

E-COMMERCE DEVELOPMENT IN CHINA: OPPORTUNITIES OR CHALLENGES?

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ABSTRACT

E-commerce in China has grown at an astonishing rate in the past 10 years. E-commerce development in China has been influenced by the local environment. This article introduces the present condition of e-commerce development in China and analyses the obstacles in e-commerce development in China. It aims to find the influential factors which impede e-commerce development in China. In China government regulations, payment system and logistics system are the main factors which influence e-commerce development. The improvement on the above mentioned factors is critical in e-commerce if e-commerce is to live up to its potential in China.

KEYWORDS

Electronic commerce, Development, Environment.

1. INTRODUCTION

Electronic commerce (e-commerce) in China has grown at an astonishing rate since 1993 when the Chinese government took the first step towards implementing electronic commerce through a series of “golden projects”. These golden projects were aiming at building the technical infrastructure and regulatory frameworks for electronic commerce in China. In the past 10 years Internet penetration rates have increased rapidly (Fan 2005). According to the newly-released report from the China Internet Network Information Centre (CNNIC), the number of Internet users in China had reached 123 million by June 30th, 2006 (CNNIC 2006). The number of websites in China has arrived at 788.4 thousand, and 81.1% of Chinese websites are operated by enterprises for business (CNNIC 2006).

E-commerce in China is multiplying almost as fast as the number of Internet users in China. According to the survey conducted by China Market Information Centre (CCID), in 2005 the revenue generated in e-commerce was about \$92.2 billion in China. The Chinese e-commerce market will continue to expand, and will be perhaps totally as much as \$654.3 billion by 2010 (CCID 2006). In China Business to Business (B2B) is still the main e-commerce model. The revenue of B2B was about \$85.1 billion in 2005 with an increase rate of 44.8% compared with that in 2004. This means takes nearly 92% of the total revenue of e-commerce in China in 2005. Business to Consumer (B2C) in China has got revenue of \$5.9 billion in 2005 with an increase rate of 475.6% compared with that in 2004 (CCID 2006). These developments are in line with the rate of adoption theory. The theory describes the IT diffusion process as initially proceeding through a slow, gradual growth period, followed by dramatic and rapid growth, then gradual stabilization. At present the U.S. is still the largest global Internet market, and takes nearly half of the global Internet market. Analysts predict that with the second largest user population and double-digit economic growth, China could potentially take the place of the U.S. and become the largest Internet and telecommunication market in the world (Du 2006).

Though e-commerce in China has developed rapidly in the past several years, it is still in its infancy. Various technical, commercial and regulatory restraints continue to impede its development. This article introduces the present environment of e-commerce development and analyses the obstacles in e-commerce development in China. It aims to find the influential factors which impede e-commerce development in China. In China environmental factors, such as government regulations, payment system and logistics systems are the main factors which influence e-commerce development. Improvement on the above-mentioned factors is critical in e-commerce development if e-commerce is to live up to its potential in China. The article is based on a literature study and contains no direct own empirical research.

2. ENVIRONMENTAL RESTRAINT

As Trappey (2001) states e-commerce in China is at its early stage of development. In China Internet is used in business primarily as a means to reach out to foreign companies and secondly as a means for conducting B2B and B2C business. The emerging global network is highly problematic on its regulation (Trappey and Trappey 2001). In China the Chinese government has implemented some measures to regulate the Internet including domain name registration, encryption, Internet policing and monitoring web media (Kennedy 2000a; Lo and Everett 2001). Three main environmental conditions still affect the development of e-commerce development in China. Firstly, government regulations hamper the development of e-commerce in China (Ho and Chen 1999; Rosen 1999; Chen and Ning 2002; Markus and Soh 2003; Stylianou, Robbins et al. 2003). Secondly, the lack of an infrastructure for electronic payment with credit cards or debit cards hampers e-commerce transactions (Ho and Chen 1999; Steinert-Threlkeld 2000; Haley 2002; Markus and Soh 2003; Stylianou, Robbins et al. 2003; Tan and Ouyang 2004; Wang, Yen et al. 2004). Thirdly, inefficient logistics systems impede e-commerce development in China (Haley 2002; Wang, Yen et al. 2004).

2.1 Government Regulations

2.1.1 Access Regulation

Economic development has become a major goal for Chinese government-the Chinese government is willing to grasp many opportunities which might forward this goal. The Chinese government welcomes the potential economic gains which e-commerce and the Internet can bring to the Chinese economy and tries to propel the development of e-commerce in China; it is clear that the Chinese government has a strong motivation to develop e-commerce in China.

