The Mechanism of Enterprise External Network Affecting Its Performance: From the Perspective of Absorptive Capacity

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Abstract: Performance especially innovation performance is an important goal for enterprises. With the development of globalization economy and knowledge economy, networks have become an important way to improve enterprise performance. While, however, most of the existing research on the impact of enterprise external network on its performance merely emphasize the role of their network location and neglect the heterogeneity themselves, and thus, leading to contradictory conclusions. In this paper, independent variable is enterprise external network, intermediate variable is absorptive capacity and dependent variable is enterprise performance. Based on these definitions, the paper conducts a further study on the mechanism of enterprise external network affecting its performance.

Keywords: Enterprise External Network, Absorptive Capacity, Profit Performance, Innovation Performance

1 Introduction

With the intensified of economic globalization and coming of knowledge economy, it is becoming more and more important for enterprises to make full use of its external resources, particularly knowledge resources. Thus, absorptive capacity as an enterprise’s capacity to deals with information and knowledge, has received extensive attention from researchers. Through reviewing the related theory on knowledge absorptive capacity, not only have a thematic understanding of knowledge absorptive capacity researched, but also propose directions for further research.

2 An Overview on Absorptive Capacity

The concept of absorptive capacity arose from the macro level and was first used to analyze technology catching-up of lagging countries. In the book “Economic Backwardness in Historical Perspective”, Gerschenkron(1962) given the concept of backward advantage, he pointed that lagging countries can utilize stock knowledge in the world, therefore, lagging countries have more growth potential than developed countries. Rapid growth potential depends on many factors, the natural endowments, the country's social competence and the technology matching are the most important ones (Abramovitz, 1986). Absorptive capacity is an integral part of social competence, which affects a country’s ability to absorb and assimilate knowledge from leading countries (Ohkawa & Rosovsky, 1973). Cohen and Levinthal (1990) first introduce absorptive capacity into the level of the firm, they given that absorptive capacity refers not only the acquisition or assimilation of information by an organization but also the organization’s ability to exploit it. Overall, existing researches on absorptive capacity can be divided into four groups (Wangju, 2007), the definition of absorptive capacity, the antecedents of absorptive capacity, the outputs of absorptive capacity and marginal researches took absorptive capacity as a strategic concept.

3 The Process Model of Absorptive Capacity

The most widely used process model of absorptive capacity is advanced by Cohen and Levinthal (1990) that showed in Figure 1. They argue that absorptive capacity consists of the abilities to recognize the
value of new knowledge, to assimilate it and to apply it to commercial. The three processes are dynamic and depend on the knowledge source and prior knowledge, and furthermore, they affect innovation activity and innovative performance of enterprise.

Zahra and George (2002) reconceptualized the concept of absorptive capacity, took absorptive capacity as a dynamic capability and proposed a new model showed in Figure 2. Absorptive capacity is a set of organizational routines and processes to acquire, assimilate, transform and exploit knowledge. Being a kind of capability, absorptive capacity focus on enterprise’s ability of managing its resources especially its knowledge resources, and this ability can improve enterprise performance and competitive advantage (Zahra and George2002). Different from previous researches, “cognitive” was replaced by “acquire” in their study, and absorptive capacity was divided into potential absorptive capacity (including acquire and assimilate knowledge) and realized absorptive capacity (including transform and exploit knowledge). Meanwhile, new concepts were raised such as activation triggers, social integration mechanisms and regimes of appropriability. Firstly, Prior knowledge, knowledge source and complementarity are acquired and assimilated by enterprise under activation triggers. Then, they are transformed and exploited by social integration mechanisms. And under given regimes of appropriability, enterprise competitive advantage form (including flexibility, innovation and performance).

Based on empirical research, Todorova and Durisin (2007) reconceptualized the concept of absorptive
capacity that has five elements including recognize the value, acquire, assimilate, transform and exploit, showed in Figure 3. They reintroduced the concept of recognizing the value, and argued that transformation represents an alternative process linked to assimilation. Besides social integration mechanism, they proposed power relationships as the new contingency factor. And meanwhile, new feedback links was added to reflect the dynamic aspect of absorptive capacity.

