The factors that influence electronic payment adoption by SMEs in two cities of China

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by

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Declaration

Hereby I, *Guo Dong Hu*, declare that "*The factors that influence electronic payment adoption by SMEs in two cities of China*" is my own original work and that all sources have been accurately reported and acknowledged, and that this document has not previously in its entirety or in part been submitted at any university in order to obtain an academic qualification.

Full name: Guo Dong Hu……..Date: June 2008

Signed: ……

Key words

Electronic payment (e-payment)

Small to medium sized enterprises (SMEs)

Electronic commerce (e-commerce)

The security of electronic payment (or electronic commerce)

Information technology (IT) security

Commerce security

The social legal protection

The adoption level of electronic payment among Chinese small to medium-sized enterprises

The traditional commerce culture of China

South Africa

Abstract

Electronic payment (e-payment) processes were introduced into China in 1998. Expansion however did not really begin until 2005 when the country entered a period of rapid growth. The development of e-payment services accelerated the quick growth of the online market now using e-payment as its preferred settlement method. This expansion, compounded by burgeoning e-commerce-driven needs, created enormous market volumes and profits, thus further stimulating e-payment growth. The e-payment market share, however, remained low – at best achieving no more than 2% of the total online market turnover.

Business to business (B2B) e-commerce accounts for about 95% of total transactions in the online market – hence the importance for enterprises to develop related systems. China has about 31 million small-to-medium sized enterprises (SMEs), accounting for 99.6% of total businesses. They create 55.6% of GDP value of goods and services. Since big enterprises routinely use their own e-payment platforms in daily transactions the development of a viable e-payment industry is dependent upon these SMEs. However the demand of e-payment systems from SMEs appears less than the demand for e-commerce. This raises the questions: why do not more SMEs make use of e-payment technologies, and what factors block the adoption of e-payment amongst SMEs.

This empirical study involves the preparation and administration of a survey instrument, based extensively on the literature. The questionnaire was carefully developed with 35 items concerning the possible factors that may influence e-payment industry development. It was administered in printed format. The completed questionnaires were collected from respondents in two Chinese cities containing SMEs of different size and type. The study population consisted of 123 available responses. Quantitative research was used in subsequent data analysis, and comparisons were made between the related survey results. The findings were also compared with the South African online market to search for significant trends or implications for similar enterprises in other developing countries.

The findings were reasonably consistent with the literature. Security concerns and low e-payment usage levels were found to be the most important factors that influence e-payment adoption. Expanding usage should lead to better e-payment adoption, ultimately resulting in the effective development of the industry. Further development of e-payment adoption was

found to be correlated with e-commerce growth, since when complimented with an ecommerce capability, SMEs are more likely to adopt e-payment methods. The adoption of e-payment was found to vary with region and industry. Adoption was better in more developed regions with established industries .L-time trading SMEs were generally found to have higher e-payment adoption levels.

South Africa and China have similar global online market challenges, as they are both developing countries entering the same era of e-commerce development. Security concerns, low e-payment usage levels and a general resistance to change are factors influencing e-commerce development in both countries. While an expensive telecommunication service appears to hamper the development of the South Africa online market, this is of lesser concern in China. E-commerce adoption by Chinese enterprises was found to be mainly for marketing purposes, while reduction of transaction costs appears to be the driver for South African online businesses. The differences between these two countries creates opportunities. It is useful therefore to compare experiences for the learning purposes of enterprises in both countries.

The study findings have implications for both theory and practice. The findings will inform and encourage e-payment systems providers, bankers and software developers who may then introduce services better tailored to meet client needs, enabling them to realise the full potential that electronic payment has to offer. These factors also significant for South African and other developing countries where parallels may be found and similar solutions sought.

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DEDICATION

TO MY PARENTS

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CHAPTER 1 - INTRODUCTION

1.1 Introduction

Notwithstanding the rapid growth of the Chinese online market, its electronic payment (e-payment) industry remains in its infancy. The reasons are many and obscure. There is value in identifying the practical barriers hindering growth. Knowing what the barriers are may contribute towards increased e-payment adoption. On the surface it may appear that concerns such as security, legality, adoption levels and the culture of traditional commerce. Chinese commerce practice may influence e-payment adoption by small and medium sized enterprises (SMEs). This study examines these problems to determine the main hindrances to adopting practices that have become routine for its Western counterparts. An introduction to this study follows in this chapter.

1.2 Background

A survey of the Chinese e-payment[1] service provider performance in 2005 shows an increase in the availability of e-payment service providers. For example, one key player, the RongTong Company, released its YeePal Electronic Payment Platform for business users on April 7; another, the YunWang Company, produced Cncard.com Online Payment Platform for business users on May 12. The world's largest online payment business, PayPal, began operations in China on July 11 with a Chinese version of PayPal Online Payment Service. PayPal was a direct challenge to the Alipay.com payment platform of Alibaba.com Electronic Commerce Company. The purpose of these e-payment initiatives was to service the needs of the emerging electronic commerce (e-commerce) market (CCW, 2005).

In order to compete in the e-payment market, China's major state-owned commercial banks launched their own online banking services in that same year. This act was in response to the diversification of e-payment market by the third-part e-payment companies (CIW, 2006).

As a result of these and many other related developments occurring in the e-payment market in China that year, 2005 was labelled the “Chinese year of electronic payment”.

[1] E-commerce, e-payment and their differences, as well as other terms are explained in more detail in the next chapter.

Chinese e-commerce transactions in 2005, which amounted to $US95billion, is comparable with the 54.2% growth achieved in 2004. Business to business (B2B) e-commerce transactions accounted for 95% of total e-commerce transactions. The e-payment market also flourished along with the rapid growth of e-commerce. The Chinese e-payments market scale reached $US21billion in 2005, which is comparable with the more than 100% growth achieved in 2004. However, the development of the e-payment market lagged well behind e-commerce. Only 3% of total e-commerce transactions were paid online (e-payment), which is less than 2% of the total online market transaction value (CCID, 2006).

China has more than 31 million SMEs, accounting for 99.6% of total enterprises, and 55.6% of total value of goods and services produced (GDP). However, in 2005 only about 0.5 million SMEs, amounting to less than 2% of the total number of SMEs in China, regularly used e-commerce for trading. That year, e-commerce volumes for SMEs exceeded $US38 billion, accounting, however, for only 3.5% of total SME commerce (MCC, 2005).

E-payment is gaining greater acceptance, but the use of paper money is still significant in many sectors of the economy today. The use of electronic methods is positioned to become the dominant form of payment over the next decade, as economic forces ultimately encourage consumers and merchants to adopt this form of payment (Andrieu, 2001).

E-payment was developed from the instrument of e-commerce, as a payment method in the online market. E-payment has become important in the development and successful implementation of e-commerce (Tsiakis & Sthephanides, 2005). E-commerce can be described as “doing business online”. The advantages, such as expanding business at low cost for SMEs, encourage the rapid adoption of e-commerce by SMEs. Competitiveness of SMEs is also to some extent influenced by the adoption of e-commerce (Yeung, Shim & Lai, 2003).

These factors combine to provide the focus for this study.

1.3 Research topic

Given the size and complexity of the subject the practical research topic is:

The factors that influence electronic payment adoption by small to medium sized enterprises (SME) in two cities of China

This study will refer specifically to the reasons why SMEs are not willing to use e-payment as their first-choice method: the reasons hampering e-payment adoption.

In order to adequately bind the scope of this study, samples will be taken from two major commerce cities: BeiJing and JiLin. BeiJing is the capital of China, and JiLin is a medium sized city in the Northeast of China. These responses will be compared.

1.4 Research object

E-payment, as an alternative to the traditional payment method of SMEs, is becoming increasingly popular. However the development of e-payment is also closely linked to e-commerce, as this sector would generally use e-payment as its preferred payment method. SMEs have little interest in online e-payment if they are not Internet-capable (Andrieu, 2001). On the other hand more and more Chinese SMEs are joining the online market to grow their business. They are also looking for global trading partners. These factors are increasing the demand for online payment, and thus driving the demand for e-payment systems (CCID, 2006).

1.4.1 Electronic payment

Electronic payment refers to payment fulfilment via electronic means. The scope of e-payment in this study is extensive. It includes the use of different forms of payment such as credit/debit cards, electronic cheque accounts, smart cards, personal payment services (PPS), online banking, and digital money (Andrieu, 2001; Yang, 2005).

1.4.2 Electronic commerce

Electronic commerce is analogous to a marketplace on the Internet. E-commerce consists primarily of the distribution, buying, selling, marketing and servicing of products or services over electronic systems such as the Internet and other computer networks. The scope of e-commerce in this research includes “low level” usage, for example: the early use of e-commerce to communicate online, do data collection online, design websites for enterprises, or online payments (Barry & Milner, 2002).

1.4.3 Small to medium sized enterprises (China)

SMEs in China refer to a business with less than 2000 employees or $50 million in consolidated annual revenue (MCC, 2005). To distinguish from "micro-enterprises", this study defines SMEs as enterprises that have more than ten employees.

1.5 SMEs in South Africa

This study includes a brief review of the implications for South African SME counterparts. The survival and development of SMEs in South Africa is possibly more difficult than those in China due to technology and labour issues. Nevertheless, SMEs are still important to the South Africa economy (Gumede & Rasmussen, 2002). As with other small sized enterprises in developing countries, South Africa SMEs share similar problems with Chinese SMEs during their early growth phase and as they enter the global markets. The importance of online markets in introducing manufacturers to global markets is being recognized by more and more South African SMEs. E-commerce technologies are becoming increasingly important for their development and survival (Moodley, 2003). Similar challenges of a competitive environment and global online markets face both South Africa and Chinese SMEs, therefore the research into Chinese online market characteristics could have a significant impact on the development of local enterprises. It is therefore useful for local SMEs to understand and familiarize themselves with developments in the Chinese online e-commerce industry. Such knowledge could prove beneficial, as South African enterprises are either doing increasingly business with Chinese firms or competing with them in the online market. This study therefore includes a brief review of the implications for South Africa e-commerce development.

1.6 Aim of research

This research aims to identify the practical barriers to increased use of e-payments.

1.6.1 Research questions

The main research question becomes: What are the factors influencing the adoption of electronic payment methods by Chinese SMEs; and what are the possible implications for South Africa companies.

Secondary questions include:

- How could security problems influence SMEs e-payment development;
- How could legal protection problems influence e-payment development;
- How could e-payment adoption level influence e-payment development; and,
- How could commerce culture influence e-payment development?

1.7 Rationale for the study

Increasing competition from both internal and global market has driven SMEs to adopt e-commerce processes in order to strengthen their competitive ability and exploit online market opportunities. E-commerce is widely distributed, and in various forms, has been used in global transactions for more than three decades (He, Duan, Fu & Li, 2006). As the payment method of e-commerce, e-payment has developed following on e-commerce. However, the e-payment adoption level by SMEs remains low. Although e-payment has gained greater acceptance during the development of trading online, the use of traditional payment is still significant in the economy today (Andrieu, 2001).

The e-payment market should benefit from this study. Online payment companies need to understand the reasons for SME hesitation or unwillingness to participate. Since SMEs represent over 95% of enterprises in most countries (MCC, 2005), the potential e-payment market is vast. The findings of this research will help online payment companies understand the reasons for the blockages and provide them with some ways of improving their e-payment service and helping them grow. As this study will collect information relevant to the e-payment industry with its enormous market space and financial value, a significant impact on society and finance could be made.

The findings will also inform and encourage e-payments system providers, bankers and software developers who may then introduce services tailored to meet members' specific needs, enabling them to realize the full potential that e-payment has to offer. People have been able to trade online for several years because of the advances made in the development of the World Wide Web (WWW) and information technology (IT). Searching for business, purchasing, and marketing online help growing a business quickly and powerfully (Yu, 2006). As the instrument of online trade, e-commerce has been increasing rapidly in recent years,

global trading and low costs of finding business have made the online market attractive for enterprises.

SMEs make substantial contributions to global economies. It is estimated that they account for 80% of global economic growth (Stockdale & Standing, 2004), which represents over 95% of enterprises in most countries (Istanbul, 2004). However, when compared to large enterprises SMEs have many limitations such as their small size, their limited resources, their limited ability to identify market and to find new international customers and suppliers (Moodley, 2003). These limitations hinder their development, hence a good reason why SMEs should apply e-commerce technologies and gain the concomitant benefits. The advantages of e-commerce include adding new distribution channels, increasing overall sales, and most importantly, reaching new businesses around the world at affordable costs (Ouyang & Li, 2005). Enterprises seemingly need to be involved in e-commerce in order to fully understand the trends of market changes and to grasp the market opportunities (Labuschagne & Eloff, 2000).

With the rapid development of e-commerce, the traditional methods of payments are no longer appropriate for online transactions (He, Duan, Fu & Li, 2006). E-payment was introduced to e-commerce for the advantages of cheaper, quicker and wider range of remote transactions involving large sums of money. As stated before, e-payment is closely linked to e-commerce and plays an important role as the payment instrument in the development of e-commerce (Andrieu, 2001). The lack of online e-payment could therefore hinder the successful implementation of e-commerce (He, Duan, Fu & Li, 2006). However, most people seem to be used to using cash and cheques. Even though the largest portion of money is held today in electronic form, consumers, as well as a large majority of SMEs, still rely on paper money for a substantial share of their daily transactions (Andrieu, 2001).

Due to their share in the global economy, SMEs are an important part in e-commerce, as are their larger counterparts (Barry & Milner, 2002). The adoption of e-payment by SMEs may serve to encourage the e-payment industry to develop rapidly. This is a topic worthy of study.

1.8

According to the Internet Payment Research of China (2006) report, the e-payment industry was expected to enter a long period of growth from the beginning of 2007. The overall size of the market is expected to exceed 12 billion dollars in 2008 (iResearch, 2006). Security and credit are still the key factors hindering the development of the e-payment industry. More than 60% of Internet users fear for the safety of their bank accounts. The lack of legislation on e-payment increases the concerns of e-payment credibility. Thus, the confidence in e-payment policy and technology is still weak (iResearch, 2006). SMEs constitute 99.8% of a total number of Chinese enterprises. However, the use of e-commerce is less than 3%. In realizing the need for e-commerce by SMEs, the process of developing systems and creating web sites was not a problem, but the adoption process has become a bottleneck. The promotion of e-payment use by SMEs has become the focus of attention for China's e-payment industry (iResearch, 2006).

1.9 Perspectives on security, risk and trust

There is considerable literature[2] that highlights the importance of SMEs in the economic development of a country. E-commerce is critically important for enterprises and has been identified as the most important instrument for SMEs entering the global market (MCC, 2005). However, few empirical studies on the importance of e-payment have been done, and rarely has attention been paid to the factors that influence the adoption of e-payment by SMEs for their transactions.

The principal barriers to the adoption of e-payment by SMEs include the insecurity of e-payment (or e-commerce), the culture of commerce, the lack of social-legal protection and the level of the electronic development in SMEs.

1.9.1 The security of electronic payment

Security with regard to e-payment can be categorized into commerce security, such as security concern with traditional commerce risk (commerce fraud and the quality uncertainty problem) and information technology (IT) risk, termed "Internet transfer risk" and "payment

[2] The definitions are discussed in more detail in the next section and a full literature study follows. This section simply introduces some academic perspectives.

software risk" (Tsiakis & Sthephanides, 2004). As an online payment instrument, e-payment security is closely linked to e-commerce security and IT security.

Organizations face significant risks of fraud security and almost all business transactions factor in the possibility of being cheated (Ba, Whinston & Zhang, 1999). Payments fraud was widespread and broad-based in 2005, affecting both large and small organizations and showing no signs of letting up. Over two-thirds of organizations were targets of attempted or actual payments fraud in 2006 (AFP, 2006).

Fraud is one concern, but another problem for online transactions is related to information on product quality. Asymmetric information makes it difficult for buyers in the electronic market to have a full knowledge of the product quality prior to purchase (Ba, Whinston & Zhang, 1999). The counterfeiting and distribution of below-par products is the major problem of commerce security, which discourages those willing from transacting online (Alev & Vincent, 2004).

The information technology (on which information regarding e-payment or e-commerce is conveyed) has security breaches. These involve the stealing of consumer or merchant devices and creating fraudulent transactions or messages that are accepted as genuine, altering data stored on or contained in messages transmitted between devices, or altering the software functions of a product. All these different IT threats have potentially serious financial implications (Yang, 2005). As in the case of other payment instruments, e-money can be stolen or used illegally. Transfers of e-money over computer networks can be intercepted and manipulated. Losses could also result from accidents, damage to electronic devices, operational errors or malfunctions, and the weakness of payment software (Andrieu, 2001). Systems failures at banks and third-party processors may also interfere with an organization's payments processes. In 2005, 13% of organizations surveyed reported that they lost productive time, or were unable to meet their financial obligations, because of systems failure at their bank or third-party processor (AFP, 2006).

1.9.2 Legal protection risks

The legal risks affect the adoption of e-payment and arise from the violation of laws, regulations or prescribed practices, such as money laundering, customer disclosures, and privacy protection, amongst others. Legal risk may also arise when the legal rights and

obligations of parties are not well established (Yang, 2005). Electronic transactions are likely to attract the attention of criminals because of the open access that characterizes the Internet. Such crimes are usually difficult to detect and prosecute, and supporting evidence may be inadmissible, even though law enforcement authorities know how cyberspace crime is committed, because of the lack of an adequate legal framework (Andrieu, 2001).

Current laws are often ill suited or incompatible with the way electronic payment instruments and systems work (Vartanian, 2000). As rules for implementing redress are not clear in laws, consumers may suffer huge loss through impersonation, forgery or theft of card by a third party (ECOM, 2003). The delay of electronic laws may hinder the development of e-payment.