Because of the characteristics of Internet, being virtual, open to every one in the world, some immoral behaviors, even crimes, happen on Internet, which harm the state interest and state security. Not only China, but also other countries in the world are facing with these problems. In the wake of the increased use of new information technology in business, adoption of legal framework to regulate e-commerce is particularly important for China's economic development (Yan 2005). The Chinese government has drafted some regulations and policies on Internet usage and e-commerce since 1996. These regulations and policies were focused on access to the Internet, domain name regulation, Internet content regulation, encryption regulation and so on. The Chinese government issued some regulations or laws on e-contract, e-signature, taxation, authentication and so on to help push e-commerce development. In 2005 the Electronic Signature Law was issued in China. It is a set of rules to deal with the most activities in e-commerce and have generated the most legal work in e-commerce in China (Yan 2005). However, the supporting legal system on e-commerce in China still can not solve some problems and uncertainties. The development of e-commerce calls for an adequate administrative and legal environment (Chen and Ning 2002).

In order to realize the administration of international link-ups of Internet in China, the Tentative Provisions on International Link-ups of Computer Information Networks (Computer Link-up Provisions) were promulgated in February 1996 and amended in May 1997. It set up a four-tier system for access to the Internet and designated the Ministry of Information Industry (MII) as the ultimate gatekeeper for transmission to and from the World Wide Web. At the top of this system is the international gateway, which is operated by the MII. The second tier is made up of four government Internet Service Providers (ISPs) known as interconnected networks: CHINANET (administered by MII); CHINAGBN (administered by the

Ministry of Electronics Industry); CERNET (administered by the Ministry of Education) and CASNET (administered by the Chinese Academy of Sciences). The third tier is made of private sector Information Service Providers (ISPs) or connected networks, which can only link to the Internet through the four government-interconnected networks and get a link-up business permit from one of them before they can offer services to users. The final tier is Internet user, which can be individuals, legal persons or organizations. Individual clients can obtain Internet access either indirectly from private providers or directly from one of the four government ISPs. Once connected to the Internet, Internet users must register with the local public securities authorities within 30 days according to the Work of Record of Computer Information Systems Linked to Foreign Networks Circular and the Internet Security Regulations.

2.1.2 Domain Name Registration

CNNIC handles the registration and administration of all domain names. The domain name rules, issued by the State Council, stipulate that domain names are available on a first-come-first-served basis. Web companies which intend to register domain names in China must meet certain requirements: (1) the applicant must be a registered organization in China (in the case of a foreign enterprise it must have a branch or representative office in China); (2) the main domain name server must be in China; and (3) the proposed domain name should not include an enterprise name or a trademark registered by a third party in China.

China's domain name system is facing some problems. Firstly, due to the popularity of dot.com domain names, some Chinese companies prefer a dot.com registration to a dot.cn one. Since October 1999, companies have been able to apply for a dot.com or a dot.cn registration. Secondly, at present CNNIC does not have effective mechanisms to deal with disputes over domain name registrations. CNNIC does not have the responsibility to check whether a requested domain name violates the trademark or existing usage rights belonging to another organization. If the owners of companies' name or trademarks raise objections to the proposed domain name registration, they must themselves provide evidence of registration to CNNIC.

2.1.3 Encryption

Encryption is considered as an important element of the infrastructure for electronic commerce. The emergence of strong encryption products and the expanded application and impact of encryption on the daily lives of citizens have alerted many governments to public safety, law enforcement, and national security risks associated with encryption. China is also one of them. In China, the National Commission on Encryption Code Regulations (NCECR) is the organization to monitor the domestic use of encryption. In October 1999, the State Council in China issued the Commercial Use Encryption Management Regulations (Encryption Regulations) and the State Encryption Management Commission (SEMC) announced the implementation of the Encryption Regulations on November 8, 1999. Under these regulations, all foreign companies must obtain approval from NCECR for their use of imported encryption products and local companies are only allowed to use Chinese-made, state-approved ones. The main reason for driving the Encryption Regulations in China is to keep Chinese national security and public safety.

2.1.4 The Secrecy Regulations

The State Secrets Bureau under the Ministry of State Security issued the State Secrecy Protection Regulations for Computer Information Systems on the Internet (Secrecy Regulations) on January 1, 2000. The Secrecy Regulations prohibit the dissemination, storing, and processing of state secrets by Internet-connected computer systems. The Internet police are charged primarily with combating Internet crimes ranging broadly from pornography to the dissemination of state secrets. The regulations cover all activities conducted through the Internet. All local Internet content providers (ICPs) are now obliged to routinely censor the content of their Web and expunge politically sensitive material.

2.2 Payment System

The importance of payment on-line is unassailable in e-commerce. In e-commerce the ownership of goods can be transferred only when the payment has been finished. One of the advantages of e-commerce is its convenience and quickness without face-to-face business. Internet purchases are generally credit card transactions, which is quite a contrast to China's cash-based consuming culture.