Figu3 A model of Absorptive Capacity Based on Todorova & Durisin (2007)

4 Mechanism of Absorptive Capacity Acting

Figu4 Mechanism on the Impact Enterprise External Network on Its Performance
Integrated previous literatures on absorptive capacity (especially Zahra & George, 2002; Todorova & Durisin, 2007), this research redefine the concept of absorptive capacity. The essence of the absorptive capacity is a kind of accommodation capacity in the ever-changing business environment. The absorptive capacity is a processing ability including four dimensions, which are recognize the value, acquire resources, assimilate resources and apply resources.

On the basis of the above definition, the paper conducts a further study on the mechanism of enterprise external network affecting its performance. Specifically, the absorptive capacity plays an intermediary role in the process of enterprise external network affects enterprise performance. Enterprise external network not only has a significant positive impact on enterprise performance, furthermore, the absorptive capacity, as the intermediate variable, decides the extent of this impact. The mechanism is shown in Figure 4.

4.1 Theoretical analysis
Enterprise external network is a kind of relation between external free market and internal organizations. Enterprise external network is not only the collection of enterprise relations but also the collection of resources contain in these relations (Williamson, 1975; Larson, 1992). Theoretically speaking, there are two aspects enterprise external network affected enterprise performance.

On one hand, enterprise external network is a kind of resource allocation system paralleling with enterprise and market. Enterprise external network directly affect its profit and innovation performance by way of network structure and network relation. This means that the specific network position itself is critical, the position determines the knowledge, information, capital and other resources for enterprises and furthermore affects enterprises performance, whether it is who in this place.

On the other hand, enterprise external network is a collection of potential resources filled with knowledge, information, capital and etc. These potential resources can be translated into real resources, and the conversion rate is determined by enterprises abilities of recognize, acquire, understanding and exploit resources. Only the translated real resources can affect enterprise performance, and thus, the enterprise itself is more important than the specific network position.

4.2 Mechanism building
The mechanism building in this paper is focus on the second theoretical aspect. That is, enterprises external network do not affects enterprise performance significantly, but affects absorptive capacity apparently. Resources acquired from enterprise external network can only effective through being recognized, being gathered, being understood and being exploited. This process, in essence, reflected the role of absorption capacity.

From the perspective of social network analysis, network structure and network relation are the two dimensions of it. Indicators of network structure include network size, network density, network centrality and network heterogeneity. What’s the structural dimension concentrated including not only resources given by enterprise position in the net but also the ability possessing resources (Burt, 1992; Granovetter, 1973). Network structure impact on the flow of resources (Nonaka, 1994), thereby affecting enterprise absorptive capacity. And absorptive capacity furthermore, determines enterprise performance.

Network relation focus on the bilateral relations between a given ego and a given alter. It means that network relations can increase quantity of knowledge learn from others in the net (Dyer & Singh, 1998; Nahapiet & Ghoshal, 1998), based on these knowledge network relation affects enterprise performance significantly, while, the extent of this impact are decided by absorptive capacity.

5 Conclusion
This is the time of globalization economy and coming of knowledge economy, the competition among enterprises is fierce day by day. All these make it important for enterprises to communicate with external
organizations. The aim of the communication is to make full use of its external resources, particularly knowledge resources, and furthermore, improve enterprise performance. Essentially, the process of the communication is the process absorptive capacity acting. By introducing absorptive capacity, we can not only give a reasonable interpretation on enterprise differential performance in a cluster, but also give a guide for enterprise to keep competitive advantage based on this difference. In this paper, independent variable is enterprise external network, intermediate variable is absorptive and dependent variable is enterprise performance. Based on these definitions, the paper conducts a further study on the mechanism of enterprise external network affecting its performance. Specifically, this research set up and verify the mechanism that enterprise external network affecting its performance.

References