International Journal of Multimedia and Ubiquitous Engineering
Vol.10, No.10 (2015), pp.385-394
http://dx.doi.org/10.14257/ijmue.2015.10.10.38

Research on Performance and E-business Strategy in SME's Enterprises Based on Dynamic Competitive Ability

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Abstract

With the development of e-commerce, more and more small and medium enterprises begin to start building their own business platform; it is undeniable that e-commerce technology to business development brings new opportunities. In this paper, we make an empirical analysis to test how enterprises could improve their cooperative performance by developing their E-business strategy. The result shows that IT competitiveness including process cooperation ability and knowledge sharing capability, enterprises' dynamic capability including relationship ability, agile Enterprise and operation innovation. Through regression analysis, we find that dynamic capabilities play an important role in the process of enterprise competition. On this basis, we put forward relevant policy suggestions.

Keywords: *Cooperative performance; E-business Strategy; Small and medium enterprises; Dynamic competitive*

1. Introduction

With the emergence of the internet and the electronic commerce technology, the distribution channels of enterprises and related business models and business activities will be affected. Business and channel partners in the state, so that the company's channel management and marketing behavior appear new features, to a deeper sense of market dynamics and customer needs, so to provide enterprises with access to new value creation opportunities. However, with the sets of business processes between it and business model, Currently many test value business models often showed out and changing the business reality of synchronization. An important original in the small number of business managers and cannot effectively lift the technology and traditional business functions, cannot be clear how the business activities through the impact of business, and thus help create value for enterprises. In the field of information systems, supply chain and marketing areas for this topic has begun the relevant research. Scholars in the field of IS pay attention to the value of the relevant variables of individual enterprises and enterprises, such as It resources, ability and other complementary factors, emphasis on IT in the process of enterprise cooperation in the process of reducing the cost of the process, optimize the process structure, while ignoring the improvement of cooperative relations, response to market changes, business functions of the change. The research on the field of supply chain and marketing to the enterprise should pay more attention to the interaction between the enterprise, the interaction and the management of the business, and the relationship between the structure and the adjustment. However, from the perspective of the research of the field, the formation process of enterprise value is not from the perspective of IT technology and enterprise management market environment. It is not able to transform the complex relationship between the dynamic capabilities of the technology.

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ISSN: 1975-0080 IJMUE

At the same time, the current enterprise will optimize the traditional business process as the main, the well not exist from the perspective of strategic competition and effective application, and therefore cannot clear how to respond to the dynamic market, thereby helping companies create value. At the same time, many enterprises in the expansion of the enterprise, the enterprise in the implementation of the factors in the implementation of the new technology coordination control, coupled with the market environment, the enterprise seems to be unable to meet the dynamic capabilities and changes in the market to achieve effective implementation of electricity business is not ideal. Thus, in the dynamic environment, the enterprise through the application of creating value covers the business promotion, enterprise management, environment adaptation, more difficult to control mechanism. This article tries to clarify this complex process, to help managers more scholars understanding of dynamic state environment value creation path.

2. Literature review

2.1. Electronic Commerce and IT Value

The IT value of the people in all kinds of financial value of the intangible, the neglect of its inherent ability to the economic role of the IS investment, IT value of the specific research direction and selection of performance indicators may be a large source of research areas, and from other areas of theoretical and research methods. Only a few studies have considered the importance of the relationship between different classes of performance.