A survey about the payment methods for on-line shopping among the Internet users in China shows that 73.8% of Chinese consumers would like to pay online with credit cards or debit cards, 28.1% by cash and carry, 15.2% by transfer money from bank and 2.0% by other methods. The primary obstacles of online shopping among them are as following: lack of security of the transaction 61.5%, the quality of purchasing products, after-sales service can not be guaranteed 45.7%, inconvenient payment 21.7%, delivery time is not satisfied and the distribution channel is not expedite 10.7%, unattractive price 10.2% and unreliable information 8.3% (CNNIC 2006).

Although analysts agree that e-commerce growth in China will be great, higher growth is stymied by the lack of nationwide credit card network. The use of credit cards requires an infrastructure capable of handling electronic payments. China's standard electronic payment infrastructure creates a somewhat formidable obstacle. In China twenty banks have issued their own bankcard and most of the bankcards are debit cards. Cash, instead of credit cards, is the dominant payment method, which stems from the lack of credit system. In China the phenomena of bilking or defaulting the loan to the banks exists among the enterprises, which may stem from the malpractice of the regime or the unhealthy legal system.

According to the statistics conducted by the China Unionpay, about 1 billion bank cards have been issued in China including debit card and credit card (Netease 12.08.2006). Most of the debit cards and credit cards can be used to pay online. It is common that 3 to 5 bank cards are held at hand for Chinese people. In China the bank cards can only be accepted by the issuing bank in the issuing province. No national bank cards are issued in China. Compared to debit cards, the amount of credit cards issued in China is still very small. According to the statistics of China Unionpay about 10 million credit cards had been issued in China until the end of 2004 (Netease 12.08.2006). In China on one side some people lack credit cards to pay online. On the other sides those who have credit cards worry about the potential risks of using their credit cards to pay online.

China lacks a centralized settlement system. In China different banks issue their own credit cards and the cards can only be used in certain shops, restaurants and hotels, etc. All the commercial banks in China do their business in their own way. It results in the different protocols used in different banks. In China there are four main commercial banks offering on-line payment service, which are China Merchants Bank, Industrial and Commercial Bank of China, Bank of China and People's Bank of China. Different technological standards are used in the banks in China, which prevents them from cooperating with each other. Moreover it also lowers the whole on-line service quality of banks in China.

In China payment systems remain a major bottleneck for e-commerce development. Chinese government still needs to take effective measures to develop the systems.

2.3 Logistics systems

Another severe constraint on the development of e-commerce in China is the inefficient logistics systems. The local logistics system in China is poorly developed. China's primitive and unreliable distribution capabilities present additional difficulties to the development of e-commerce in China for large-scale B2B and small-scale B2C transactions. In fact, the development of delivery and transaction infrastructures is out of the reach of Internet companies in China. Many e-commerce companies in China are forced to outsource distribution service. The Chinese Post Office is one alternative channel, which covers 2300 cities in China and 200 cities abroad. However, it seems not able to meet the need of e-commerce in China. Chinese Post Office is inefficient and in lack of staff skilled in e-commerce. Some foreign competitors have joined in this industry, but the cost they charge is excessively high for an ordinary online shopper.

In on-line shopping, people usually would like to choose low price delivery methods. Postal delivery seems to be the best alternative for consumers in China. A recent survey on delivery service for on-line shopping conducted by CNNIC shows that most of the Internet users would like to choose post system in China to offer delivery service (CNNIC 2006). Underdeveloped transportation infrastructure, fragmented distribution systems, limited use of technology in the distribution and logistics sector, regulatory restrictions, and local protectionism, all result in the inefficiency and unreliability of logistics in China. Logistics service still needs more time to develop and meet the requirements of e-commerce.

Besides the above-mentioned main constraints of e-commerce development in China, there are some other factors which impede development of e-commerce in China, for example the lack of high-skilled e-commerce talents, the uneven Internet development in different areas in China and so on (Haley 2002).

3. CONCLUSION

It is very likely that China will be the biggest Internet market in the world in the next several years. There is great potential in e-commerce in China. Despite all this optimism, there is still a long way to go for the development of e-commerce in China. E-commerce in China is still in its formation stage. Compared to some countries where e-commerce has developed very well, it takes more time for e-commerce to go into the next stage in China because of many local constraints. We need to be aware that e-commerce is influenced by the environmental restraints, such as the government regulation, the payment system, and the logistics systems and so on. That is why e-commerce in China does not grow as fast as in Europe and in the U.S. However we should also see the opportunities in e-commerce market in China. With the improvement of the supporting industry, the improvement of the information infrastructure and some e-commerce strategies to particular situation of e-commerce, e-commerce in China will develop much better. Of course e-commerce should go step by step, which can not be completed in a short time. There is still a long way for China to go.

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