1.9.3 Level of electronic payment adoption of Chinese SMEs

As a new network payment instrument e-money faces a steep uphill battle at the initial stages of its development. The development of e-payment may take a long time. The adoption or usage level of e-payment is low at the beginning of e-payment expansion, which is an important impediment to e-payment development. Generally the more people use e-payment, the more merchants will accept it and the more appealing it becomes for hesitant consumers. The general use of e-payment, however, cannot occur unless the installed base exceeds a minimum level (Andrieu, 2001). Pioneering research has also found that industries that have well-developed relationships with the online market are more eager to adopt e-payment, and hence have higher levels of e-payment adoption (Tsiakis & Sthephanides, 2005). The more developed regions which have the best economic markets and Internet technology will have a much higher e-payment adoption level than other regions (Zhang & Li, 2005).

1.9.4 The Chinese traditional commerce culture

There are significant cultural differences between the way Western and Chinese firms cement their business deals (Lai, Humphreys & Sculli, 2001). Culture affects all stages of consumer decision-making by influencing the buying behaviour. The cultural values influencing role behaviour is latent in the more traditional countries and manifests when countries modernize (Su & Adams, 2005). The cultural characteristics of China pose a great challenge and act as a major impediment to electronic development. This might be a serious hindrance to the growth and wide scale acceptance of e-commerce (Alev & Vincent, 2004). The Chinese culture places a strong emphasis on interpersonal friendship and trust in business deals, with details and formal contracts being regarded as secondary in nature (Lai, Humphreys & Sculli, 2001).

Trust is also essential in global e-commerce. Trust counteracts the fear of opportunistic behaviour and as a result is likely to limit the transaction costs associated with an electronic exchange. Vitality requires trust to make it work and technology alone is not enough (Ratnasingham, 1998). Trust is the enabler of confidence that something will or will not occur in a predictable or promised manner. Strong and long-lasting business relationships have always depended on trust. The majority of trust theories are built upon the basis that there is a history of exchanges between partners (experiences), but the fluid and dispersed nature of the online market makes the issue of trust complicated due to the difficulty of scaling the reliability of participants (Tsiakis & Sthephanides, 2005).

Trust is a binding force. In the Chinese commerce market, some contracts may change and promises may be broken. More generally, however a strong individual relationship among the market players is often the only ingredient that is required for the implementation of a contract. This concept is termed "guanxi", which refers to a particular kind of social traditional commerce networking based on trust (Alev and Vincent, 2004). "Guanxi" is also a general term that describes personal commerce relationships in China (Lai & Humphreys, 2001). As success of doing business in China also depends heavily on the quality and sometimes the quantity of personal relationships (Alev and Vincent, 2004), "guanxi" is an essential element in the network and can influence the behaviour of all Chinese merchants. China, being a "high-context and low trust country" (Zhang & Li, 2005), means negotiators favour face-to-face transactions in building trust, which in turn is a precursor to successful business relationships (Yu, 2006). This is the reason why Chinese people rely on face-to-face contact more than in other cultures (Alev and Vincent, 2004). The "remote" character of the online market is not readily accepted. It only serves to increase the apprehension of commerce risk by SMEs.

1.10 Research Methodology

The literature shows that the empirical method proposed for this study is commonly applied when investigating topics such as adoption and use of technology (Jyoti & Yogesh, 2005). Since e-payment is also a technology applied in a similar way, in this research such an approach is also valid. The data collection was quantitative. The instrument applied was a literature-based questionnaire. Quantitative research designs strive to identify and isolate

specific variables within the context of the study (Graham & Hair, 2000). Quantitative analysis techniques will be used in the study to analyze the findings.

1.10.1 Survey Instrument

A questionnaire wasl be developed and administered. This questionnaire, based on the literature, will contain some questions relating to the technological readiness of enterprises, the security of e-payment (or e-commerce) when (or after) adopting e-payment, the influence of Chinese culture, and the level of e-payment technology deployment amongst peers, the socio-legal legislative environment for SMEs, and other factors that may influence the adoption of e-payment. The questionnaire was be forwarded to a random sample of more than 100 SMEs.

1.11 Sampling and Limitations

SMEs in China form the object of the study. However since the country is large, data collection will be confined to SMEs in two cities, BeiJing and JiLin, the former which represents a more developed region, while the later represents a developing region. Associates working in the Chinese government tax department will assist with questionnaire distribution.

To get the best response possible, the questionnaire was be simple, quick to complete yet detailed enough to provide the requisite information. However, since the purpose of the research is to determine the main factors influencing SME e-payment adoption the questions will be focused on the research objectives.

1.12 Conclusion

With the rapid development of e-commerce, e-payment has grown quickly as an online payment method. The lack of e-payment could therefore hinder the successful implementation of e-commerce. The growth of e-commerce in the global market has resulted in an alternative to traditional commerce and the importance of e-payment is therefore is clear.

Although e-payment has existed for more than three decades, the adoption levels in developing countries are still low. The high performance of e-payment did not occur until 2005, and then it entered a quick growth period up to the present. However, the adoption

level is still low, and there are many factors influencing e-payment development. The principal barriers include the insecurity of e-payment (or e-commerce), the culture of commerce, the lack of social-legal protection, and the level of the electronic development in SMEs.

Data will be collected from two cities of China by using a well-designed questionnaire and quantitative research will be used for analysis. The findings of this study will helpful for the development of the e-payment industry of China and also have significance for South Africa, as they both are developing countries.

This chapter provided an introduction into the problem and introduced certain concepts. In order to better clarify these, the next chapter explains the terms used in more detail. The third chapter covers the literature study.

CHAPTER 2 - DEFINITION

2.1 Introduction

As the development of Internet technology expanded, e-money became an accepted online payment method. However, even though it has been in use in many different forms, on many different technology platforms for more than three decades, the general adoption of e-payment is still at a low level in China, especially amongst SMEs. There are many factors that impede e-payment adoption. There are many unfamiliar specialized terms used especially in the information technology field. This chapter is an explanation about related key words and concepts used in this study. The first are money and payment.

2.2 The definition of other relevant terms

2.2.1 Electronic money

Since the invention of money, its successive incarnations (from beads to gold and, more recently, to digital) have provided opportunities for major changes, not only in the way transactions are carried out, but also in how wealth is measured and stored, and in the nature and scope of economic activities (Andrieu, 2001). The introduction of the online market and subsequent development of e-commerce required new online payment instruments. This gave rise to the development of electronic money or "e-money". The emergence of e-money payment instruments provides additional benefits in the paper money world, notably in terms of efficiency and convenience for online transactions (Andrieu, 2001).

Electronic currency has been widely used throughout the world, mostly between institutions for more than three decades. Electronic currency is present today in many segments of the payment systems in the guise of electronic data interchange (EDI) systems, inter-bank payment networks, automated clearing-houses, automated teller machines (ATM), point of sale debit card and credit card networks. Most electronic business transactions today are carried out using electronic data interchange systems, which use proprietary software to connect the purchasers' and the suppliers' computers and in automating the transaction processing and information exchange (Andrieu, 2001).

2.2.2 Electronic commerce

As an instrument of trading online, e-commerce has many definitions in different perspectives. E-commerce is the delivery of information, products/services, or payments via telephone lines, computer networks, or any other means from an Internet perspective. The business process perspective considers e-commerce an applied technology towards the automation of business transactions and workflows (Su & Adams, 2005). From a service perspective, e-commerce is a tool that addresses the desire of firms, consumers, and management to cut service costs while improving the quality of goods and increasing the speed of service delivery. From an online perspective, e-commerce provides the capability of buying and selling products and information on the Internet and on other online services (Barry & Milner, 2002).

All these definitions are valid but differ in focus. As a general definition, e-commerce is the ability to perform transactions involving the exchange or use of goods or services between two or more parties using electronic tools and techniques (Su & Adams, 2005). This definition is the one preferable for application in this study since most Chinese SMEs are still at very low e-commerce usage levels. Any SME having even the simplest usage of e-commerce functions for commercial purposes will be viewed an adopter in this study.

2.2.3 Electronic payment

Electronic payment, also known as electronic funds transfer, refers to using computer and networking, supported with specific information of electronic data, to replace the traditional payment instruments. It also has the ability of real-time payment (ChinaECIaw.com, 2006). The main features of e-payment include using electronic data transfer to complete information transmission, using an open system platform, low cost and high efficiency. The form of e-payment includes credit cards, electronic cheque accounts, smart cards, personal payment services (PPS), online banking, and digital money (Andrieu, 2001).

Since the debut of Mondex, there have been many forms of electronic payment or "e-payment" products and systems introduced to the public. These include VisaCash, Digicash, CyberCash, Millicent, Proton, PayPal, eMoneyMail, BillPoint, Payme.com, PayTrust and Propay. At the same time, e-payment products and systems are beginning to infiltrate the payments landscape (Vartanian, 2000). Organizations appear to be more willing to convert the

majority of transactions from traditional payment methods to e-payment in order to expand their markets and economies (Yang, 2005).

Not everyone uses e-payment. Despite its early successes, e-payment's domination of paper money is still far from over. Cash and non-cash paper money instruments still dominate retail transactions and are extensively used by small to medium sized firms (Andrieu, 2001). Businesses and consumers are comfortable with traditional forms of payment infrastructure, which they understand and are well-established (Vartanian, 2000). Most business-to-business (B2B) payments, especially by smaller organizations, continue to be made in cash or paper cheques (AFP, 2003). Businesses and consumers are slow to change their financial habits (Vartanian, 2000).

2.2.4 Small to medium-sized enterprises

Small to medium sized enterprises (SMEs) are the most common form of business, but researchers always have difficulties in satisfactorily defining and separating them from larger firms. Most SMEs are not just smaller organisations but businesses that are often managed and run in ways fundamentally very different from large corporations (Michael& Thierry, 2004).

There are essentially two broad ways of classifying a business. The first approach focuses on the qualitative or intangible characteristics of the firm, that is, the way in which it does things, and how it is managed. The other approach is to focus on the quantitative or tangible characteristics of firm, which includes the size of firm or the number of employees (Alev & Vincent, 2004). As a general definition, a small business can be said to be an independent firm, which is usually managed, funded and operated by its owner, and whose staff size, financial resources and assets are comparatively small in scale (Michael& Thierry, 2004). The 2003 Economic and Trade Committee of China define a company as a small to medium sized enterprises (SMEs) if it satisfies one of the set in table (ETC, 2004):

Table 2.1 The definition of Chinese SMEs

In Industry ➢ Less than 2000 employees ➢ Less than 38.5 million dollar of total sales per year ➢ Less than 51 million dollar of total assets per year
In Construction trade ➢ Less than 3000 employees ➢ Less than 38.5 million dollar of total sales per year ➢ Less than 51 million dollar of total assets per year
In Wholesale and retail trade ➢ Less than 500 employees ➢ Less than 19 million dollar of total sales per year
In Transport and postal service trade ➢ Less than 3000 employees ➢ Less than 38.5 million dollar of total sales per year
In Accommodation and catering trade ➢ Less than 800 employees ➢ Less than 19 million dollar of total sales per year

However, in order to distinguish micro-enterprises[3] of China this study refers to SMEs as businesses with less than 2000 employees or $50 million in consolidated annual revenue, and should have more than ten staff members.

2.2.5 Certificate authority

A certificate authority (CA) is an authority in a network that issues and manages security credentials and public keys for message encryption. A CA issues digital certificates, which contain a public key and the identity of the owner. The CA also attests that the public key contained in the certificate belongs to the person, organization, server or other entity noted in the certificate. A CA's obligation in such schemes is to verify an applicant's credentials, so that users and relying parties can trust the information in the CA's certificates (Wikipedia, 2007).

2.3 Adoption factors

There are several adoption factors that have been explored by other studies. These may or may not have a bearing on the study. They are discussed below.

2.3.1 The security of electronic payment (or e-commerce)

Security is the condition of being protected against danger or loss. As a technical term "security" means that something is not only secure, but also has been secured. The security of

[3] Roberts and Wood (2002) refer Micro-enterprises as: "very smallest business organizations in the economy. They possess most of the characteristics of small business but probably in an exaggerated form."

e-payment (or e-commerce) in this research is mainly focused on two areas, IT security and transaction security. The former relates to network security, information security and data protection/privacy (e-Business watch, 2007), while the latter addresses the requirements for secure electronic commerce transactions (Ratnasingham, 1998).

2.3.2 Socio-legal protection

Legal risk arises from violation of laws, regulations or prescribed practices, such as money laundering, customer disclosures, and privacy protection amongst others. Legal risk may also arise when the legal rights and obligations of parties are not well established (Yang, 2005). This research (Section 3.6.2) explores the existing laws related to e-payment, the influence for e-payment industry, and analyses of the deficiencies of e-payment laws in China.

2.3.3 The adoption level of electronic payment amongst Chinese SMEs

E-payment is far from being accepted by consumers and businesses, many of which will not use it until they fully understand or absolutely need the technology (Vartanian, 2000). The low level of usage begets a huge problem of e-payment development and ultimately there is no need for the technology that no one uses (Andrieu, 2001). This research will analyse the adoption level of e-payment usage by SMEs based on size of firms, industry type and business location, according to the approach suggested by Mina and Galle, (Mina & Galle, 2003).

2.3.4 The traditional commerce culture of China

Culture in this context refers to national culture, which is the collective programming of the mind acquired by a country (Su & Adams, 2005). The most pronounced impact of culture lies in the influence of the populace on decision making and successful transaction. Two Chinese cultural characteristics trust in commerce and the specific relationship in Chinese business networks will be analyzed in this research.

2.3.4.1 Trust in commerce

Trust is defined by Mayer, Mayer, Davis and Schoorman (1995:712) as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustee, irrespective of the agility to monitor or control that other party". The importance of trust is based on the potential use of the technology to increase information sharing. Trust among the trading partners in electronic

commerce reinforces the prospect of continuity in a relationship and a commitment to extend an inter-organizational relationship (Ratnasingham, 1998).

2.3.4.2 The specific relationship in Chinese business networks

For the Chinese, the success of doing business depends heavily on the quality and sometimes the quantity of personal relationships. A strong individual relationship is often the indispensable ingredient required for the implementation of a contract. This concept is described before as "guanxi", which includes a particular kind of social networking based on trust (Alev & Vincent, 2004). Chinese societies are likely to act on a group basis rather than individually, whilst the Western societies, on the contrary, are more likely to act individually. The special relationships in Chinese business networks are therefore an important component when doing business because "guanxi" influences the transaction action (Ratnasingham, 1998).

2.4 Conclusions

There are many specialized words, especially in the electronic market, which are still new for most SMEs in developing countries. And there are lot of different about realization of electronic market and economic commerce between Western countries and developing countries. An explanation of related key words and concepts is therefore necessary.

The use of e-commerce by Chinese SMEs is at a low level as a method for entering the global market. So the use of e-commerce does not necessarily include e-payment. China, as a developing country, has a history, social system, commerce development, SMEs definition, online environment, legal protection in the online market, electronic market usage level, and commerce culture all deferent from Western countries.

This chapter reviewed some of the concepts introduced previously and provided definitions. Before the questionnaire can be constructed it is necessary to review the academic environment in order to better understand the research landscape. The next chapter covers the literature study, providing input into the development of the survey instrument.

CHAPTER 3 - LITERATURE STUDY

3.1 Introduction

This chapter is an overview of other authoritative viewpoints about the problems that influence e-payment adoption. Since 2005, e-payment in its present form started showing its power in the online market. SMEs remain unwilling to use these systems. There are some critical factors that hinder them from using the online payment market.

Literature used in this chapter is mainly from commerce and academic journals, University of Western Cape (UWC) database, government statistics, records, survey reports from other organizations or research institutions and websites. This chapter begins with a short review of developments in the industry.

3.2 The history of electronic payment

In recent decades, the pace of change from paper money to electronic transfer of funds has accelerated. The financial services industry was an early adopter of information technology, pioneering the automation of back-office information-handling processes in the 1950s and 1960s. However, the widespread use of electronic currency did not begin until early 1970s in North America and Europe, when automated clearing-houses (ACH) were set up to provide commercial banks with an electronic alternative to cheque processing (Andrieu , 2001).

In China, e-payment in its present form using Internet technologies dates back to 1998 when the China Merchants Bank introduced online banking services. After that banks started to offer online payment, mobile banking and online transaction services. Initially, banks totally dominated the e-payment arena and the premier payment model was the payment interface established by large enterprise users and banks. However, the payment needs of small to medium-sized enterprises grew and diversified and third-party payment platforms came into the field of e-payment, serving as a bridge between businesses and banks (PBC, 2005).

In 2005, the central banks of China completed the development of a large number of real-time payment systems in order to achieve real-time payment between commercial banks. A small number of payment systems were built during the same time so that the payment between

commercial banks could be effected efficiently by using any payment method and processed within a space of 24 hours through the system. The use of these systems greatly encouraged the development of e-payment in China (PBC, 2005). The e-payment industry maintained a high growth rate, but paper money still remains the main form of payment method in China. The e-payment industry is still on the first step of the ladder (CIW, 2006).

3.3 The evolution of electronic money

Electronic banking services are offered in two streams: e-money products, mainly in the form of stored value products; and electronic delivery channel products, or access products (Yang, 2005). E-money may be characterized as a form of currency. It has the same capability as paper money, cheque or other payment mechanisms. However, the payment method of e-money is quite different, as e-money is paid electronically, using a standard personal computer linked to the Internet to make a credit card payment or to transmit instructions for making fund transfers between bank accounts (Yang, 2005).

As a new payment method, e-money has its own unique features. These include electronic storage, electronic transferability, the use of a different payment channel, as well as different role and level of customer involvement. The value of e-money is stored electronically, although different e-payment methods use different technical specifications. Credit/debit cards, VISA cards or Mondex cards use a microprocessor chip embedded in a plastic card, while electronic cheque accounts or personal payment services (PPS) use specialized software installed on a standard personal computer linked to the Internet (Buck, 1997).