The environment is constantly changing, such as the continuous updating of products, customer demand is changeable, enterprises are faced with more and more uncertain competition, and then how to maintain a sustainable competitive advantage, has become the subject of strategic management research. Based on the traditional theory of resources, this is not a dynamic environment for enterprises to obtain sustainable competitiveness of the problem is better described. Therefore, the theory of IT capability must be combined with the dynamic environment. Tao (2012) proposed the ability to change the ability to change the capacity of the dynamic capabilities [1], they first from the perspective of dynamic capabilities. Along with the study of the research, he proposed a famous dynamic capabilities framework, which is defined as the ability of enterprises to integrate, build and reconstruct internal and external capabilities to adapt to the rapidly changing environment. "Dynamic" refers to the ability to update the business with the change of the environment. The ability to emphasize the integration and configuration of internal and external capabilities, in order to adapt to the changing needs of enterprises. Savrul (2014) research shows that dynamic capabilities are a set of specific and identifiable processes [2], such as product development, strategic decisions, and partnerships. Dynamic capabilities are varied in many details, but there is usually one of the best practices among them. More specifically, we propose a model to construct a dynamic capability, and then to study the creation of enterprise dynamic capabilities and the supporting role played by the technology in the creation of this ability. They believe that the organization of the enterprise is in a continuous process of change, thus continuously updated the ability of the enterprise and to obtain sustained, long-term competitive advantage.

2.2. Business Cooperation

Along with the theory of the prevalence, people began to study the resource theory and enterprise performance, based on RBV proposed a business transformation model based on Internet, the research results show that enterprises can adjust the company's internal resources and capabilities, and then produce a kind of advanced resources, which can improve the enterprise business process and improve the financial performance of

enterprises to play an important role. Lefebvre (2002) puts forward the model of business value integration, and points out that the resources are embedded in the enterprise business process, and then generate the process performance and organizational performance [3].

Carlos (2001) points out that the customer chooses the supplier's foundation comes from the enterprise product and the services different attribute [4]. The results of the study show that although the quality of the product is the most important factor for the enterprise to choose the supplier, the enterprise managers pay more attention to the transaction cost and delivery performance. The research is more specific, focused on the specific performance measurement of production costs, market value and profit. The results of the study are also more direct investment in automation and exchange of investment in the company's performance and profitability of the company has a significant impact on these two aspects. Ramanathan (2012) also studied the influence of E-business activities on the performance of enterprises from the perspective of supply chain [5]. Their research is mainly in the electronic order they put the order completion time is divided into it. The three dimensions of the order, the reverse order time and the delivery time. It is found that the performance of the main process orders can be increased only in a certain way, but not the time of the order completion. Analysis of the impact of e-commerce applications on the performance, they put the enterprise electronic commerce application is divided into communication, internal management, orders are received and electronic procurement four aspects results unexpectedly. Enterprise application of electronic commerce has no significant effect on enterprise performance, but only on the improvement of customer relationship has some small positive impact.

Gebauer (2012) emphasizes the electronic business cooperation between the enterprises and their suppliers based on the information system of the enterprise [6]. Electronic cooperation, including electronic information sharing and collaboration, he believes that electronic information sharing and collaboration is the main factor in the development of information adoption ability, both can effectively improve the performance of the company. The relationship between e-commerce and enterprise performance has been studied in foreign countries. The research on the impact of e-commerce activities on the enterprise performance, Liem (2013) pointed out that the enterprise through the electronic commerce of an activity and behavior will increase the value of the product or service to the customer [7], it is willing to buy the product more than the original price, so that the enterprise performance may increase. They studied the impact of e-commerce activities on business performance by using a regression analysis of the survey of Chinese listing Corporation. The study found that e-commerce can increase the income of the enterprise, improve the operation efficiency, but also increase the cost of the enterprise, but the overall electronic commerce to enterprise performance has a positive impact.

2.3. Enterprise Internal and External E-Commerce Ability

Djelassi (2013) focuses on the relationship between e-commerce and business processes, and through the research to confirm that e-commerce capability is closely linked to the dependence of resources and nested in business processes [8]. The evaluation of enterprise’s sharing information ability is generally through the typical process of three kinds of electronic commerce, including electronic purchase, electronic order and customer relationship management. The evaluation of enterprise's cooperation process capability is realized from the partnership and the sales forecast. The ability to share information about the enterprise is mainly focused on the measurement of the level of technology and the level of information sharing with partners [9]. The cooperation process focuses on the evaluation of the electronic cooperation ability of the enterprise internal and external flow, which is embodied in the integration. These two kinds of abilities have the function of a medium bridge to a large extent. The bridge connects the resources and the enterprise performance, which is integrated with the transfer of the

resources through the process, and thus obtains the value of the electronic commerce. This value is reflected in the enterprise performance.

