's dynamic capability is not mono-directional. It indicated that the impact of the information about policies and markets' need on a venture's dynamic capabilities is indirect in the emerging economies. The availability of information is insufficient. Its positive impact takes effect only when the venture knows how to use the information wisely to optimize its resources. It was found that an invert U-shape relationship represents the relationship of information acquisition and resource combination adequately. An appropriate level of the information benefits the activities of the resource combination. The process of resource combination involves a learning process [1], a new venture needs to continually grasp environmental information and learn how to adjust their resources. Moreover, the acquired information from its competitors helps the venture having a short cut in building its competitive advantages and avoid similar loss occurred to competitors. However, a large amount of information brings the challenge to process and retrieve valuable information for decision-making. Extra abundant information causes the redundancy of information and interferes managers' judgments [8, 20]. The managers of a new venture need to rationalize the effort on the acquisition and processing of external information.

6.2 Limitations and future research

It should note that the presented work does not give enough considerations to environmental factors, especially in the context of the emerging economies. Future research is needed to analyze the moderating effect of environmental dynamics. According to the research by Sirmon et al. [56], the environmental dynamics will affect the process of resource management; different environmental conditions correspond to different processes of resource management. However, environmental factors are not just the changes of polices and market' needs [36]. The environment in the emerging economies is even more complicated than that in mature economies.

The objects in our empirical study were survived new ventures. As a matter of fact, the majority of new ventures have vanished very soon after they started-up. It is interesting to investigate the differences of resource managements between survived and un-survived ventures. For example, is there certain type of resource combination leading to the failure of a new venture? Future research is needed to understand the strategies to create a new venture and avoid failure at early development stage.

Finally, this research did not consider the time factor in the data collection and analysis. In a new venture, resources, capabilities, as well as resource combination at its creation stage are quite different from its early growth stage. Therefore, the relationships among these elements evolve along with the development of venture. Future study is needed to collect and analyze longitudinal data to discuss the dynamics of information acquisition and reveal the transformation of resource management.

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