The value of e-money is transferred electronically in different ways. Mondex allows transfers of electronic balances directly from one consumer to another without any involvement of a third party. Credit/debit cards, Visa Cash or electronic cheque accounts need the help of the bank to clear the transaction from consumers to merchants, while the PPS user can only send money between PPS accounts (Buck, 1997).

Another feature of e-payment is the channel of payment. Common transactions between consumers and merchants are recorded in a central bank database, but some kind of e-payment methods allow consumer-to-consumer transactions, which can only be recorded on consumers' own storage devices (Andrieu, 2001).

The roles and functions of participants or parties involved in e-payment transactions are different from those involved in other forms of payment. The most common transaction occurs between consumers, merchants and banks while e-payment requires more parts or instruments to complete the transaction; such as computers with Internet, network operators and the necessary software (Yang, 2005).

One downside feature of e-payment is the possibility of having faulty software. The malfunction of the Internet or error operations by people involved that may hinder the execution of a transaction (AFP, 2003).

3.4 Methods of e-payment

3.4.1 Credit cards

A credit card was described as a plastic card embossed with the account number, initials and surname of the cardholder to which the account is assigned. The account makes provision for a credit limit that can be used to purchase goods and services and to obtain cash disbursements on credit (ABSA, 2008). Despite a slow start in the past, credit cards today capture a significant share of all retail transactions in most countries, including transactions on the Internet. Today, credit cards play an important role in online transaction (Andrieu, 2001).

3.4.2 Smart card

Smart card can be described as a plastic card that carries an embedded computer chip with memory and interactive capabilities, allowing it to exchange data with an electronic terminal at the point of service (Worthington, 1996).

The main feature of smart card is that it is entirely chip card-based and is unique in that it can accommodate card-to-card transfers, and so it allows not only for payment from consumers to merchants, but also for transfers between consumers. It is the closest of all the digital cash systems to real cash. Money can be transferred indefinitely, from card to card without requiring central clearing or verification by a bank or a processor (Andrieu, 2001).

3.4.3 The "Visa" card – (the example of a credit card)

The Visa card is a branded credit card that enables a cardholder to obtain goods, services or cash from a merchant or acquirer (Ben, 2008). In contrast to a smart card, these card owners cannot transfer funds indefinitely from card to card. Hence, it may be viewed as a kind of pre-authorized credit card, rather than as real e-cash. A processing fee is charged for each merchant deposit. Moreover, the banks keep track of where the e-cash is for security reasons (Andrieu, 2001). Despite its limitations as an e-cash scheme, Visa cards may have more growth potential than smart cards because there are already more Visa cards in circulation than smart cards. More importantly, Visa has taken a flexible approach to its technology and is keen to promote interoperability with other e-purse schemes (Andrieu, 2001).

3.4.4 Electronic cheque accounts

Under an electronic cheque accounts scheme, the buyers issues electronic cheques to pay their bills, the receiver of the cheque sends it to the bank for confirmation and cashes it. Electronic cheque payment could provide an attractive alternative to credit cards for online payment as security is ensured, transaction fees are reduced, and this account allows for peer-to-peer payments (Andrieu, 2001).

3.4.5 Personal payment services

Personal payment services are a variant of electronic cheque accounts. Such services allow users to send money to anyone with an e-mail address, which makes it particularly attractive for consumers who wish to make auction purchases or shop online. This kind of service can be used in a national or an international market. Online merchants can also adopt it as a payment system for their online offerings. PPS offer security and privacy protection; sale receipts are automatically transferred to the merchant's regular bank account every night and sellers never need to see the account holder's credit card or bank account numbers (Andrieu, 2001).

3.5 The adoption of e-payment by SMEs

Both Internet penetration and the absolute size of the Internet population in China have increased dramatically, and will continue to do so. At the current growth rate, China is probably going to have the largest Internet user base in the near future and thus an enormous potential for the e-commerce sector (Yu, 2006). In addition, the smaller sizes of SMEs enable

these firms to be more adaptable and more responsive to changing conditions than larger organizations and to benefit from the speed and flexibility that the electronic environment offers (Stockdale & Standing, 2004).

E-commerce helps SMEs keep pace with a changing business landscape. In addition, SMEs also benefit by adopting e-commerce in global markets, ameliorated production methods and costs, enhanced communication, and reduced transaction costs (Stockdale & Standing, 2004). Delays in implementing an Internet marketing strategy would not only result in a loss of revenues but also in creating market opportunities for competitors, who would then build a stronghold in the virtual marketplace (Yu, 2006). With the rapid development of e-commerce, traditional payments methods are no longer appropriate for online transactions. As an emerging technology, online e-payment replaces the traditional payment method and plays an important role in the development of e-commerce (He, Duan, Fu & Li, 2006). As a critical element for the successful development of e-commerce, the future of e-money is closely linked to the future of e-commerce. However, the development of e-payment seems not to be closely following the rapid expansion of e-commerce. The volume of online transactions is still low; the lack of online e-payment is the bottleneck for e-commerce (Andrieu, 2001).

3.6 Key factors relating to the adoption of e-payment by SMEs

The growth of the online market has made the transformation from traditional commerce to electronic commerce. Money flow, material flow and information flow are the most important factors that determine the successful operation of the commercial process by enterprises (Tsiakis & Sthephanides, 2004). As an indispensable part of e-commerce, e-payment serves the same market and suffers similar problems regarding to the adoption by SMEs.

E-payment is a very recent payment channel for consumers, and is still at the early adoption stage. Although the potential of e-payment is enormous, the current market of e-payment is small (Laforet & Li, 2005). There are many critical issues which are obstacles to consumer adoption of online e-payment including security problems, legal protection problems, e-payment adoption level problems, and the Chinese commercial culture problem.

3.6.1 The security of electronic payment (or e-commerce)

The Report of the Electronic Payments Industry (CIW, 2006) has shown that insecurity issues rate among the most important barriers to e-payment market development. Compared with Western countries, the risk cost for Chinese SMEs is significantly higher. Missing participation in turbulent and risky online markets may result in the loss of a competitive position which, however, could be far less of a problem than the risk cost (Lai, Humphreys & Sculli, 2001).

Laforet and Li (2005) made similar findings regarding the perceptions and attitudes of SMEs in which security was found to be the most important factor that influenced the adoption of e-payment by enterprises. The advantages of e-payment such as convenience, ease of use, and access to a wide range of services freed from the constraints of time and place seem not to be of much importance to Chinese enterprises.

Labuschagne and Eloff (2000) distinguish online trading risk from business and technology risks. Figure 3.1 resents the online environment of the Internet, technology, and business risks. Business risk and technology risk involved in the online market environment overlap and cannot be clearly categorised as purely business or purely technology risks.

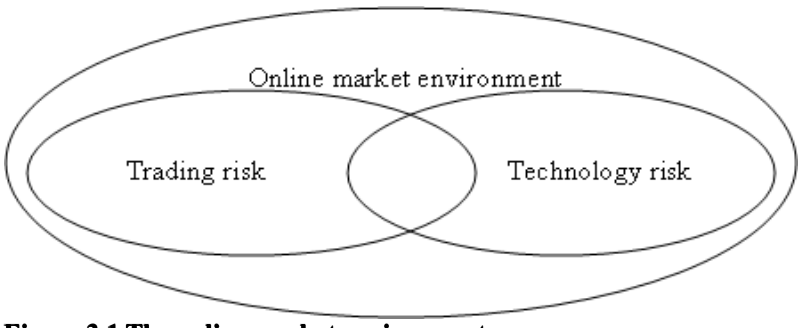

Figure 3.1 The online market environment

3.6.1.1 Technology security and online transactions

Tsiakis and Sthephanides (2004) found out that Internet technology security is one of the most important online trading risks. The IT on which the Internet is based is complex but the open standards make it difficult to secure the Internet. Sophisticated technology and equipment are required for this purpose. The Internet comprises a global technology linking millions of computers and people. The Internet is a very dynamic environment. It is almost impossible to

predict every action that could be executed on the Internet or the nature of the fraud risk an organisation might be exposed to. Such problems are even more difficult to predict or to identify. The dynamic nature of the Internet makes the security of online behaviour difficult to secure effectively (Labuschagne & Eloff, 2000).

Ratnasingham (1998) found that threats for network security also stem from an organization's internal networks (Intranet). The risk on the Intranet may come from the lack of proper configuration, and access or failure to closely monitor the network traffic. When the Intranet is connected to the Internet, the whole network is exposed to outside risk.

Labuschagne and Eloff (2000) also point out that the integrity of information communicated through the Internet is more important than the Internet channel itself. Information stored on the Internet can be read, altered, or even stolen by unauthorised people. Communications can be intercepted and personal services or even the entire network can be rendered unavailable (Ratnasingham, 1998). Andrieu (2001) suggests that e-money can be stolen or used illegally like any other payment instruments. Transfer of e-money over the Internet can be intercepted and manipulated like any other message. The attack could occur at the level of the consumer, the merchant or the issuer and could involve attempts to steal e-money, create fraudulent messages that are accepted as genuine, alter data stored on or contained in massage transmitted, or alter the functions of software. Security attacks would most likely be for financial gain, but could also aim to disrupt the system (Yang, 2005). Andrieu (2001) also mentions that losses could also result from accidents, damage to electronic devices, or operational errors or malfunctions.

Consumers may also be exposed to financial losses if the e-money issuer becomes insolvent. They may fear for their financial security when they choose to use e-money as they may be aware of problems such as misrouting, transmission failure, data corruption, and the failure of physical components at any point of the network (Ratnasingham, 1998). The Internet problems pose a threat of having e-money credit information being stolen and used without the owner's knowledge or permission. The fear may become widespread with the growth of the e-market (Yang, 2005). Hence, the SMEs are not willing to use e-payment until the security issues have been clearly solved (Istanbul, 2004).

3.6.1.2 The business risk of online trading

Online trading is another risk factor affecting the adoption of e-commerce, besides that of technology security. Online trading creates more security risks for the new market entrants than does traditional trading. Ratnasingham (1998) sees the Internet as offering no safe haven in which to conduct business. The general business risks such as the problem of verifying the quality of product, fraud, online crime, are all exacerbated by the open interconnectivity of the Internet. Hence, for this reason, most SMEs still feel uncomfortable about the idea of trading electronically because they perceive there are more possible risks than potential rewards (Andrieu, 2001).

Yeung, Shim and Lai (2003) found that SME owners expressed discomfort with trading in the online market as the quality of goods is not guaranteed. The risks associated with quality concerns arise from the physical separation of buyers and sellers, and the same asymmetric information problems exist between the trading partners (Zhang & Li, 2005). For example, when SMEs offer products online, it is difficult to know if the seller is a reputable company, to see the quality of the product, or to determine if it is a legitimate business. The common means to ensure product quality, such as reputation and brand name, although still important, is less useful in the global online market (Ba, Whinston & Zhang, 1999).

In a traditional face-to-face business environment, customers would know the quality of products by looking, touching, and feeling. However, such an interpersonal realm does not exist in the online market (Ba, Whinston & Zhang, 1999). In online markets, buyers cannot closely examine the product before purchase. When bidders view a product listed at an online auction site, their experience of the product's quality is constrained by the limitations of the electronic medium (Zhang & Li, 2005). Therefore, enterprises are inevitably facing many difficulties in selecting reliable suppliers in the online marketplace, and resort to making provisions for the possibility of being defrauded.

AFP (2006) showed payment fraud to be widespread in 2005, affecting organizations, both large and small, and showing no signs of letting up. Over two-thirds of organizations were impacted in some way by payment fraud.

Today sellers and buyers cannot see each other on the online market. They know each other not by real identification, but by "virtual" contact (Zhang & Li, 2005), which creates even more possibilities for fraudulent behaviour. On the global Internet, the primary carrier of e-commerce transactions, web sites can even be counterfeited, identities forged, and the nature of transactions altered (Ba, Whinston & Zhang, 1999). The spread of such online crime is likely to increase substantially with the growth of e-money (Yang, 2005). Labuschagne and Eloff (2000) find that IT related crime has increased sharply in number as well as in value. They cite many articles and reports of organisations that have been defrauded by technology. Andrieu (2001) maintains that such crimes are particularly difficult to detect and prosecute as no physical presence is required and the evidence is hard to collect. However, IT related criminal risk is slowly being reduced (Labuschagne & Eloff, 2000). Moreover, even if authorities know how a cyberspace crime is being committed, there may be lack of an adequate legal framework for the indictment of the criminal (Andrieu, 2001).

3.6.2 Socio-legal protection

Other than the above-mentioned security concerns, there are also some legal risks that impede the adoption of e-money. Yang (2005) mentions that legal risk arises from violation of laws, regulations, or prescribed practices such as money laundering, customer disclosures, and privacy protection, amongst others. Legal risk may also arise when the legal rights and obligations of parties are not well established. In a similar vein, Istanbul (2004) finds that legal uncertainties and conflicting regulatory environments for cross-border transactions affect SMEs, particularly strongly, when using e-commerce. Legal uncertainties are a significant barrier to the adoption of e-commerce by SMEs. ECOM (2003) realized that control by legislation could improve the security of electronic payment methods. The state should legislate policy and laws to improve the security of the online environment (Zeng, Zeng, & Guo, 2005). However, the extant legal mechanisms are not strictly enforceable in the online market, and legal regulation and control cannot keep pace with the development of e-commerce (Ba, Whinston & Zhang, 1999).

Zeng, Zeng and Guo (2005) find that intellectual property rights, privacy, electronic contract of law, consumer rights and reputation, amongst others are problems in the electronic market activity that are unavailable to traditional law which inter alia involves civil law, commercial law, administrative law, economic law and criminal law. Vartanian (2000) agrees that current laws are often ill-suited, or incompatible with the way that electronic payment instruments

and systems work. When transaction disputes occur, one traditional approach of solving the problem is to resort to the legal system (Ba, Whinston & Zhang, 1999). However, as discussed above, the rules for redress are not clear in laws and in cases; the consumer suffers loss through impersonation, forgery or theft (ECOM, 2003).

Ba, Whinston and Zhang (1999) also suggest that online low value, or micro payment, transactions may be impracticably expensive or even impossible to resort to legal enforcement. The trading product may be only several dollars and not worth settling in court. Complicating matters further, Chinese online trading law is not compatibles with international law, which benefits the international economic exchange (Zeng, Zeng, & Guo, 2005). The weak responsibility of certificate authorities (CA), which should be established by national authorities, raises the difficulty of constructing a quality and effective legal system (Andrieu, 2001).

3.6.3 The level of electronic payment amongst Chinese SMEs

Andrieu (2001) points out that, as a new network payment instruments, e-money will face a steep uphill battle at the initial stages of its evolution. The availability of e-payment services and the value of the payment instrument depend on the diffusion of e-money. Generally, the more the people use e-payment, the more merchants will accept it, and the more possible it becomes to convince hesitant consumers to adopt it. The use of e-payment cannot occur unless the installed base exceeds a minimum level. The value of e-payment to businesses and consumers will not be clear until there is a critical mass of users (Vartanian, 2000).

However, Laforet and Li (2005) believe that the current electronic market for e-payment is relatively small so the level of awareness of such services is also low in China. Most SMEs are still observing the development of e-payment service from afar, and will not adopt it until they fully understand it or see that it meets the specific needs of their consumers (Vartanian, 2000). Mina and Galle (2003) suggest that the success of e-payment hinges on the degree of acceptance and the extent of participation among trading partners. The electronic capability is the prerequisite to get the potential benefit from electronic markets. However, the level of SMEs that have adopted e-payment is low and most SMEs in China are still far from using the electronic market.

Tsiakis and Sthephanides (2004) found that firms in certain industries, which have different levels of competition and information needs, have different levels of-payment. For example, the industry of healthcare needs more ability to connect suppliers and customers electronically than the transportation industry, hence, the healthcare industry has more electronic potential and the e-payment level in its industry is higher. These authors also find that commercial e-commerce trading capability is low in China, but government organizations are even slower in electronically capable development. It appears that the adoption of e-payment is regarded as "…unnecessary for the coming few years." (Tsiakis & Sthephanides, 2004:12)

Zhang and Li (2002) analysed different levels of e-payment between developing and developed regions and noted that serious disparities exist in China's economy, Internet usage, and capital market. Securities branches can be seen in nearly every block in major cities, such as ShangHai and BeiJing, which have the best developed electronic markets and subsequently high levels of e-payment adoption. Conversely, those in the western part of China have both poor Internet infrastructure and less electronic development.

3.6.4 The Chinese traditional commerce culture

Laforet and Li (2005) believe that traditional culture influences consumer adoption of new technology and therefore also influences e-payment adoption. Compared with other countries, Chinese consumers are more traditional and less affected by technological advantages. Understanding national commerce culture can help to understand the behaviour and attitudes of SMEs, especially towards new online payment systems. Alev and Vincent (2004) agree with this opinion and point out that the unique social and cultural characteristics of China pose a greater challenge to electronic market development than elsewhere. Even the off-site exchange systems, such as catalogue and telephone sales systems that the American public have been used to for long a time, are still new in China, and may not even suit its culture and ways of doing business. Since the electronic market is based on unfamiliar methodologies that differ radically from Chinese cultural/commerce characteristics, this might be a serious impediment to the growth and wide scale acceptance of e-payment.

Yu (2006) see China as a high-context and low trust country where its consumers strongly prefer to see and feel the products before payment. The current payment infrastructure is well-established, reliable, convenient and easy to understand for consumers. They will not easily change their payment habits, unless compelled to by some other reason/s (Vartanian, 2000).

According to Ratnasingham (1998), trust is important in the global electronic market. Trust was widely recognized as a kind of social capital, which can increase connection, reduce the commerce risk, lower the bargain cost, and above all is the basis of transactions in e-commerce (Zeng, Zeng, & Guo, 2005). Vartanian (2000) also believes that the adoption of e-payment is based on commerce trust. No payment instrument or system can work without the trust and confidence of its users, as the money is just a symbol of a trusted system that works. The trust that has developed in global e-commerce can facilitate the adoption of e-payment services in international business transactions.