Wen (2000) research mainly on the relationship between enterprise cooperation, agile supply chain and enterprise performance [10]. Through the empirical research, the paper verifies the effect of enterprise cooperation on agile supply chain, and has a significant positive effect on enterprise performance. In this study, the agile supply chain is also a part of the intermediary role in the relationship between enterprise cooperative relationship and enterprise performance. This research also opened up the previous research on corporate performance from another angle, which mainly focused on product quality performance, market performance or financial performance, and his research on corporate performance includes market growth, financial performance, product innovation and corporate reputation. Helander (2000) research is a combination of information technology capabilities [11], and the relationship between the enterprise and the enterprise performance of the relationship on the relationship between the empirical researches. The ability to develop and explore the relationship between the capacity and the ability to explore the relationship between the enterprise and its downstream distributors to establish a long-term, close relationship, and this relationship is designed to obtain the best economic benefits. This relationship uses trust, commitment, and dependence [12]. Empirical results show that the two kinds of enterprises have a significant positive impact on corporate performance, and the relationship between the enterprises has a significant moderating effect on the relationship between IT capability and enterprise performance.

3. Research Design

3.1. Research Framework

This research is concerned with the value creation process in the market environment, and the model of the test generation is usually the non synchronization of the changing business reality. This is mainly because the IT is embedded in the process of the enterprise. It is a part of the process and the competition between enterprises, which is difficult to distinguish between the IT technology features and the functional characteristics. Therefore, based on the above theoretical basis, this study is based on how to reflect the complex process of enterprise's technological capabilities to business capabilities, including: dynamic environment, which can be used to realize the strategic application of dynamic capabilities, and then create value; the relationship between the competitiveness of enterprises and the dynamic capabilities; how to make these different functions in a variety of different conditions to increase the value .

Previous research on the relationship between the competitiveness and the ability to explain, in which, the competitiveness of enterprises through the use of resources in order to accomplish a specific task, and ability is the strategic application of these competencies, in order to achieve a certain standard. The relationship between the 1, while in the dynamic capabilities of the choice, we are based on the dynamic capabilities of the division from the perception of market opportunities, seize the opportunity and resources to describe the ability of enterprises to respond to the dynamic market level, and for the premise of enterprise IT application environment, and expand the resource base theory, the company's resources to expand the external organization, that is, the company's distribution channel resources. Through the control and management of external resources, response to potential opportunities and threats. Finally, the development of the relevant theory to clarify the various functions of the process, dynamic capabilities and their contribution to the performance of the competition, and clearly in the different stages of value creation may be influenced by the inter firm and market factors, the competitiveness and dynamic capabilities and a variety of different conditions, as shown in Figure 1.

