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THE E-BUSINESS RESEARCH IN CHINA: CURRENT AND FUTURE

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ABSTRACT

After the rapid development in recent years, E-business has been a common business topic, although there is still some confusion in this new scope. In this paper, we will analyze the E-business in China from the point of view of research, and the research areas of China E-business are analyzed also, including the E-business Industry model, E-commerce XML infrastructure, E-auction, E-procurement, E-payment, online cataloging and selection, and so on. Based on the analysis, we deduced the trends of E-business research in China, especially the most perspective business model in the future.

Keywords: E-business, E-commerce

1 INTRODUCTION

E-business (E-biz) has been a hot topic in China since 1996. This new scope has attracted great attention from Chinese scholars and businessmen, as well as officers [1, 10]. However, since the crash of "network bubbles" in recent two years, people become more realistic to deal with EC issues than before. It is necessary to summarize the experiences, especially the research methods and scopes for E-biz researcher.

As an economist, we often regard the E-biz as a productive force. The characteristics of e-business as a productive force can be concluded as follow:

- E-biz is a new production tool. E-biz enlarge the objective of production, Ebiz creates a new market as well as brings the traditional industry to a fantastic future. It is no doubt that the Ebiz is playing the same role in the new century as the steam engine at the beginning of the 20th century.
- IT has become the essential qualification of labor. Just because the importance of Ebiz in the new economy, the information technologies is the basic requirements in many positions, one without IT technology will be refused for the new enterprise.

According to the problems we must face in the E-biz era, we will analyze the E-business in China from the point of view of research in this paper. Firstly, the scope of China e-biz will be analyzed. Then we will discuss the research areas of China e-biz. Finally, the future of e-biz research in China is also put forward in the paper.

2 E-BUSINESS REVIEW OF CHINA

2.1 The E-biz Practice of China

Since the 1980's, lots of Chinese enterprises have paid great efforts in developing their information systems so as to improve their competitiveness [6, 7]. Among the total

number of 10 millions enterprises in China, about 15000 are recognized as the key enterprises to the China's economy. The diffusion rate of computer applications in these key enterprises has exceeded 90% [8]. More than 2000 enterprises have accomplished their information systems. A series of national projects on information infrastructure "Golden Project Series" have been accomplished with great success, which constructed a backbone of the countrywide network system.

At the same time, the number of Internet users in China is increasing dramatically:(Table 1)[8]

Table 1 Internet Users in China (millions)

Time	1999	2000	April, 2001	2005 (estimated)
Internet Users	8.90	16.00	20.00	100.00

Although a lot of dot.com companies went bankrupt and the stock price of high-tech industry dropped down, Ebiz in China is still under developing.(Table 2)

Table 2 Turnover of EC in China (millions, RMB)[9]

Year	B2C	B2B	Total
2000	390	76770	77160
2001(estimated)	1300	94200	95500
Increasing Rate	233.3%	22.8%	23.8%

Besides dotcoms, more companies from traditional industries start to join the efforts in EC development. Table 3 shows the percentage of business using Internet in enterprises from 6 major industries in 2000. [9]

Table 3 Percentages of doing business through Internet

Industries	Elec.& Comm.	Electric App.	Indust. Equip.	Consumer Goods	Auto. Indust.
Total	49%	32%	31%	18%	13.3%
Using EC Platforms	8%	7%	5%	4%	3.2%
Using Company's own Website	27%	13%	14%	7%	8.7%
Using other Website	14%	12%	12%	7%	1.4%

There are four kinds of e-biz practitioners in China, IT professional, scholars, officers and customers.

- IT Professional: Based on the distribution of hardware and software abroad, they are the practice pioneers.

Combined with the ideas of talents in Silicon Valley and venture capital, they organized a batch of E-biz companies firstly.

- Scholars: they came from all kinds of background to the new research scope, and tried their best to form the new framework of economics and management.
- Officer: they are the most important factors in the development of China E-biz, all basic principles and rules are formed under their efforts.
- Customers: they are the backbone of China Ebiz, the growth of customers owe to the success of education in China.

2.2 Problems Analysis

Briefly, the development of China Ebiz can be divided into four steps: information techniques oriented step, E-biz knowledge spreading, rules and laws establishing, and enterprises implementing. After the four steps, the Ebiz in China has some achievements now, especially the management theories based on Chinese status.

Although we have some new theories about Ebiz, such as attention economics, knowledge economics, foam theory, we still need more economics and management theories about the new era [4]. This is a very serious problem for all scholars and practicers, and the main reason of this paper is to classify the research scope of E-biz.

What is the best business model for E-biz companies? It is a very important problem for Ebiz management. So much business model emerged recently, such as the initial portal (sina.com, sohu.com, china.com etc.), B-C, B-B, B-G (my8848.net, Alibaba.com etc.), ASP (Application Service Provider), ISP (Internet Service Provider), ICP (Internet Content Provider) and so on. All of the models should be summarized according to the economics and management principles, if the principles are clear, the research work will be clear also.