Tsiakis and Sthephanides (2004) find trust in e-commerce to be built upon a basis of a long history of business practice. The fluid and dispersed nature of the electronic market, however, makes trust hard to build. Since there is physical separation between buyers and sellers on the electronic market, transactions occur without any prior human contact. This lack of interpersonal trust creates circumstances for security threats. The Chinese have historically been using "face-to-face" transactions conducive to the building of trust, which in turn is a precursor to successful business relationships (Yu, 2006). Ratnasingham (1998) agrees, and finds that the development of trust requires "face-to-face" interaction, which is likely to be a challenge for the electronic market. It is unlikely that e-commerce will come naturally to the majority of Chinese entrepreneurs.

Alev and Vincent (2004) find that American consumers are still highly concerned with security issues regarding the availability of reliable and secure technology, even though Internet usage has been wide spread over a long period of time in the USA. These same concerns are major issues for Chinese consumers conducting electronic transactions and are exacerbated as a result of Chinese traditional cultural characteristics (Alev & Vincent, 2004).

Chinese merchants know that contracts may change and agreements compromised, there is no "Western honour system" in their commerce which may explain the cultural attitudes towards commerce in China. The existing inadequate infrastructure and business transaction systems continue to reinforce interactions in the Chinese electronic market (Alev & Vincent, 2004). In China, a strong individual relationship is often an indispensable ingredient required for the implementation of a contract and seemingly the only way for businesses to secure their commerce. This is guanxi referred to previously. The existence of guanxi is developed between partners over a long period of teamwork in the same group, and can be introduced to

one partner inside the group with another businessman. However, a new guanxi network is hard and costly to build up (Zhang & Li, 2005).

3.7 Conclusion

Electronic currency emerged in the 1970s in North America and Europe, and grew quickly in recent decades in developing countries. As an online payment method, e-payment has its own features (like strode and transferred electronically) and created different payment methods, such as credit cards and VISA cards.

E-payment is a new payment channel for Chinese consumers, and is still at an early stage of development. The adoption of e-payment is still low among SMEs. There are many issues that hamper the adoption of e-payment by SMEs, which include security problems, legal protection problems, e-payment adoption level problems, and Chinese commerce /culture problem.

This chapter reviewed the academic literature on problems relating to e-commerce and the associated e-payment adoption rates. The next chapter covers the methodology and the development of the survey research method.

CHAPTER 4 - METHODOLOGY

4.1 Introduction

The research procedures and instruments selected for this thesis are discussed in this chapter. In particular, this chapter highlights the survey questionnaire design, the collection and management of data, and the introduction to the material data arrangement. The research will involve the use of both primary and secondary data. The secondary data, obtained from the review of published literature and authoritative articles and/or reports, will be used to describe the problems encountered in this research. The design and administration of the questionnaire follows the description of the problems discussed previously and is used to generate quantitative data. The survey and questionnaire design will be introduced in this chapter while the statistical analysis of the research data will be carried out in the next chapter.

4.2 Research method

4.2.1 Quantitative research

Quantitative research designs strive to identify and isolate specific variables within the context of the study. In quantitative research we classify features, count them, and even construct more complex statistical models in an attempt to explain what is observed. Quantitative research involves objective measurements where the reduction to numbers allows for the testing of the hypothesis and the deriving of statistical data (Graham & Hair, 2002).

Graham and Hair (2002) also suggest that the advantage of quantitative research is that the findings can be used to identify the research problem in a very specific set of terms, by clearly and precisely specifying both the independent and the dependent variables under investigation. Quantitative research involves firmly following the original set of research goals, making more objective conclusions, testing hypothesis, determining the issues of causality, generalizing to a larger population, making direct comparisons between data sets, and allowing for longitudinal measures of subsequent performance of research subjects.

4.3 Research instrument

Survey research is one of the most important methods of quantitative data collection. In survey research, a sample of respondents from a population is selected and a designed questionnaire is used to collect data specific to the research goals through this survey. The data is gathered from a sample of respondents thought to be representative enough of the whole population so that the research findings can be generalized to the larger population (Greig, 2003).

Some of the advantages of survey research include relative cheapness, utility in describing the characteristics of large populations, extrapolation to remote locations, and convenience when multiple questions are required, thereby making the analysis considerably flexible. High reliability is easy to obtain by the use of a standardised questionnaire. Standardised questions make measurement more precise and simplify the process of data clearing and analysis. However, the design of questionnaires requires a high level of education, careful analysis, and thorough checking before administering. Even though the questionnaire cannot change throughout the data collection process, it can be difficult to ensure consistency of responses within the selected sample (Janes, 2001).

Since the research population in the present study is a large group of enterprises, a survey research method will be used to try and describe the characteristics of SMEs in China using a selected sample of qualified respondents (see section 2.2.4). A survey questionnaire will be carefully designed for the collection of data in order to ensure clarity, which should subsequently facilitate the generation of unbiased findings and recommendations.

4.4 Survey population

Since the purpose of this study was to find out the factors influencing SMEs adoption of e-payment in China, an inclusion and exclusion criteria defined the profile of those companies that would qualify as SMEs. The screening also made the survey manageable by reducing the number of participants within acceptable limits for the study. In line with SME research, the number of employees and assets were the criteria used to define an SME, and as previously stated, an enterprise that employs less than 2000 persons with total assets valued at less than US$51 million. Very minor enterprises that would not be suitable for the purposes of this

study were identified as having a minimum requirement of at least ten employees and the possession of assets valued for at least US$60 thousand.

The development of the Internet and online markets varies from region to region and is firmly linked to the development of the economy. The respondents were therefore, selected from two cities, BeiJing and JiLin, which have different levels of economic development. BeiJin, the capital city, is one of the most developed cities in China, and JiLin, a less developed medium-sized city in the Northeast province.

A total number of 150 questionnaires were administered to respondents in both cities between 24 September and 15 October in 2007, with 75 sent to BeiJing and 75 to JiLin respectively.

4.5 Data collection

4.5.1 The survey data collection

The main data collected for this research was through the questionnaire completed by the decision-making staff member in the finance department of each SME. Respondents were required to complete the questionnaire while the administrator was waiting and immediately hand back the questionnaire when completed. The administrator was instructed to only accept a fully completed questionnaire and, after checking for any missing information or non-responses, was required to request the respondent to fill in any missing sections.

Limitations with regard to the method of collecting data during the survey defined the sampling to some extent. It is difficult to use commonly used survey methods, such as e-mail or telephone contacts and interviews are expensive and unsuitable for the collection of quantitative data.

In this research, the researcher's associates employed in the SMEs and tax departments in those two cities collected the data. Those working in the tax department had more capacity and efficiency in collecting the required data than those in the SMEs since they had more influence and coverage by virtue of their power of office. However, the data collection exercise was aggressively conducted over a short period of time in order not to overburden the tax department of China, as it is not approved by authorities.

4.5.2 Secondary data collection

The secondary data was gathered from government statistics records, survey results from other organizations or research institutions, and websites. This data was used to qualitatively describe the premises of this research, design the questionnaire, account for the missing data, and to analyze and compare with data generated from the questionnaire survey.

4.6 Minimizing bias

Bias is a prejudice in a general or specific sense, usually in the sense of having a preference to one particular point of view or ideological perspective. The bias in survey research is an important problem as it produces biased results. Bias may occur for emotional reasons, for example, people rarely like to criticize someone to their face or answer questions about themselves. People may not lie directly, but may try to put themselves in a better light or tend to answer in ways that make them feel better. Emotionally charged words or leading questions that point towards a certain answer easily create bias in a questionnaire. A shortage of suitable response options for structured questions also creates bias. Respondents normally have a tendency to choose a response similar to theirs, or to omit the question if they cannot find a suitable answer amongst the given responses (Collins & Cordon, 1997).

The bias problem in survey research is a common feature and it is almost impossible to exclude all bias. However, some cases of bias can probably be avoided by designing the questionnaire carefully; for example, an anonymous questionnaire assures the respondents of confidentiality, which helps to ensure the reliability of data collected. Finally, a pre-test of questionnaire is needed to check the bias beforehand (Collins & Cordon, 1997).

4.7 The reliability and validity check

The difference between reliability and validity is mainly the aim. Reliability estimates the consistency of the measurement, or more simply, whether the result is replicable. Validity, on the other hand, estimates the accuracy of measurement, or ensures that the means of measurement is accurate and whether what is actually measured is what they intended to measure.

4.7.1 The reliability check

Reliability is the consistency of measurement, or the degree to which an instrument measures the same way each time it is used, under the same conditions, with the same subjects (Asher, 1974). Internal consistency estimates reliability by grouping questions in a questionnaire that measure the same concept. Several questions in the instrument that ask the same question but in different ways were inserted at different places. To enhance reliability, contradictory responses to these questions caused that respondent's data set to be deleted.

4.7.2 The validity check

Validity is the strength of research conclusions, inferences or propositions. In a quantitative research, validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are (Berkowitz & Donnerstein. 1982). Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others. The item design of the questionnaire is important for validity of research. The items will clearly and completely state and define the purpose of the research enabling enough suitable data for further analysis and discussion.

4.8 Missing data

Missing data may arise during data collection. The data may be missing due to incomplete responses, or responses which are out of the research population, or failure to meet the requirements of reliability. In this research, collected data was carefully checked before editing, the questionnaire was fully and totally completed by respondents from the research population and measured up to the reliability requirements. The data not generated from these requirements was considered as missing and cancelled from analysis data.

4.9 Pilot test of questionnaire

The last step in good research design is to test a questionnaire with a small number of survey samples before conducting the main survey. The pilot stage is evaluated by experts to check for typographical errors, misleading statements and assess both the validity and reliability of the research design. The people who conduct the survey need to ensure that all the respondents understand the given questions so that they respond by giving useful answers.

If a question be changed after the pilot, the results from the pre-test will not be combined with those from the post-test questionnaire. The questionnaire was be edited and re-tested until there is no longer any noticeable problem in order to improve on validity and reliability because it is the basis for all data collected and subsequent conclusions.

4.10 Editing questionnaire data

Before analysis, material data collected from the survey was be edited as a preliminary step for further analysis. The material data is examined using scientific classification, aggregated according to the research purpose, and changed to descriptive data of the characteristics of the total sample. Editing consists of checking the material data to make sure of correctness and completion, classification and aggregation of the examined data, and finally cross-referencing and preparation of data into a statistical format.

4.11 Questionnaire design

According to Janes (1999:324), surveys are "… a mixture of science and art". A well-designed questionnaire can help to save time. The author suggests that there are a number of important issues to consider when designing a questionnaire. The questionnaire should be short enough otherwise; potential respondents may lose interest in completing to the end, or are even unwilling to participate. The questionnaire must be simple and clear to avoid biased responses and easy to understand. Technical terms and acronyms, which the respondents may not know should be avoided and questions must be relevant, particularly focusing on the research problems. The researcher must reassure respondents of confidentiality in the questionnaire, that their responses will not be revealed to other people, but treated as anonymous as far as possible. All the relevant alternative responses must be included as leaving out any possible choices can give misleading results.

4.11.1 Focus of the research study

This research aims to determine the adoption factors related to the use of electronic payment by small to medium sized enterprises (SMEs) in China, and the possible significant for the South African online market. Therefore it addresses the following specific questions:

1. Are risks a factor influencing SMEs' adoption of electronic payment;

2. Is the legal system of electronic payment in China a factor that influences SMEs' adoption of electronic payment;
3. Is the electronic payment adoption rate a factor that influences SMEs adopting electronic payment;
4. Do cultural factors influence SMEs adopting electronic payment; and,
5. What are the factors emerging from the research in China that can be compared with South African enterprises in the online market?

4.11.2 The framework of questionnaire

This questionnaire is in three main parts. The first part concerns the basic demographic information on enterprises, in order to check if the sample meets the requirements of this research project. The second part attempts to identify the problems and influences that affect SMEs when conducting their daily businesses (online and offline). The third part is the main part of the questionnaire that tries to establish the security reasons that influence the adoption of electronic payment, how the legal system of electronic payment in China works, and the e-payment adoption rate of SMEs in China. The last part of the questionnaire (as addition of other questions) aims to identify and evaluate the most important factor influencing SMEs adoption of e-payment by SMEs.

4.11.3 The design of questions

4.11.3.1 The security of electronic payment (or e-commerce)

Compared to Western countries, the issues of security are the most important factors that influence the Chinese consumer adoption of electronic payment (Laforet & Li, 2005). Online Internet trading exposes the electronic payment system to risks (AFP, 2004; Labuschagne & Eloff, 2000) including business and technology risks. The main forms of online risks are information technology risks (AFP, 2004), network risks (Ratnasingham, 1998), payment fraud (Andrieu, 2001), and goods quality (Zhang & Li, 2005). In this study, the impact of each of the risks on the operation of SMEs was included in the questionnaire (Table 4.1).

Table 4.1: Different types of e-commerce security risks

The security questions		
Measurement	Source reference	Questionnaire Item
The information technology risk	Yang, 2005	To what extent does your company consider information technology reliable?
Network risk	Ratnasingham, 1998	Is it safe to transfer data by using the Internet?
Payment method risk	Andrieu, 2001	What level of safety does your company require in using electronic payment?
Fraud risk	Andrieu, 2001	Has your company encountered any kind of fraud in the last 3 years?
The goods quality risk	Zhang and Li, 2005	Has your company encountered the problem of goods quality during trading?

4.11.3.2 The culture of commerce in China

As discussed previously, traditional culture makes a difference to consumer behaviour and therefore has an impact on the acceptance of new technology and the use of online payment (Laforet & Li, 2005). Since China is a traditional country with a culture of high-context and low trust, the acceptance of e-payment (electronic commerce) may take a long time (Alev and Vincent, 2004). The problems of culture that influence consumer acceptance of e-payment amongst the Chinese include trust (Alev and Vincent, 2004), the special commerce networks (Lai & Humphreys, 2001), and the unwillingness to change the current payment methods (Vartanian, 2000). There are various cultural factors that influence the adoption of e-payment amongst businesses (Table 4.2).

Table 4.2: Cultural factors that possibly influences e-payment adoption

The traditional commerce/cultural questions		
Measurement	Source reference	Questionnaire Item
Trust	Alev and Vincent, 2004	Will your company conduct business with another company with which it has not developed the trust relationship?
Special commerce network	Lai and Humphreys, 2001	How does your company find new businesses?
Unwillingness to change	Vartanian, 2000	What are the current payment methods of your company? Will your company change your current payment method without compulsive requirements?

4.11.3.3 The lack of socio-legal protection

Control by legislation can improve security of electronic payment methods (ECOM, 2003). However, the improvement of e-payment-relevant legal protection is far behind the development of e-payment, as the legal rights and obligations of parties are not well established (Yang, 2005). The questionnaire intends to determine if the social-legal status of

e-payment is well established (Vartanian, 2000), if the legal rights system is effective (Istanbul, 2004), and if the certificate authorities (CA) are well established and functioning effectively (Andrieu, 2001) (Table 4.3)?

Table 4.3: Social-legal protection aspects

The social-legal protection questions		
Measurement	Source reference	Questionnaire Item
Establishment level of the social-legal payment	Vartanian, 2000	How does your company assess China's current electronic payment related law?
Functional performance of the social-legal payment	Istanbul, 2004	Does your company think the electronic payment divergence can be solved by current legislation?
Establishment and functioning of certificate authorities	Andrieu, 2001	Does your company adopt Certificate Authority (CA)? Does your company think the Certificate Authority (CA) is good enough for trading online in China?

4.11.3.4 The level of the electronic development in Chinese SMEs

The development of e-payment depends on the diffusion of the service. The more people that use e-payment the more the merchants will accept and appreciate the value it provides (Andrieu, 2001). However, the current market for e-payment is relatively small and the level of usage is low, even among urban consumers, hence, the influence of e-payment is lacking on the market (Laforet & Li, 2005). The questionnaire attempts to assess the level of e-payment usage and function amongst the SME industries and their partner companies (Mina & Galle, 2003), in different regions (Zhang & Li, 2002), and within these enterprises.

Table 4.4: Level of e-payment usage

The level of e-payment questions		
Measurement	Source reference	Questionnaire Item
Level of e-payment usage in industry	Mina and Galle, 2003	What is the percentage of electronic payment capability in your company's trading industry?
Level of e-payment usage in partner companies	Mina and Galle, 2003	What percentage of your organization's co-operate companies has the capability of electronic payment?
Regional level of e-payment usage	Zhang and Li, 2002	Where were your companies registered?
The e-payment usage level in enterprises		What is the percentage of clearing by electronic payment in your company (last year)?

4.11.3.5 Other questions

Since the security risk problem is one of the most important factors that influence the adoption of e-payment by SMEs (Yang, 2005), the questionnaire designed in this study emphasizes that aspect.

Table 4.5: Security risk of e-payment

The security factor		
Measurement	Question	Structured response options provided in questionnaire
The most important security factor	What are the main security factors that deter your company from using electronic payment services?	A. the weakness of Internet technology (IT) B. the risk of traditional commerce C. Certificate Authority (CA) needs to be perfected D. the weakness of electronic related legal protection E. other reasons

Since one of the purposes of the research is to help develop the services in the e-payment industry, additional questions focused on establishing the reasons SMEs would have considered before adopting e-payment; and the benefits or disadvantages perceived.