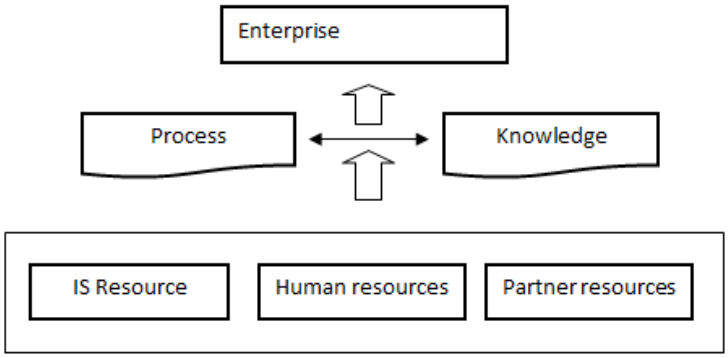

Figure 1. Enterprise IT Resources and Competitiveness

3.2. Index System

The questionnaire of this study was designed to study the questionnaire of the mature form and the management practice. Mainly through the research in the field of IS, supply chain and marketing, we summarized and summarized the content of this study. The competitiveness dimension is the information resources and knowledge resources in the enterprise integration management activities, in order to realize the organization's ability to integrate and cooperate, among them, the process cooperation ability is mainly considered the information sharing between the enterprise and the channel partners. Supporting the ability of business activities, the selection of indicators in addition to considering the previous research and comparison of product related information sharing, the study also included in the business information related to marketing activities, such as the industry dynamics and customer complaints recommended in the shared between enterprises. Knowledge sharing capability reflects the ability of enterprises to accumulate and share knowledge with channel partners and customers, mainly from two aspects: market dynamics, customer demand and cooperation experience.

Dimensions of dynamic capabilities emphasize the enterprise through the improvement and innovation of the existing cooperation activities, and establish a higher level of dynamic capability, in response to changing market needs and environmental situation. Among them, the relationship between enterprise management and channel resources, enhance the ability to communicate, cooperate and manage business behavior, referring to the definition of the relationship between the field of marketing and indicators, combined with China's distribution network business relationship management practices, from the channel management, cooperation and conflict resolution two aspects to solve the problem: the level of resource reconfiguration. Enterprise agility is the ability to detect and respond to the market opportunity, which emphasizes the difficulty and speed of response, therefore, the use of indicators to measure the enterprise's discovery of market opportunities and threats, such as customer preferences, competitors speed level. The specific index system is shown in Table 1.

Table 1. Index System of the Dynamic Capabilities

Dimensions	Variable	Code	Content
IT competitiveness	Process cooperation ability	OCC1	Support management decision
		OCC2	Constantly update business value
	Knowledge sharing capability	KSC1	Share market developments
		KSC1	Share customer information
Dynamic capability	Relationship ability	RC1	Integration of existing distribution channels

		RC2	effectively deal with the conflicts in the cooperation
	Agile Enterprise	FA1	develop market opportunities
		FA2	Flexible response to customer needs
	Operation innovation	IC1	Establish a new business process
Competitive performance	Competitive ability	CP1	Higher market share than competitors
		CP2	Higher sales growth than competitors
Partnership	Relational governance	RG1	Trust each other
		RG2	Related policy

4. Empirical Analysis

4.1. Questionnaire Investigation

In this paper, we conducted a questionnaire survey of 15 enterprises in Harbin, the network and face interviews in two ways, a total of 800 questionnaires were distributed, 756 copies of the questionnaire, we have different ways of issuing the questionnaire, the results show that the method of different ways of issuing the questionnaire does not exist significant differences. After data entry is completed, we analyze the sample, observe the basic attribute of the survey, the results are shown in Table 2.

Table 2. Basic Statistical Information of the Sample

Index	Content	Number	Proportion
position	Senior management	23	3.4%
	Manager of business department	170	25.75%
	Electric business technical personnel	467	70.75%
Working period	Within 1 years	259	39.24%
	1-3	140	21.21%
	3-5	186	28.18%
	Over 5 years	75	11.36%
Education	Specialty	306	46.36%
	Undergraduate	229	34.69%
	Master	125	18.93%

4.2. Reliability and Validity Analysis

Before modeling the structural equation, it is necessary to carry out the validity and reliability analysis, which is the most important measure of the quality of the two aspects. This paper adopts comprehensive assessment validity of factor analysis and the average variance extracted; mining coefficient Cronbach α and composition of the reliability level of the reliability of measuring scale. Firstly, we analyze the model's structural variables and adjustment variables respectively by using statistical analysis software, and then, by using the orthogonal rotation of the variance, the process cooperation ability, knowledge sharing ability, relationship ability, enterprise agility and competition performance of five model structure variables, KMO test, s test, 79.8%. By using the same method to explore the factor analysis, three variables, KMO test, Bartlett test, 0.816, 0.01, s, and the total variance explained by 75.9%. As shown in table 3,