3 MAIN RESEARCH SCOPE OF E-BIZ IN CHINA

3.1 The Industrial E-biz Model

The main research work of Ebiz model in China is the industrial Ebiz Model. In order to form the models, a lot of work have been done to analyze the business process of many industry, and some business logic model have been formed.

Based on the industrial business logic model, the E-biz application system will be designed according to calling. And some researchers designed the e-Market Place to fulfill this requirement. This is a Web-based platform for enterprises in the same industry.

Besides the E-biz theory, the advanced information systems such as ERP, CRM, SCM, have been developed very fast. As we know, the information infrastructure in the basic of E-biz, so the combination of E-biz with advanced information systems is another research scope for E-biz model researching.

3.2 E-Commerce XML Infrastructure

XML (and RDF), recommended by W3C, is a major metadata technology and an open standard. Its flexibility in data description satisfies the requirements of the Web application development for storing, exchanging, and managing the data. Therefore, XML is widely accepted for

E-Commerce development. E-commerce XML infrastructure is designed and tailor-made to support management and exchange of various types of data in E-Business activities, transactions, and performance.

3.3 E-Auction

Auctions on the web are growing fast for the reason that a sufficient match can be found due to a larger number of bidders and items to be sold. During an e-auction process, the bidders need to be identified and registered, the items need to be evaluated and classified, the auction methods need to be decided, and the auction process needs to be operated.

3.4 E-Procurement

Procurement is a complex process, existing in every enterprise. Traditional procurement process is quite costly and e-procurement emerges to replace from the context of turning paper work into e-document management. An e-procurement system consists of three major steps in general. The first step is pre-ordering, including online cataloguing, selection, negotiation, and decision-making. The second step is e-purchasing. The third step is post-purchase, including invoicing and e-payment. The two major techniques used in E-procurement are intelligent search technique and agent technique. So the research focused on the two techniques recently.

3.5 E-Payment

E-payment is an important step after the product is delivered to customer. The activities involving e-payment include checking the product against the order, reviewing the invoice, and signing off the payment. When the payment is done by e-cash, contact to the issuing bank will be necessary in order to verify it. The e-payment system will manage a generic form of payment, used for describing the content of invoices, orders, payments, as well as the metadata for verification and signature.

Problems in E-payment process need coordination of a few kinds of techniques, such as current applications of payment cards, credit cards, XML signature technology, security technology etc. [3]

3.6 Online Cataloguing and Selection

Online Cataloguing is to support the business participants to easily search and sort out the products and services online. This system involves data transferring, information classification, as well as integrity and consistence control. Online Selection helps buyers compare the online products and services and choose those that best meet their requirements. This system considers issues including the user profiles, preferences and even personalization.

4 RESEARCH TRENDS OF E-BIZ IN CHINA

4.1 Depth Trends

After the NASDAQ disaster, both government and scholars are considering E-biz more deeply, and they are doing some fundamental research works related to the basic economics and management theory, so do as the practical work.

Government: from office automation to e-government. Chinese government decide to improve the information system in the recent five years, so that the main framework

of e-government will be formed.

Business: from advertise to supply chain e-management. The traditional enterprise in China used Internet as an advertisement tools in the past, but now the realized that the Internet should be a place to build virtual company.

Person: from search for information to living in the Internet. Customers have become mature in the Internet; they use it as a common tool to improve their basic living conditions.

4.2 Personalization

Personalization is another trends of E-biz development. The relating research scope is the customizing management methods and techniques. The example of customizing techniques if the Website customizing, which allows visitors customize the interface according to their willingness.

For a personalization business management, the CRM (Customer Relation Management) is a good way. CRM is based on data warehouse and data mining methods, and all theories and techniques about business intelligence is the main research scope in this area.

4.3 Specialization

In the near future, the main E-biz models maybe the specialized information service model. As we discussed in section 2, the calling based supply chain portal (SCP) maybe the most important business model, because a lot of enterprise need industrial information and principles.

Another promising specializing business model is the specialized service provider (SSP), which can provide different service to enterprises, such as information system.

4.4 Syncretism

Another research trends are syncretism model. The annex of E-biz company is a trend since last year. The syncretism models including three kinds, the first is the syncretism of same kind of websites, which is the simplest one. The second is complementary annex, which required the business of both sides in syncretism is complementary. The third is the strategy alliance, which is a virtual company according to the market and your orders.

The syncretism model is a very complex model, there are a lot of basic work must be accomplished, such as the partner selection methods, optimization methods etc.

5 CONCLUSION

Based on the analyses of China Ebiz status, we can reach the conclusion that the Ebiz in China has a bright future, because of the booming trends in this scope.

In recent years, the main research works maybe focused on such areas:

Enterprise e-Management: the e-management methods in an enterprise and the combination methods between Ebiz and the information systems in enterprise. Especially the E-business models of different industries

E-Biz supported techniques: Such as XML techniques, security technology, customizing technology and so on.

According to the achievements in the recent years and the trends of economy, the most perspective business models of Dot com company can be concluded as following.

Calling based supply chain portal (SCP): for the common characteristics of information in the same industry, this kind of portals is the most attractive portals for enterprise.

Specialized service provider (SSP): for the specialization

trends of E-biz development, enterprises need specialized service, especially specialized information technology service.

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