Table 4.6: SMEs' preferences and attitudes towards payment methods

Measurement	Question	Structured response options provided in questionnaire
Intended benefits of payment method of choice	What is the main reason for selecting the trading payment method?	A. Ease of use B. Quick transaction C. Lower cost D. Payment security E. Leading in your industry F. others
Reasons for using e-payment	What forced your company adopted electronic payment services?	A. Strategic considerations of business B. the request of the trading department C. the need of competitiveness D. the need for authority E. the need of electronic commerce F. the need of corporate businesses G. introduction from company operating through electronic services H. has never used electronic payment service I. other reasons
The aim for using e-payment	What your company got by using electronic payment services?	A. has never used electronic payment services B. to achieve efficiency C. to lower costs D. to have business convenience E. to have assured payment security F. to increase competitiveness G. others
Reasons for not using e-payment	What are the important factors that influence e-payment adoption?	A. the lack of electronic transaction security B. the lack of regulation protection C. the low level of electronic payment capability of co-operation businesses D. the shortage of electronic payment requirements E. the weak foundation of electronic commerce F. the shortage of skilled people G. the high cost of adopting electronic payment services H. the immature electronic payment environment I. the unwillingness to change current payment methods J. the lack of electronic capability K. the "unknown" of electronic payment
The most important reason for not using e-payment	Of the above selected in the last question, choose the most important factor that influences e-payment adoption?	(same response options provided for the previous question)

The last three questions are aimed at determining the level of adoption of e-payment and the factors that hinder SMEs from adopting e-payment, and therefore, the factors that influence the adoption of e-payment amongst those SMEs that have not yet adopted. The structured responses provided in the questionnaire included most of the possible reasons that have been known to influence the adoption of e-payment. The last two questions are included as a reliability check, by making possible a comparison with the responses to the question; "Why not use e-payment for payment?"

Table 4.7: Issues that related to e-payment adoption

Measurement	question	Structured response options provided in questionnaire
The level of adoption	Has your company adopted electronic payment?	A. Yes B. No
What are the important factors that influence e-payment adoption?	Select the most important reasons your company has not adopted electronic payment?	A. Online electronic payment is not safe B. Most partners do not have electronic payment capacity C. Lack of related law is unsafe D. Lack of corresponding technical personnel E. Satisfied with current payment system F. Cost too high G. Lack of basic infrastructure/ technology H. Have no idea of electronic payment I. Planning on use J. Insecurity of online trading K. Worried about the fraud L. Worried about the quality of goods M. Other reason(s)
What is the most important factor that influences e-payment adoption?	Of the above selected in the last question, what is the most important reason your company has not adopted electronic payment?	(same response options provided for the previous question)

4.12 Conclusion

The methodology was discussed in this chapter. For this study a quantitative research method was used. The survey collected data from SMEs in two cities of China. Questions based on the literature formed the basis of the questionnaire. There are three main parts to the questionnaire: basic information, the traditional commerce influence on SMEs common commerce activities, and the factors that influence e-payment usage or adoption by SMEs. The most important factors that influence e-payment usage or adoption were also identified to focus on the main obstacles to the development of e-payment.

This chapter discussed the research design and questionnaire development. The next chapter covers the analysis of the data collected.

CHAPTER 5 - DATA COLLECTION AND ANALYSIS

5.1 Introduction

This chapter covers the editing and analysis of data from the questionnaire. The methods of data collection are presented. Similar results from other surveys are used to check the reliability of this research. Data is analysed to determine the factors that influence e-payment adoption. Findings will be presented in the conclusion.

5.2 Data collection

As pointed out in Chapter 3 the main factors influencing the adoption of e-payment by Chinese SMEs include the problems of security, the social-legal status, the capability of e-payment, and the culture of commerce. The research questions were therefore, formulated to answers that primarily focused on the problems which relate to e-commerce in general and e-payment in particular for SMEs.

In order to refine the questions and identify the current influences on the development and growth of e-payment, a 35-question instrument was developed in Chinese and initially administered as a pre-test to small group of 15 participants. The actual study population consisted of a total of 123 individuals (not including 27 rejected responses), located in BeiJing and JiLin during the time of the study. Knowledgeable associates randomly administered the questionnaires to SMEs of different sizes and type. The study has some unique characteristics when compared with similar studies mentioned in Chapter 3.

The questionnaires were administered in person thus increasing the validity of the study by minimizing contamination and non-expose that might have arisen from a mail or online survey, and thus increasing the participation rate and decreasing the rejection of responses that were unclear or incomplete. The participants were asked to fill out the questionnaires without any inducements such as prizes or money, as happens to be the tradition in most of the mail or electronic surveys conducted.

The questionnaire was intended to gather data on enterprises' commerce culture, payment habits, and e-payment activities (perceptions of e-payment in China, e-payment capability of enterprises). The questionnaire design requires the findings to be presented for further quantitative analysis.

5.2.1 Missing Data

Most of the missing data was due to uncompleted responses, as the respondents failed to select the negative item designed at the end of the questions, hence 21 questionnaires were rejected for this reason. The other 6 questionnaires contained cancelled self-contradictory responses in answering similar questions.

5.3 Pioneering survey studies

E-payment is a new technology in Chinese commerce markets, hence previous research on the adoption factors of e-payment amongst SMEs is rarely mentioned making it difficult to get the relevant statistical information for comparative reference. However, some reports are available, which provide useful information to serve this study, though not fully precise.

A total number of 123 participants involved in this study (Table 5.1) had different characteristics from those in the survey conducted by Ministry of Commerce of the People's Republic of China (MCC), based on the data from China Internet Network Information Centre (CNNIC, 2005). Similarly, the present study is different from the studies conducted by the Internet Weekly, involving data collection from online market active enterprises (CIW, 2006), and by the iRsearch Company (iResearch, 2006) involving data collection from individual Internet users online. Even though all these three reports had their own survey purposes, some of the statistics collected are useful for comparison and contrast.

Table 5.1: Comparison to similar reports

	Present study	E-commerce report (MCC, 2005)	E-payment Industry Report (CIW, 2006)	E-payment Report (iResearch, 2006)
Region	BeiJing and JiLin, China	China	China	China
Respondents	SMEs	Enterprises	Enterprises which have adopted e-payment	Individual Internet users
Sample size	123	693	322	1290

5.4 Findings

5.4.1 Comparing the previously reported findings to the present study

5.4.1.1 E-payment adoption rate

In this study, 50.4% questionnaires were collected from BeiJing (table 5.2) and the remainder from JiLin; an almost equal number of respondents from both cities. The e-payment adoption rate in this study is 71.5%. Compared with the report of MCC, whose questionnaires were collected from the Eastern area and the Middle-Western area of China, the e-payment rate for the present study (2007) is higher than that reported in the "e-commerce report of China" (55.9%) (MCC, 2005).

Both the current and the MCC surveys paid attention to respondents from enterprises in various sectors in regions of contrasting Chinese electronic markets, i.e. the developed and the developing regions. However, due to the quick growth of the e-payment industry in China, the findings of the present study are likely to be more recent and more credible.

Table 5.2 E-payment adoption rate and compared with related report

	Present study	MCC (2005) [a]
E-payment adoption rate	71.5%	55.9%

[a] electronic commerce report (MCC, 2005)

5.4.1.2 Level of E-payment usage

Even though the e-payment market is rapidly increasing (CIW, 2006) and more than half of the respondents in the MCC report (2005) adopted the technology, the usage of e-payment as a payment method is still low in most enterprises (Table 5.3). Most of the respondents (82.1%) in this study who used clearing by e-payment in 2006 were less than 60%. In the report from CIW (2006), whose respondents were selected from active e-payment user enterprises, the rate of e-payment usage for financial clearing is also low, with only 41% using e-payment over other payment methods.

Table 5.3: Clearing by electronic payment as recorded

Present study (N=123)		CIW (M=322)[a]	
E-payment usage	Percentage of response	E-payment usage	Percentage of response
0	26.0		
0—9.99%	11.4	0—10%	26
10%--29.99%	19.5	11%—49%	33
30—59.99%	24.4		
60% above	17.9	50% above	41

[a] the e-payment industry report (Internet Weekly, 2006)

5.4.1.3 Influencing factors

5.4.1.3.1 Factors that influence e-payment usage or adoption (data collected from all respondents)

There are various factors that influence the adoption of e-payment. The security concern (Yu, 2006), lack of legal protection (Yang, 2005), and the traditional commerce culture (Lai, Humphreys & Sculli, 2001) were widely mentioned to be the most important influencing factors. Some of the questions in the present survey were aimed at determining the most important influencing factor. One question applied to all respondents in order to find out "why SMEs do not like to use e-payment for paying their bills?" The security problem is the most important influencing factor according to this survey (Table 5.4) followed by the lack of legal protection, the lack of e-payment capability in collaborative companies, and the lack of e-payment requirement, all close contenders at 44.7%, 43.1% and 41.5% respectively. Only 26% of respondents indicated high cost as a major hindering factor.

Table 5.4: Factors hindering SMEs' e-payment usage (N=123)

Factors	Rating as a percentage of responses (%)
Security problem	57.7
Lack of legal protection	44.7
Lack of e-payment capability in collaborative companies	43.1
Lack of e-payment requirement	41.5
Lack of IS	30.1
Lack of IT staff	30.1
High Costs	26.0
Electronic environment isn't mature	12.2
Dislike of change	8.1
Lack of e-payment capability	5.7
E-payment unknown	5.7

A similar survey made by the iResearch company (iResearch, 2006) of a total of 1290 individual respondents gave an analogous result although the respondents were private

Internet users (Table 5.5). In this study, the security problem was found to be the most important factor, together with the lack of legal protection. However, the private Internet users seem more concerned about cost than SMEs.

Table 5.5: Factors hindering individual Internet users' e-payment adoption (N=1290) [a]

Factors	Rating as a percentage of responses (%)
Security problem	80.0
Lack of legal protection	67.3
High Costs	65.3

[a] China e-payment report 2006 (iResearch, 2006)

A further question was designed to follow the question to SMEs, by asking what the most important hindrance factor was for e-payment usage or adoption by SMEs. In this study, the "security problem" was again identified as the most important factor hindering the usage or adoption of e-payment by SMEs (Table 5.6). The next most important factors identified, included the "lack of e-payment capability in collaborative companies" and the "lack of e-payment requirement". Surprisingly, the "lack of legal protection" was identified as the most important negative factor by only 7.3% of respondents.

Table 5.6: The most important hindrance factor of SMEs' e-payment usage (N=123)

Factors	Rating as a percentage of responses (%)
Security problem	34.1
Lack of e-payment requirement	22.8
Lack of e-payment capability in collaborative companies	17.1
Lack of legal protection	7.3

5.4.1.3.2 Factors that influence electronic payment adoption (data collected from respondents who haven't adopted e-payment)

One of the purposes of the present study was to find out why some SMEs (who haven't adopted e-payment) do not like to adopt e-payment (Questions 34 & 35). The lack of e-payment safety and the lack of e-payment capability in collaborative companies were the most significant deterrent factors for those SMEs that have not adopt e-payment. The response rate of these two factors, are 85.7% and 77.1% (Table 5.7). The lack of legal protection, the lack of trained staff, the resistance to change, and the exorbitant costs are other important negative factors identified.

Table 5.7: The reasons that SMEs did not adopt e-payment (N=35)

Factors	Rating as a percentage of responses (%)
Lack of e-payment safety	85.7
Lack of e-payment capability in collaborative companies	77.1
Lack of legal protection	60.0
Lack of IT staff	48.6
Resistance to change	40.0
Exorbitant costs	37.1
Lack of basic equipment	28.6
Unawareness of e-payment method	5.7

Similarly, the iResearch statistics (Table 5.8) also indicated the lack of e-payment safety as the most important factor discouraging private Internet user from adopting the use of e-payment. Other factors such as the lack of e-payment requirement and resistance to change did not seem to be quite so important.

Table 5.8: The reasons private Internet users do not prefer e-payment (N=1290) [a]

Factors	Rating as a percentage of responses (%)
Lack of e-payment safety	66.1
Lack of e-payment requirement	20.3
Resistance to change	19.8

[a] China e-payment report 2006 (iResearch, 2006)

The SMEs that have not yet adopted e-payment in this survey also indicated the lack of e-payment safety as the most significant negative factor (Table 5.9). The lack of e-payment capability in collaborative companies followed closely as the second most important deterrent factor, whilst each of the other factors was cited by less than 9% of the respondents.

Table 5.9: The most important reasons SMEs do not adopt e-payment (N=35)

Factors	Rating as a percentage of responses (%)
E-payment is not safe	40.0
Lack of e-payment capability in collaborative companies	31.4
Total of other factors	28.6

5.4.2 Basic information of respondents

5.4.2.1 CEOs' age

The China Internet Development Statistics Report (CNNIC, 2007) shows that most people use the Internet more often up to the age of 24 after which the usage levels decline as they grow older (Table 5.10). The study also established that most users in the category 18-24 are aged around 18. The Internet usage is firmly linked to age and

most Internet users are less than 35 years of age, with 63% of the users aged between 18 and 35 years, 8.4% between 36 and 40, and 10.9% above 41 years of age.

Table 5.10: Age and Internet usage [a]

Age	Below 18	18-24	25-30	31-35	36-40	41-50	50 above
Internet usage (%)	17.5	33.5	19.4	10.1	8.4	7.2	3.7

[a] China Internet development statistics report (CNNIC, 2007)

Since the CEOs are important decision-makers in SMEs (Barry & Milner, 2002), the link between their age and attitudes towards the adoption of e-payment is worth examining. The rate of e-payment adoption in different age categories does not indicate a distinctive pattern (Table 5.11); hence the influence of CEOs' age on the decision to adopt e-payment is not clear.

Table 5.11: CEOs' age and adoption of e-payment (N=123)

Age	Total	E-payment adoption	E-payment adoption rate (%)
20—35	8	7	87.5
36—45	56	35	62.5
46 above	58	46	79.3

5.4.2.2 Time since SME incorporation

How long an SME has been trading (registered) is also a factor that could influence the attitude of the company towards adopting e-payment. Some questions were meant to establish if there was some relationship between the length of time a SME had been registered and subsequent e-payment adoption. The enterprises registered for more than 20 years reported a higher e-payment adoption rate compared with those recently registered (Table 5.12). The category 21-30 years consisted of a small number of respondents, which may not be sufficient or representative enough to provide an informative representation for a comparative study. However, there is still a high adoption rate in this category, indicating that the more established the SMEs are, the more likely they are to adopt e-payment than those with less than 5 years of incorporation. Since only two companies were incorporated in this study more than 31 years ago, more studies will need to be conducted in the future.

Table 5.12: Company's age and e-payment adoption (N=123)

How long has registered	Total	E-payment adoption	E-payment adoption rate (%)
0—5	27	15	55.6
6—10	63	45	71.4
11—20	25	23	92.0
21—30	7	6	85.7
31 above	2	0	0

5.4.2.3 Regions of respondents

China is a country with different levels of development in distinct regions. Developed areas such as ShangHai and BeiJing, have the best commerce environment, basic city installation, and also electronic equipment. However, all these developments are unavailable in the middle and Western areas (MCC, 2005), hence the extent of the influence of the electronic market development and e-payment adoption depends on the region. The SME respondents from the two cities have different e-payment adoption rates (Table 5.13), but BeiJing has a higher e-payment adoption rate. Since JinLin is a secondary level city in China, the level of e-payment in undeveloped regions would most probably be even lower.

Table 5.13: The adoption of e-payment in BeiJin and JiLin

City	Total respondents	E-payment adoption	E-payment adoption rate (%)
BeiJing	62	54	87.1
JiLin	61	34	55.7

5.4.2.4 Industry of respondents

Different industrial sectors have different information processing needs and capacity, due to different product and service requirements (Mina & Galle, 2003). Hence, different industries may also have different e-payment requirements and adoption levels.

The e-payment adoption rate varies from 53.3% to 84% (Table 5.14) for the defined industry categories, not including the "other" category that represents an integrated industry. The manufacturing and financial service industries have the highest adoption rates.

Table 5.14: The adoption of e-payment in different industries

Industry	Total	E-payment adoption	E-payment adoption rate (%)
Manufacturing	25	21	84.0
Hybrid industry	11	8	72.2
Travel	8	5	62.5
Food service	15	9	60.0
Information service	15	8	53.3
Financial service	12	10	83.3
Transport	8	5	62.5
Retail trade	16	10	62.5
Others	13	12	92.3

5.4.3 Chinese e-commerce awareness and commerce culture

The future of e-money is linked to the future of e-commerce and e-payment and represents a critical element of the infrastructure needed for the successful development of e-commerce (Andrieu, 2001). Hence, present study mentioned about the development of e-commerce and the important factors influencing the adoption of e-commerce, these factors include the Chinese commerce culture and trading habits (Alev and Vincent, 2004).

5.4.3.1 The development of e-commerce

Three questions (questions 11, 12 & 13) intended to determine the level of e-commerce usage, the influencing factors for using e-commerce, and the appreciation of e-commerce by SMEs. Most of the respondents use e-commerce mainly for communicating with consumers (63.4%) and for online advertising (56.1%), (Table 5.15). The online e-payment function is used by 26.8% of the respondents and online negotiation by only 4.9%, whilst the other functions are rarely used.

Table 5.15: Functions used by SMEs in e-commerce (N=123)

Functions of e-commerce	Percentage of responses (%)
None	9.8
Communicating with consumers	63.4
Collecting commerce information	24.1
Online advertising	56.1
Online sale	28.5
Looking for potential customers	22.0
Online negotiations	4.9
Online e-payment	26.8
Online customer service	39.8

In a similar study, the iResearch (2007) categorized the usage functions of e-commerce as basic level, low level, high level, and information level in their study (Table 5.16). most e-commerce usage was fond below low level.

Table 5.16: E-commerce usage level [a]

level	basic level	low level	high level	information level
Functions	1.introduce company, products, 2. communicate with consumers.	1.sale and purchase online, 2.online advertisement, 3.online payment, 4. collect information online, 5.electornic contract	Trading all online.	MIS, OA, SCM, ERP, CRM, IRP, CAD, CIMS.
Adoption rate (%)	90	8	2	0

[a] China SME B2B E-commerce research report (iResearch, 2007)

The present study, in which was found most SMEs were at a low level of e-commerce adoption (at least 95.1%) (Table 5.15), compares well with the iResearch (2007) result (98%) that similarly indicates e-commerce usage in China at the lower levels.