Table 3. Analysis Results of Structural Variables in the Model

Variable	Competitive performance	Process cooperation ability	Agile Enterprise	Relationship ability	Knowledge sharing capability	Operation innovation
CP2	.908	.142	.171	.125	.101	.148
CP1	.868	.159	.204	.138	.176	.091
OCC1	.856	.170	.146	.211	.169	.162
OCC2	.214	.819	.212	.153	.265	.089
FA2	.203	.784	.157	.240	.170	.187
FA1	.019	.743	.226	.211	.333	.128
RC1	.168	.366	.851	.233	.188	.163
RC2	.246	.277	.750	.178	.216	.129
KSC1	.184	.135	.272	.786	.178	.320
KSC1	.215	.255	.380	.697	.180	.251
IC1	.166	.375	.273	.257	.715	.252

To reflect the structure of all the variables and indicators, we use confirmatory factor analysis, as shown in Table 4, the standard load of all indicators are higher than 0.01, and at 0.7 significant level through the test. The discriminant validity of the model was further investigated by using AVE, and the AVE was more than 0.5.

Table 4. Variable Load and T Test

Variable	Index	Stand. load	T value	C.R.	AVE
OCC	OCC1	0.855**	31.98	0.903	0.756
	OCC2	0.885**	39.35		
KSC	KSC1	0.803**	37.24	0.899	0.784
	KSC1	0.851**	54.52		
RC	RC1	0.927**	40.66	0.923	0.799
	RC2	0.916**	53.09		
FA	FA1	0.910**	60.99	0.948	0.858
	FA2	0.927**	57.88		
IC	IC1	0.797**	27.04	0.915	0.684
CP	CP1	0.906**	45.34	0.923	0.799
	CP2	0.899**	49.36		
RG	RG1	0.913**	41.29	0.920	0.793
	RG2	0.910**	60.99		

Reliability analysis of measuring latent variables corresponding to observe variables of internal consistency, describe the extent of observation variables to common latent variable expression. We used Cronbach's α coefficient of and the reliability level of the reliability of measuring scale. The study found that, Cronbach α coefficient between 0.9 to 0.7 means the level of reliability better. After testing, the CR value of each factor in the scale was higher than 0.85, far greater than the limit level. The above analysis confirmed that the reliability of the scale of this study reached a high level.

Table 5. Correlation Matrix and Reliability Analysis

	OCC	KSC	RC	FA	IC	CP	RG
OCC	0.87						
KSC	0.64	0.89					

RC	0.57	0.62	0.93				
FA	0.52	0.58	0.59	0.83			
IC	0.53	0.61	0.58	0.44	0.90		
CP	0.42	0.44	0.42	0.43	0.31	0.81	
RG	0.25	0.29	0.40	0.36	0.30	0.16	1.00
α Reliability	0.88	3.60	3.49	3.22	3.31	3.41	3.19
Mean	3.37	3.60	3.49	3.32	3.31	3.44	3.19
Standard deviation	0.95	0.84	0.87	1.02	0.86	0.82	1.02

4.3. Regression Analysis

According to the empirical study, we first verify the formation stage of dynamic capabilities, using linear regression analysis method of OLS, the results are shown in Table 6. Through regression analysis, we find that dynamic capabilities in the process of enterprise competition performance, plays a key role in the intermediary effect test, and also confirmed that it is an important bridge between the enterprises and the market competition process. One of the major strategic targets of the core enterprise is to narrow the relationship between the core enterprise and the final customer, and through the collection of customer needs to perceive the market dynamics. While the enterprise's distributors or channel partners to strengthen this relationship, and sometimes the relationship to harm the interests of the core business. And the information and knowledge of the new environment of e-commerce.

Sharing of knowledge has changed this situation; many of the core businesses can begin to require access to the end user information, thereby increasing their understanding of the market, and then develop better strategic planning. Through the IT application of the channel partners, the enterprise enhances the relationship management ability of the enterprise to the partnership, and promotes the ability of the enterprise to the customer's needs, and finally obtains the competitive advantage.

Table 6. Regression Analysis Results

Dependent variable	Independent variable	β	T	Sig.	Tol.	VIF	D-W	R2	F
Competitive performance	Relationship ability	0.189	1.984	0.049	0.431	2.231	1.913	0.360	33.80
	Agile Enterprise	0.287	3.110	0.002	0.455	2.198			
	Operation innovation	0.192	2.590	0.010	0.481	2.080			

5. Conclusion

This study based on the survey data, using OLS regression and structural modeling method of empirical research, the study finds that the research conclusion: first, the dynamic environment of the value creation process as competitive to the dynamic capability transformation; first, inter firm relationship governance contingency variable as a form of cooperation process ability to the ability of agile enterprise transformation process; second, product complex Zhu and market competition for enterprise competitive performance formation process with tone as. Among them, complex product and market competition respectively to promote the agile enterprise and innovation ability is a positive effect on competitive performance and market competition inhibited the ability is a positive effect on competitive performance. Under the dynamic environment of enterprise value creation Azusa Road, including two stages: formation stage and competitive performance of the formation stage, which describes the inter enterprise

application process and the process of market competition of dynamic capabilities. The convergence of these two stages reveals the process of the enterprise from the IT technology to the value creation. In this process, knowledge sharing capability is the key factor of dynamic capability, which includes the relationship between the technological capability and dynamic capability of the enterprise. This process reflects the change of the dynamic capability of IT in the process of cooperation between enterprises and the formation of competitive performance. This conclusion proves that the enterprise needs to construct the enterprise competitiveness, and promote the enterprise's ability of the external market, and the relationship between the enterprise's operational innovation capability and the enterprise's operational innovation capability. The conclusion of this conclusion is that the IT can make the enterprise electronic commerce change effect as well as the path of the value in the dynamic environment. It reflects the dynamic ability as the key intermediate capability and the dynamic characteristics, and comprehensively reflects the stage characteristics and mechanism of the value creation of dynamic environment.

In the process of enterprise, the relationship between enterprises and the relationship management has the ability to be called, and to promote the process cooperation ability in the process of the direct role of the relationship between the ability and enterprise agility. The conclusion also confirms that many theories explain the relationship among enterprises, and the key resources of the organization may be in the organization boundary. If the enterprise and partners can integrate resources in a unified way, it is possible to improve the productivity of the value chain. And from the empirical results, relationship governance is not only the catalyst of IT application process, but also the direct management of dynamic capabilities. This shows that the maintenance and development of partnership, favorable to establish a stable strategic cooperation between enterprises, enabling enterprises to obtain a variety of partners through cooperative relations, business even in the absence of cooperation, also need to pay attention to the management of trust between enterprises, incentives, *etc.*, to strengthen cooperation between enterprises.

In this paper, the effect of product complexity and market competition on dynamic capability is verified. The product complexity promotes the positive market competition performance and the positive effect on the performance of enterprises. This conclusion confirms that there is a kind of adaptation mechanism between the dynamic capability and the market environment, which influences the formation of enterprise competitive performance. The characteristics of different dynamic capabilities in different market environment for the existence of different effects of competition, the above research conclusions to promote inter enterprise IT management and development provides an important management implications.

Acknowledgements

The work of this paper is supported by Study on the strategic mode of “industry-academy-research” project in Heilongjiang province, Key projects of Heilongjiang Province, 2014.6-2015.12, Science and Technology Department of Heilongjiang Province

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