5.4.3.2 The influence factors of using e-commerce

E-commerce and e-payment are closely linked sharing similar markets and consumers. One of the questions in this study intended to find out the reasons some SMEs do not like to use e-commerce, and tried to establish whether there were some similarities between the factors that affect the adoption of both these technologies.

The willingness to continue using well-established traditional trading methods and the perceived lack of e-commerce security primarily affects the adoption of e-commerce. Thus resistance to change and the security problem are the most important factors that influence the use of e-commerce. 13.8% respondents indicated that they would like to use e-commerce without any misgivings.

Table 5.17: The most important factors influence e-commerce adoption (N=123)

Factors	Percentage of responses (%)
E-commerce not needed	17.9
Used to traditional trading methods	42.3
E-commerce not safe	39.8
Unawareness of e-commerce	2.4
Mistrust of online customers	26.0
Mistrust of Internet safety	24.4
None	13.8

5.4.3.3 The awareness levels of e-commerce compared with e-payment

More respondents (88.6%) rated e-commerce as important or very important compared to e-payment (78%), (Table 5.18).

Table 5.18: Market awareness of e-commerce compared to e-payment (N=123)

Importance	None	Very little	Important	Very important
Aware of e-commerce	3	11	57	52
Aware of e-payment	5	22	54	42

The present study also found that all the respondents who adopted e-payment have already adopted e-commerce.

5.4.4 Chinese commerce culture and trading habits

As discussed before, compared to Western countries, China is a traditional country with a culture of mistrust and a people that place more value in relationships. Some of the questions therefore intended to find out if e-commerce and e-payment technologies from Western countries would be suitable for China, and if the Chinese culture would be a hindering factor to e-payment adoption in SMEs.

5.4.4.1 Commerce habits

In order to determine the commerce habits of the SMEs, the respondents were asked if they had experienced any incidents in which they were defrauded (question 7) or misrepresented online (question 8). Most of the respondents professed that they had faced substantial defraud risk in last three years (78.9%), and others indicated product quality risk (59.3%).

Although 78.9% of the companies in the survey faced enormous defraud risk in the last three years, nearly half (48.8%) the respondents still choose to trade with unfamiliar consumers.

To check on the environment of the Chinese commerce network in business, the main trading niche for the companies had to be established through the questionnaire (question 10). Most of the SMEs (91.9%) are using the traditional commerce network for expanding their business (Table 5.19). The market for the Chinese SMEs seems to have a high relationship culture.

Table 5.19: Trading niche of company (N=123)

Trading channel	Percentage of responses (%)
Traditional commerce network	91.9
Commerce introduce company	0.8
Online market	35.8
Current business	8.1

5.4.4.2 Payment habits

Bank remittance remains the most important payment method for Chinese SMEs (Table 5.20), showing a traditional payment method amongst 91.8% of respondents. About half the respondents use e-payment and cheques. As a new payment method, e-payment is still in its development phase. Besides the security problem when making a payment, convenience, efficiency, and cost are also very important factors for some of the SMEs (Table 5.21).

Table 5.20: The main payment methods used by SMEs of China

Payment method	Percentage of responses (%)
Bank remittance	91.8
Cheque	43.0
Credit card	14.6
Credit letter	4.9
E-payment	45.5
Cash	23.6

Table 5.21: The most important factors effecting payment choice

Factors	Percentage of responses (%)
Convenience	48.0
Speed	36.6
Cost	35.8
Security	78.0
Precedence in industry	21.1

5.4.5 E-payment awareness and usage level

5.4.5.1 E-payment awareness

A series of questions was intended to determine the requirements of SMEs before choosing to use e-payment (questions18 & 19), the usage situation and the level of e-payment amongst Chinese enterprises.

Nearly half the number (48%) of respondents indicated the demands of competition as the most compelling factor for using e-payment (Table 5.22). This seems to be the most important reason for changing their payment method. The other important factors influencing the favourable adoption of e-payment by SMEs include conforming to the demands of information systems (IS) or requests from trading partners, CEO strategy, or demand of trading department. The structure of IS, trading demand, and decisions of CEOs therefore influence e-payment adoption.

Table 5.22: Impelling factors for adopting e-payment

Factors	Percentage of responses (%)
Strategy of CEO	29.0
Demand of trading department	26.0
Demand of competition	48.0
Request from authority	4.9
Demand of IS	33.3
Request from trading partner	32.5
Introduce of e-payment company	5.7
Has not wanted to use e-payment	11.4

In response to the benefits expected (wants) and purposes for using e-payment, most respondents indicated that they needed a quick payment transaction and needed to improve competitiveness. A small number of respondents (5.7%) indicated a need to improve payment security, showing that most SMEs still lack confidence in the security of e-payment.

Table 5.23: The purpose for SMEs adopting e-payment

Advantage of e-payment	Percentage of responses (%)
Convenience	36.6
Speed of payment	48.0
Detract cost	32.5
Improve competitiveness	43.9
Improve payment security	5.7
Have-not used e-payment	24.4

People generally do not like to change their familiar ways of conducting business, for example, their payment habits. The more traditional people are, the less they are likely to change. The study also examined this culture amongst the traditional Chinese SMEs. In this study, more respondents (59.3%) indicated that they would choose to use e-payment even without compulsion, indicating that the culture of resisting change is not prevalent and would not hinder the adoption of e-payment amongst SMEs.

5.4.5.2 The use of e-payment by SMEs

Investigating the use of e-payment by Chinese SMEs can help in understanding the trends within e-payment development and the potential market size, as well as comprehending some influencing factors previously discussed.

E-payment is normally used in business to business (B2B) and business to consumer (B2C) transactions (Table 5.24). In the present study, 8.1% of respondents indicated the use of e-payment in traditional commerce showing that e-payment can also be used as a payment method without e-commerce, but this is rarely done.

Table 5.24: The domains of e-payment usage

E-payment domains	Percentage of adopted responses (%)
Internet business to business (B2B)	48.8
Business to consumer (B2C)	35.8
Business to government (B2G)	17.9
Global trading	12.2
E-commerce	17.1
Traditional commerce	8.1
Have not adopted e-payment	24.4

In addition, the study investigated the e-payment levels of SMEs' trading partners in various industries. Most respondents (78.9%) (Table 5.25) had less than 60% of their trading partners not e-payment capable, and slightly over half of the non-users were found to have less than 30% of their trading partners using e-payment. This means at least half the SMEs would suppose that their demand for the use of e-payment is not important.

Table 5.25: E-payment capability level in trading partmers

Rate of e-payment capability	Percentage of responses (%)
0	2.4
0—9.99%	29.3
10%—29.99%	19.5
30%—59.99%	26.8
60% above	21.1

Table 5.26 shows the e-payment levels in the Chinese market. More than half the number of respondents thought their industry e-payment adoption rate was lower than 30%, which means that most potential users tended to overlook and unaware of the level of e-payment developments in the industry.

Table 5.26: E-payment capable level SMEs believed in their industries

Rate of e-payment awareness capability	Percentage of responses (%)
0	1.6
0—9.99%	28.5
10%—29.99%	22.8
30%—59.99%	16.3
60% above	30.9

5.4.6 The awareness of e-payment security

Since the security problem was believed to be the most important factor influencing e-payment adoption (CIW, 2006), the study was also designed to find out the awareness level of SMEs regarding the security status of electronic payment technology, even though very few of them would be expected to know.

Most SMEs (80.5%) are aware of Internet security and believed that the Internet is secure or very secure to use (Table 5.27), hence trusting the security of the network. In addition, most of the SMEs (74.8%) consider e-payment to be safe or very safe (Table 5.28), showing that more than half of the respondents trust the security of e-payment.

Table 5.27: The awareness and security of using Internet

Opinion	Percentage of responses (%)
Have no idea	8.1
Not secure	11.4
Secure	70.7
Very secure	9.8

Table 5.28: The awareness safety of online e-payment

Opinion	Percentage of responses (%)
Have no idea	6.5
Not safe	18.7
Safe	65.0
Very safe	9.8

The questionnaire further by examined the risks of using e-payment (questions 25) and determining the most important risk factors for SMEs since e-payment risk is included in various forms of IT risk including trading and legal protection risk. The respondents' ratings of all the four risk factors are similar (Table 5.29), but trading risk is considered the unsafe closely followed by IT risk and legal protection risk. Thus the most important risk factor influencing the adoption of e-payment by SMEs is not clearly definitive.

Table 5.29: Unsecured factors when using e-payment

Unsafe factors	Percentage of responses (%)
IT is not safe	48.8
Online trading is not safe	54.4
CA is not perfect	32.5
Weak of legal protection	43.1

5.4.7 The awareness of legal protection

As discussed earlier in this study, the weakness of legal protection is one of the most important deterrent factors influencing the adoption of e-payment as a new payment method. The development of e-payment-related legal structure is far behind the expansion of the e-payment market; hence, there is a substantive risk arising from the weakness of legal protection. It is also necessary to explore e-payment related legal issues. SMEs do indicate some awareness of the problem of legal protection, a factor that influences the usage of e-payment.

Most respondents (88%) were aware that legal protection is not enough to help them to protect their financial rights (Table 5.30) and some (34.1%) would consider legal protection to be useless if financial misadventure happens when using e-payment (table 5.31). Even though more than half of respondents thought they could consult lawyers, only a few of them (7.3%) sufficiently trust the legal protection system.

Table 5.30: The utility of the e-payment related legal system

Opinion	Percentage of responses (%)
Have no idea	14.6
Not at all	71.5
Ideal	12.2
Perfect	1.6

Table 5.31: The effective of current law when finical divergence happens

Opinion	Percentage of responses (%)
Have no idea	6.5
Not at all	34.1
To some extent	52.0
Yes	7.3

Certificate Authority (CA) is widely believed to provide secure insurance during online trading. The weakness of the CA system, however, is not only in the weakness of legal development, but also results in the hampering of the electronic market development,

including the development of e-payment. Customer satisfaction of SMEs by CA was also evaluated in this study (question23 & 28.).

In present study, amongst the 56.9% respondents who use CA during their online trading, 13% of respondents announced that they have not adopted online trading. However, only 10.6% respondents thought CA is good enough for trading in electronic commerce.

5.5 Data analysis

As was mentioned before, 71.5% respondents in the present study have adopted e-payment. However, only 17.9% of respondents used e-payment for more than 60% of their financial clearance in 2006, which is an enormous difference (Figure 5.1 and Figure 5.2). Even though e-payment has developed quickly, and more than half the respondents have adopted e-payment, the usage level is still low. Thus, adoption is only the first step in e-payment usage, expanding the usage is as important as e-payment adoption and has a significant for the development of the e-payment industry. The multiple factors that influence the adoption and usage of e-payment by SMEs in China will be discussed in detail.

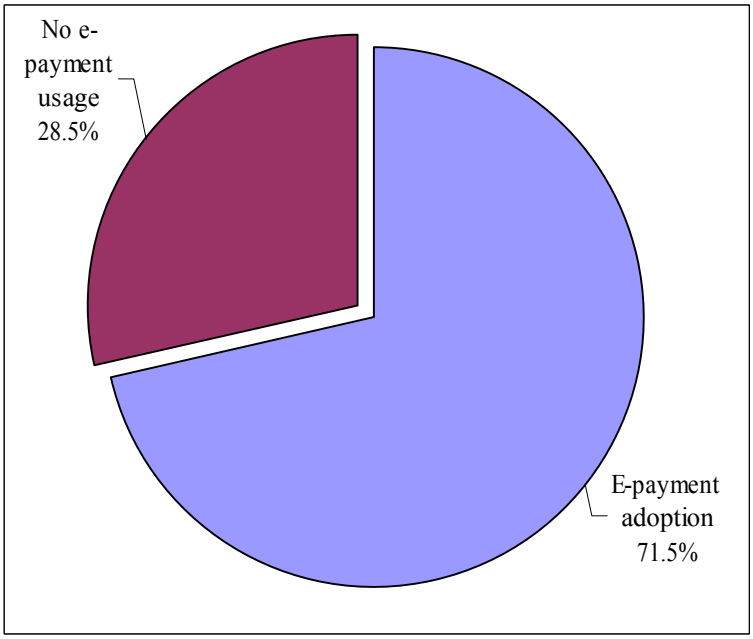

Figure 5.1 The adoption of e-payment (N=123)

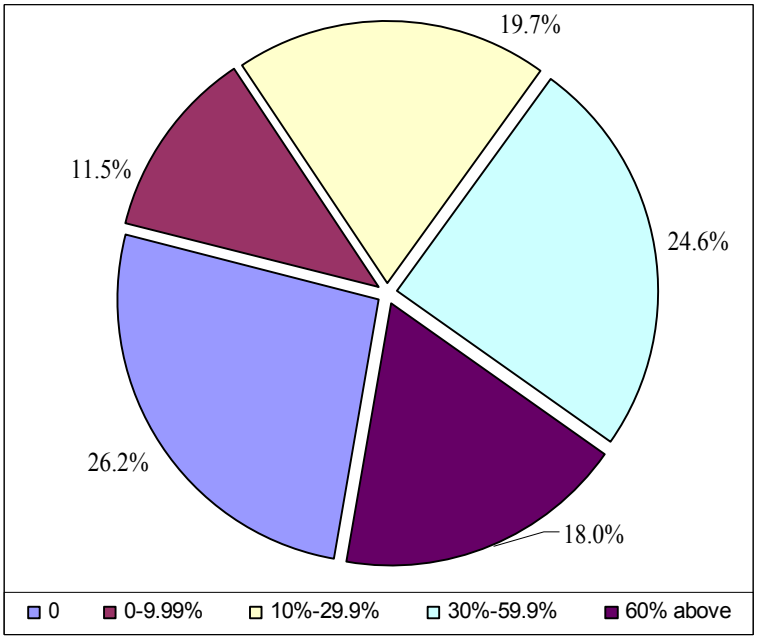

Figure 5.2 The usage level of e-payment (N=123)

5.5.1 The factors that influence e-payment usage (or adoption)

A number of factors influence the usage of e-payment by SMEs (Figure 5.3 & Figure 5.4) with 57.7% of the respondents considering the security problem to be the important deterrent factor. Almost 35% of the respondents chose it as the most important factor influencing the usage of e-payment. The lack of e-payment capability in collaborative companies and the lack of e-payment requirement followed as the two next most important factors influencing e-payment usage.

The lack of legal protection is a special factor influencing e-payment usage, as 44.7% of the respondents chose it as one of the important factors influencing e-payment usage, but not the most important factor, since only 7.3% of the respondents considered this factor the most important.

As previously discussed, the security problem is the most important factor that influences e-payment usage. This result agrees with the findings of Laforet and Li (2005). The lack of e-payment capability in collaborative companies, and lack of e-payment requirement are also important factors. However, the lack of e-payment capability in collaborative companies and lack of e-payment requirement can be classified together as the lack of e-payment usage demand, a factor as important as the

security problem. Thus, the low e-payment usage level and the security problem are the two most important factors for most SMEs that do not use e-payment for financial clearing. The lack of legal protection is also important when SMEs consider using e-payment, but it is clearly not important when making the decision to adopt.

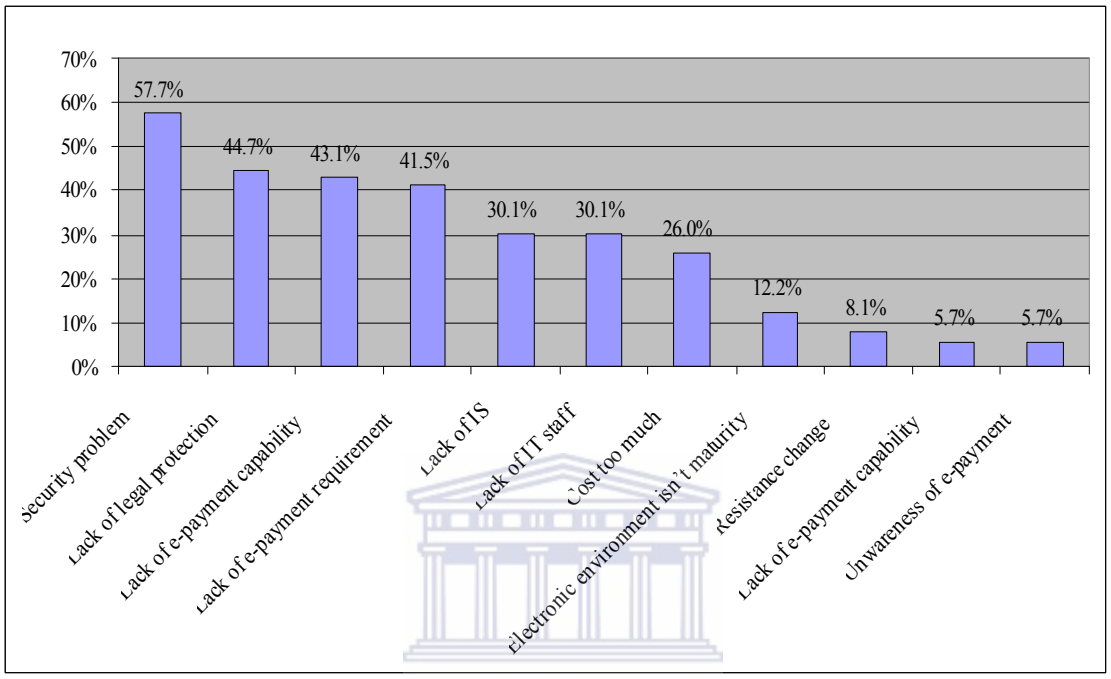

Figure 5.3 Factors influence e-payment usage (or adoption) (N=123)

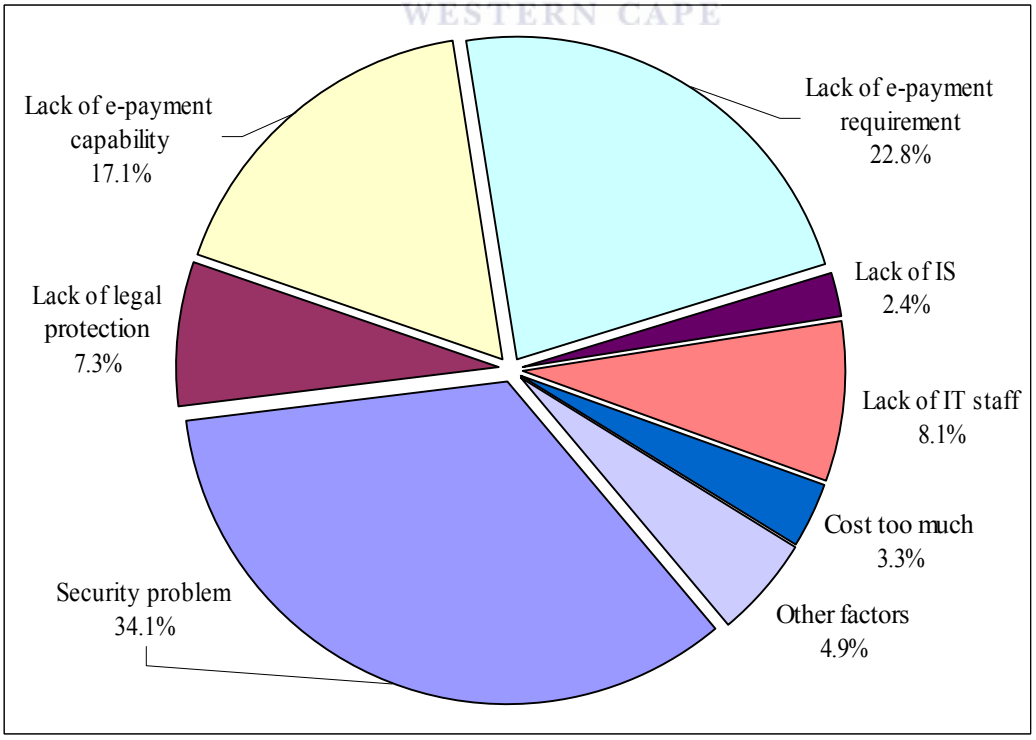

Figure 5.4 Most important factors influence e-payment usage (or adoption) (N=123)

Even though 35% of the respondents have not yet adopted e-payment, they identified the same important factors acting as a deterrent to adopt e-payment (Figure 5.5 & Figure 5.6). According to 85.7% of the respondents, the security problem is also one of the most important factors that influence e-payment adoption (40% of respondents choose it as the most important). The lack of e-payment capability in collaborative companies is also identified by 77.1% of respondents as an important factor influencing e-payment adoption. While 31.4% of respondents choose it to be the most important factor that influences e-payment adoption. The lack of legal protection is also one of the important factors, but only a few respondents consider it the most important one. The factors identified as those that influence e-payment adoption are nearly the same as the factors that influence e-payment usage. Most SMEs who have not yet adopted e-payment mention the low e-payment adoption levels and the security problem as the most important factors for not adopting e- payment.

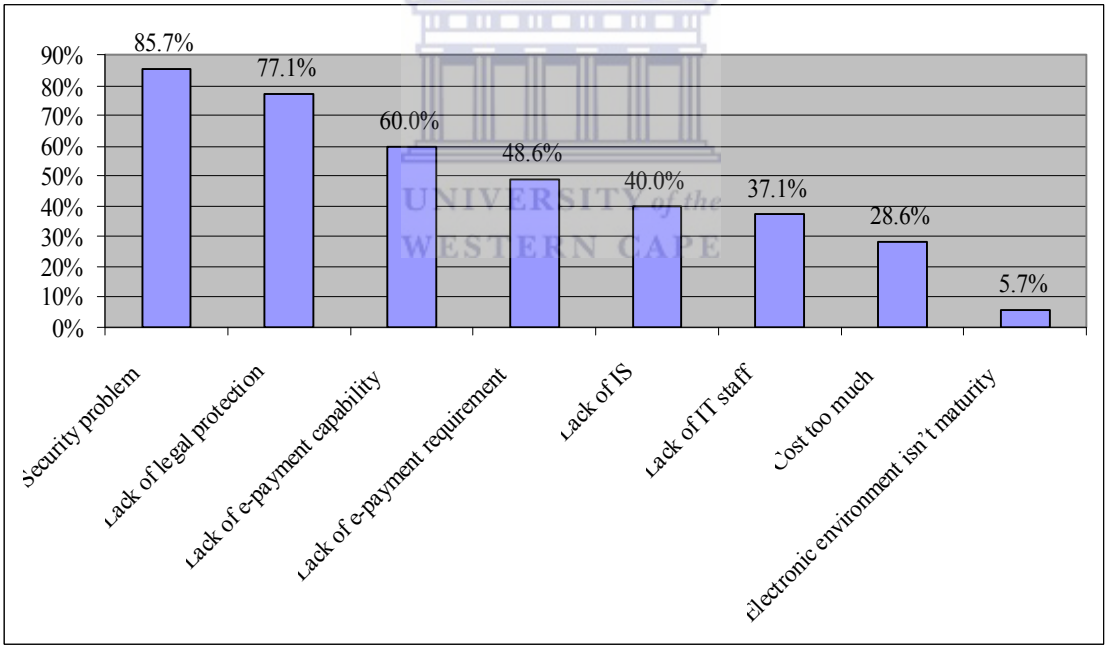

Figure 5.5 Factors influence e-payment adoption (N=35)

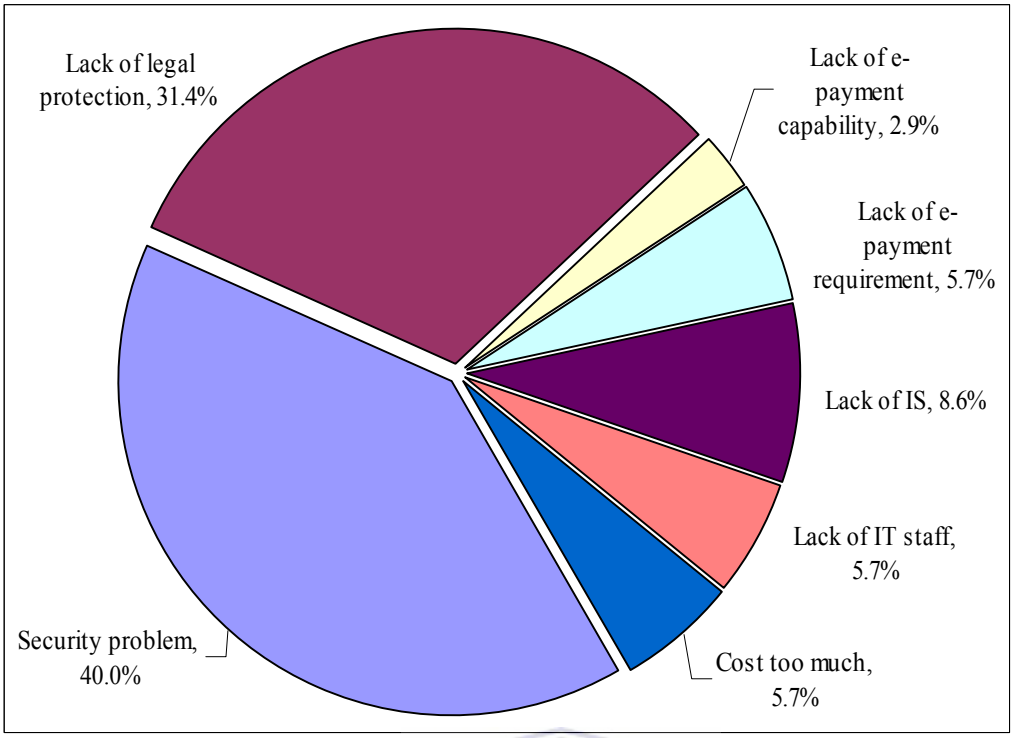

Figure 5.6 Most important factors influence e-payment adoption (N=35)

As has been discussed, for all Chinese SMEs (whether they have adopted e-payment or not), the security problem and e-payment usage or adoption levels are the most important influences on the usage or adoption of e-payment by SMEs. These two factors will be analyzed in more detail later in this chapter. Chinese commerce culture will be discussed as a general factor that influences e-payment adoption. Other factors will also be mentioned in this part as a supplement to this study.

5.5.1.1 Security problem

As was mentioned in Chapter 3, the Chinese e-payment security problem includes commerce security (default security & product quality security), and IT security (Internet security & e-payment technology security).

Since 78.9% of the respondents reported experiencing defraud risk and 59.3% reported product quality risk in last three years (Section 5.4.4.1), most SMEs in China are therefore exposed to these commerce risks during business operations. However 51.2% SMEs (Section 5.4.4.1) remain eager to join in new trading networks because of the opportunities to do business in new places. Chinese businessmen seem more resilient entering unfamiliar market than those in other countries, but the influence of Chinese

commerce risk has obviously resulted in nearly half of the respondents refusing to do businesses with unfamiliar partners. Such prudence would also be congruent in the e-payment industry, where mostly unfamiliar users from different places are linked together by e-commerce.

Another security problem is IT security, which includes Internet security (the risk normally associated with Internet transmissions), and e-payment itself (the risk normally encountered with e-payment software). Even though it is hard to determine the real security condition of IT from the non-technological respondents, it is worth finding out the attitudes of SMEs on IT security, since the feelings of the SMEs' managers can influence a company's decisions making.

Most respondents believe that the Internet (80.5%) and online e-payment (74.8%) are secure or quite secure to use (Figure 5.7 & Figure 5.8). Thus, the attitude of SMEs is better disposed towards Internet and online payment than the risks perceived in Chinese commerce culture. It seems that SMEs will trust IT more than commerce culture. However, the risks of Chinese commerce culture and IT were rated almost equally as unsafe factors in e-payment.

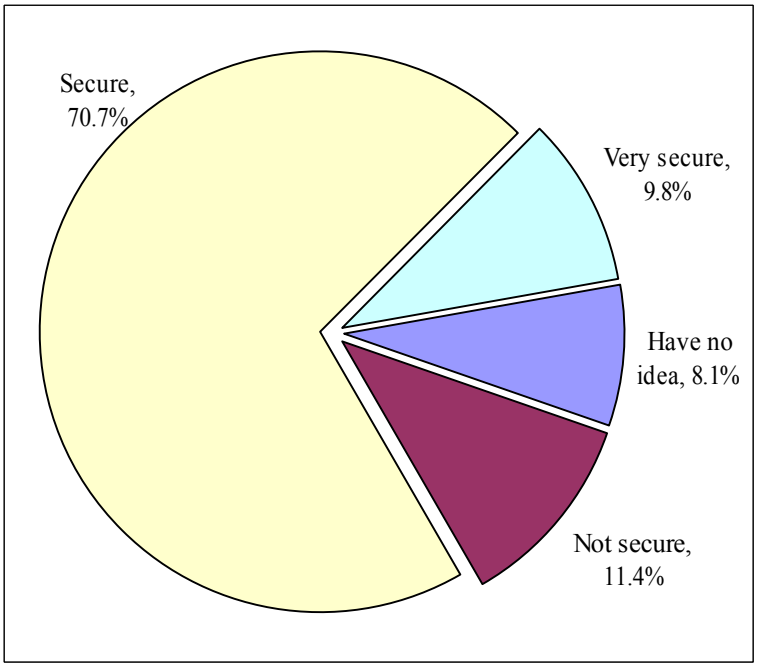

Figure 5.7 Awareness of Internet security (N=123)

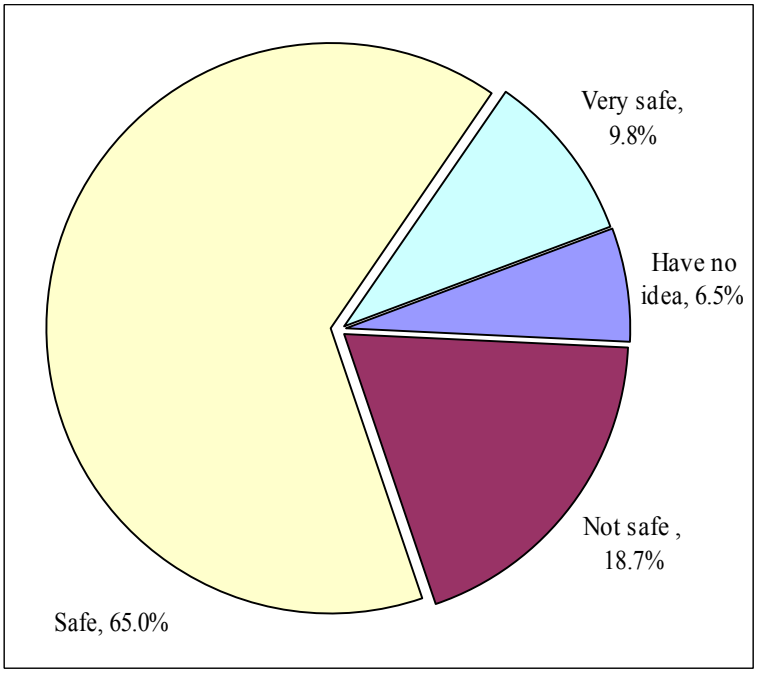

Figure 5.8Awareness of e-payment security (N=123)

Less than half the number of respondents (48.8%) regarded IT as unsafe when using e-payment (Figure 5.9). This result is in contrast to their awareness of IT security, since most of them (74.8%) considered IT to be safe to use (Figure 5.8). Comparing the three response graphs shows that even though IT is considered safe and SMEs have realized that there are problems with the security of using e-payment technology, the traditional worry of IT security negatively influences SMEs using or adopting on of e-payment seriously.

The percentage of other respondents (54.4%, Figure 5.9), who consider online trading unsafe, is close to that of those who indicated they would not trade with unfamiliar companies. This observation again suggests that the risk from Chinese commerce culture is closely linked to the Chinese e-commerce risks, both, which influence the usage and adoption of e-payment.

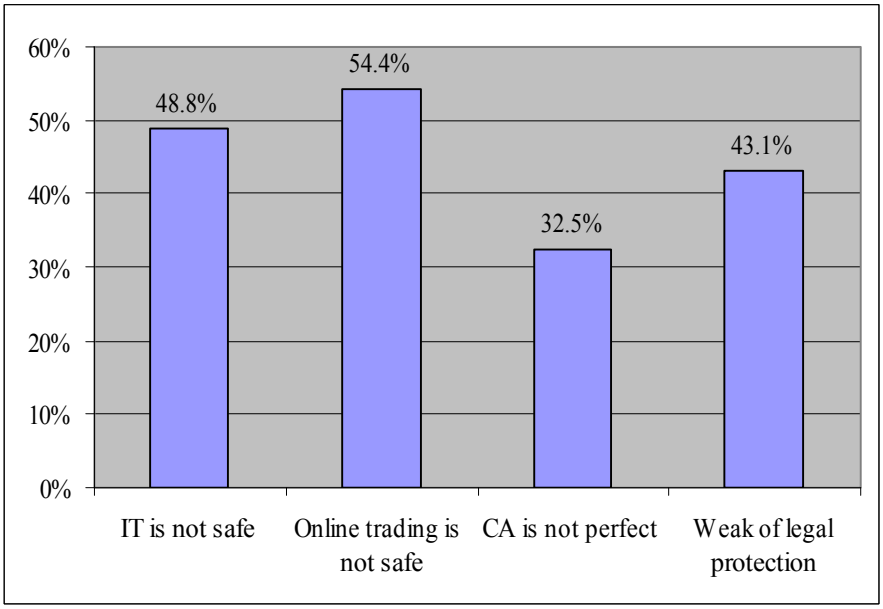

Figure 5.9 Awareness of safety problems in online market (N=123)

Nearly half (48.8%, Section 5.4.4.1) SMEs announced that they would not trade with unfamiliar companies which practice the Chinese commerce culture perceives as high risk. This viewpoint is also valid in online market since 54.4% (Figure 5.9) of the respondents state that online trading is not safe.

In IT security concern, even though most respondents (Figure 5.7 & Figure 5.8) thought IT was secure when using e-payment, the remaining 48.8% (Figure 5.9) of respondents find it to be unsafe, this possibly shows that both the real and perceived concerns about IT security can influence the usage or adoption of e-payment.

Above all, the security problem, including Chinese commerce culture security and IT security, is quite an important factor influencing e-payment usage or adoption in Chinese SMEs.

5.5.1.2 Legal protection of e-payment

Andrieu (2001) described legal risk as one of the important risks in e-payment security. As was mentioned by Yang (2005), the completion of legal items, the potency of related law, and the effective operation of online credit systems are important for the development of e-payment.

The attitudes of respondents towards legal protection of e-payment (Figure 5.10 & Figure 5.11) indicate that 71.5% of respondents thought that e-payment laws are not ideal. Only 7.3% of the respondents believed that e-payment related law would be helpful when financial irregularities occur during e-payment. The weakness of legal protection is one of the safety factors influencing e-payment usage or adoption (Figure 5.9) as indicated by 43.1% of the respondents. In addition, 32.5% of the respondents considered the weakness of CA system (Figure 5.9) as an important risk factor when using e-payment. All this information points to the fact that SMEs do not have confidence in e-payment related laws.

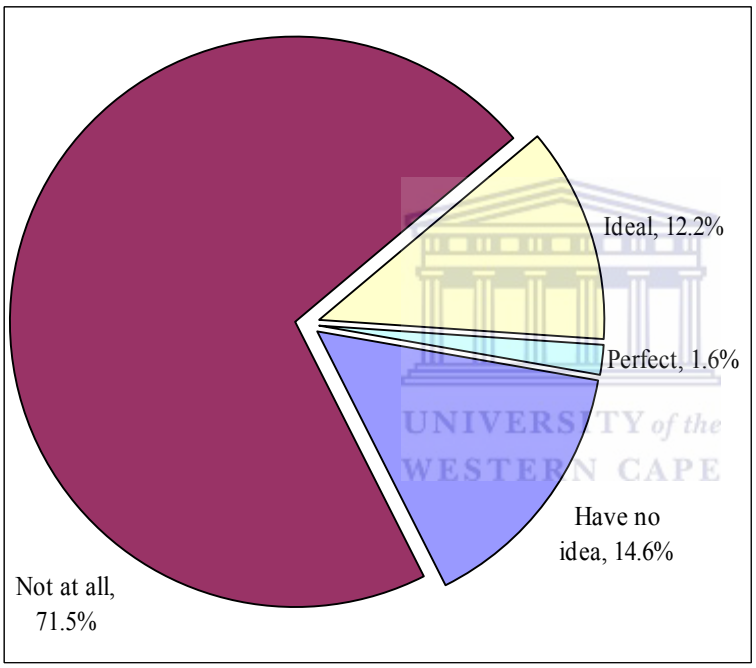

Figure 5.10 The satisfaction of e-payment related law (N=123)

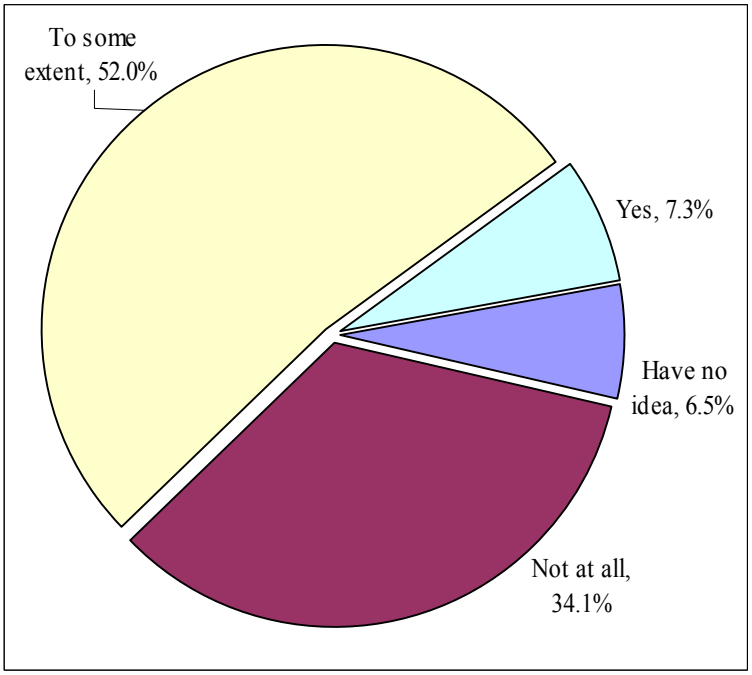

Figure 5.11 The potency of legal protection (N=123)

The effective operation of a credit system was also queried in the questionnaire. Even though a little more than half (56.9%) of respondents have adopted CA to help them do business online (Figure 5.12 & Figure 5.13), only 10.6% respondents reported that CA is sufficient protection for their trading. This means even though more than half SMEs use CA during their online trading, most of them do not think that CA can protect them completely against online trading risk, but rather appear to have adopted CA for some other reasons.

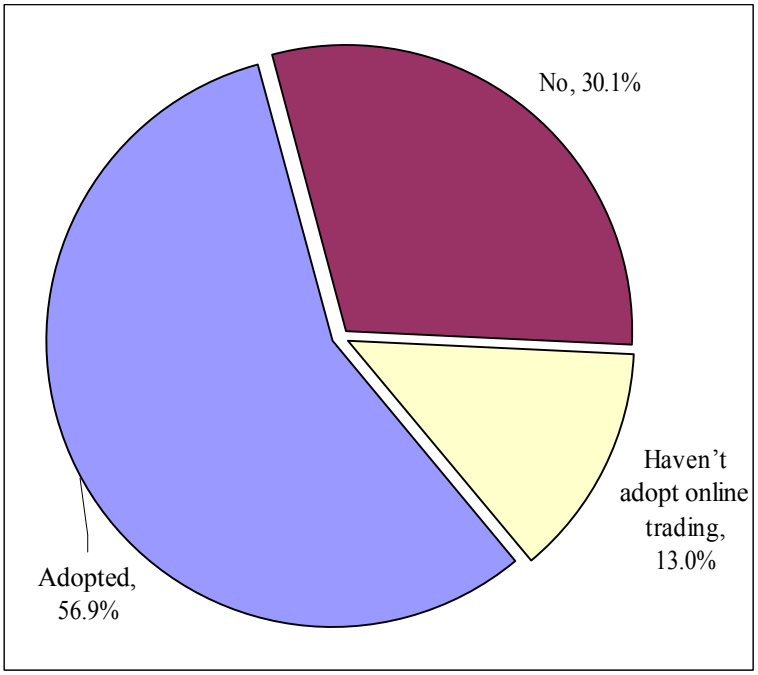

Figure 5.12 Adoption level of CA (N=123)

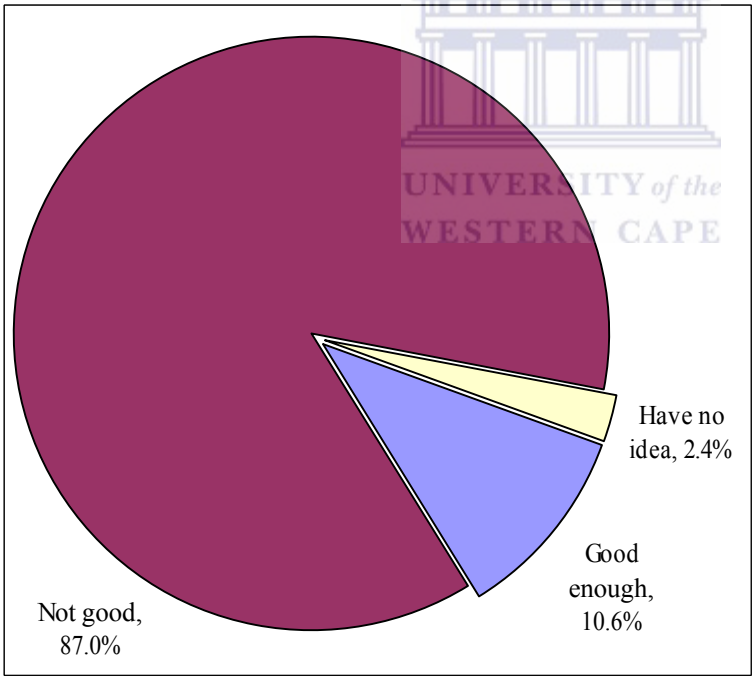

Figure 5.13 Opinion about current CA (N=123)

Since the Chinese e-payment related law is not perceived, SMEs also do not have confidence in online credit systems. The laws required to protect online payment are weak so SMEs have little legal protection when using e-payment. However, even though legal protection problem is rated high amongst the most important factors that influence e-payment usage or adoption (Figure 5.3), few SMEs still consider it the

most important factor (Figure 5.4). All this information means that lack of legal protection remains a high risk, but weak legal protection is not a strong enough risk factor when SMEs make decisions on whether or not to adopt e-payment.

5.5.1.3 E-payment usage level

As was mentioned previously, the survey was conducted in BeiJing and JiLin amongst 123 businesses mainly from eight industries. All questionnaires presented different information about the situation of respondents; hence the differences between the regions and industries will be discussed in this section.

5.5.1.3.1 E-payment in different regions

An almost equal number of respondents were chosen from the two cities in order to avoid possible errors caused by different samples sizes (62 respondents from BeiJing, 61 respondents from JiLin). Even though the number of respondents is almost the same, e-payment adoption rates are different between the cities. The e-payment adoption rate is higher in BeiJing (87.1%), than in JiLin (55.7 %). The e-payment usage level also differs between BeiJing and JiLin (Figure 5.14 & Figure 5.15), with 62.9% of the respondents from BeiJing clearing more than 30% of their company finances by using e-payment compared to only 21.3% in JiLin, which has much lower e-payment usage level.

In this study BeiJing represented a developed region and JiLin a developing region. The developed region has much better e-payment usage, and higher adoption levels because of more developed economic structures and better equipment, compared to the developing region.

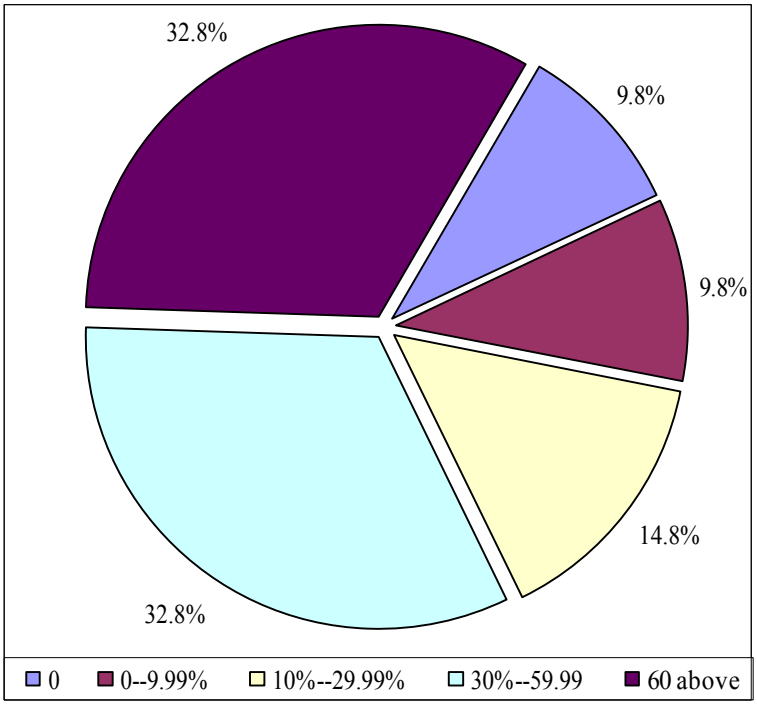

Figure 5.14 E-payment usage level in BeiJing

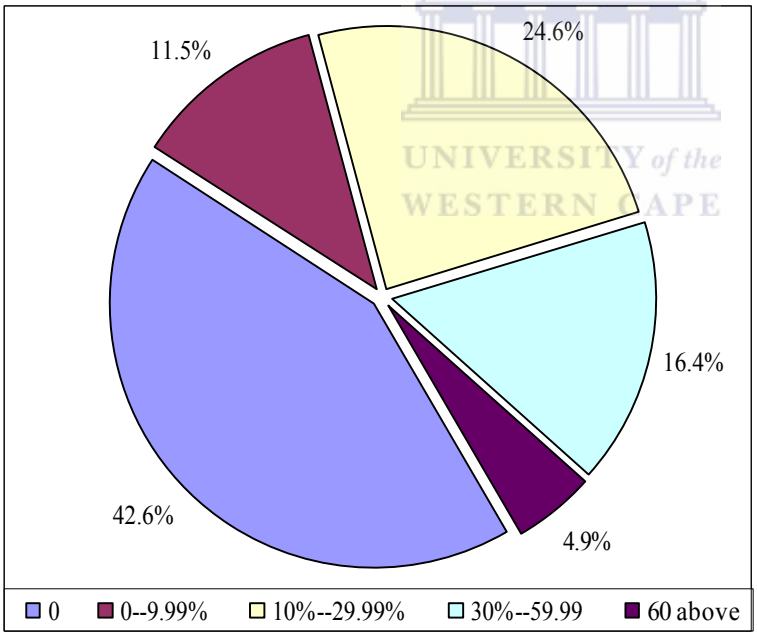

Figure 5.15 E-payment usage level in JiLin

Besides the different levels of e-payment usage and adoption, the factors that influence their usage and adoption are also different in the two cities (Figure 5.16 & Figure 5.17). There are differences in the important factors that influence e-payment usage by SMEs in the cities. Most SMEs in BeiJing (59.7%) indicate the lack of legal protection as the most important amongst all the other factors. The SMEs in JiLin (60.7%), in contrast,

indicate the lack of e-payment requirement as the most important factor, which only 22.6% of SMEs from BeiJing consider an adoption problem. In addition, only 29.5% respondents from JiLin cited the lack of legal protection as an important adoption factor.

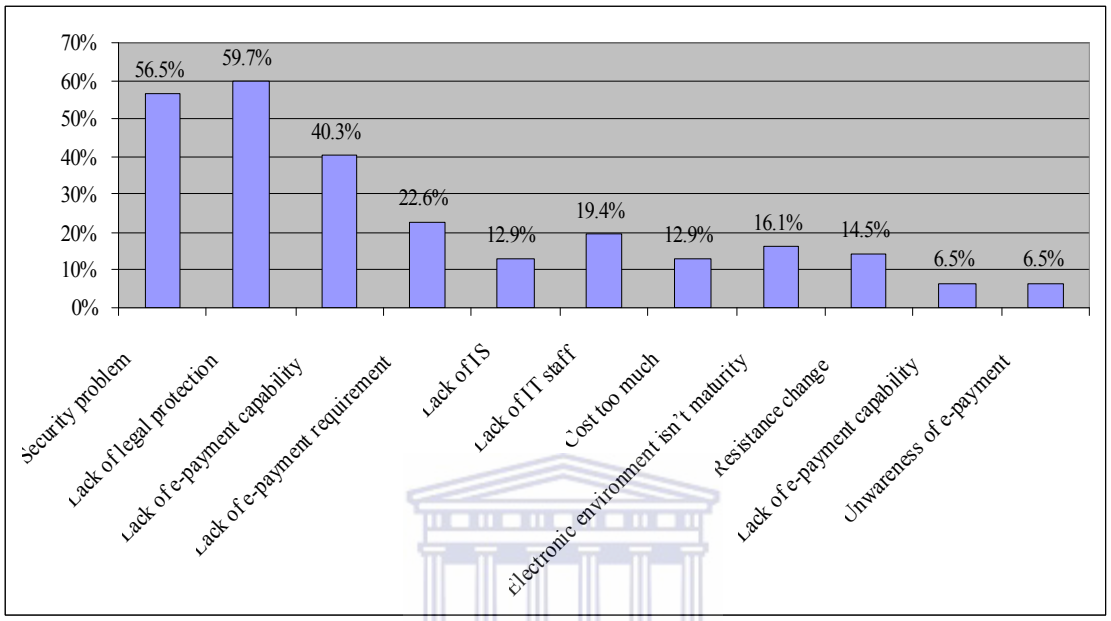

Figure 5.16 Factors influence e-payment usage (or adoption) in BeiJing

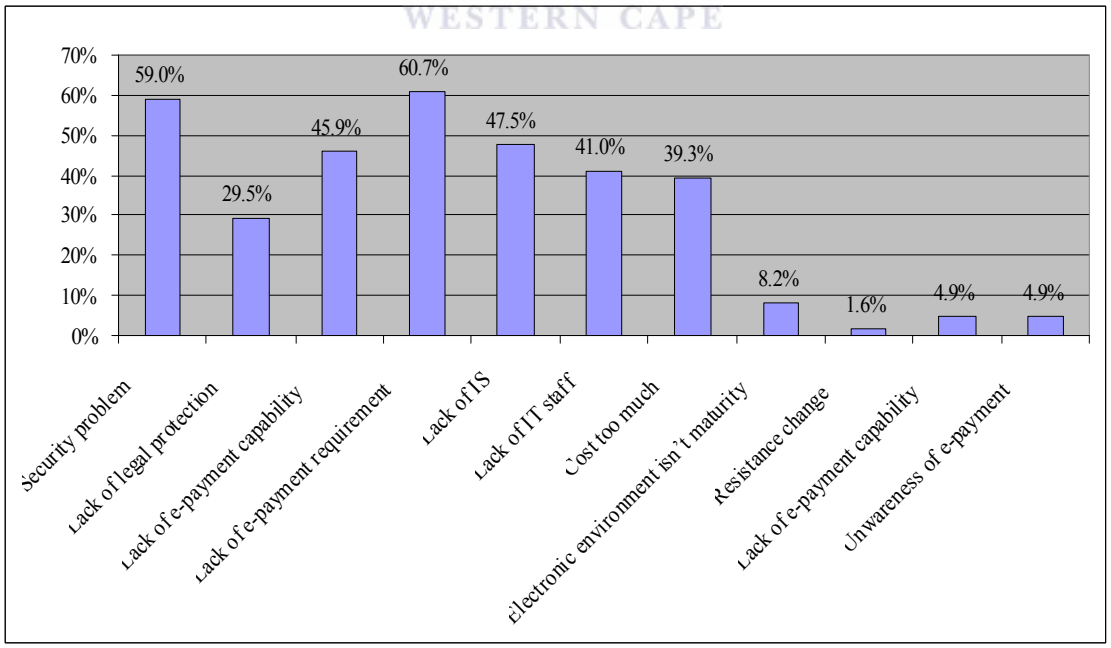

Figure 5.17 Factors influence e-payment usage (or adoption) in JiLin

A comparison of the most important factors that influence e-payment usage by SMEs from each of the two cities (Figure 5.18 & Figure 5.19) shows that the most important

factor influencing e-payment usage by SMEs is different. For SMEs in BeiJing, the security problem and lack of e-payment capability in collaborative companies are the most important factors. The lack of legal protection was also high on the list compared to the remaining other factors. Compared with BeiJing, SMEs in JiLin also identify security as one of the most important factors. However, the lack of e-payment requirement is the most important factor influencing e-payment usage by SMEs in JiLin and none of the respondents chose the lack of legal protection as the most important factor.

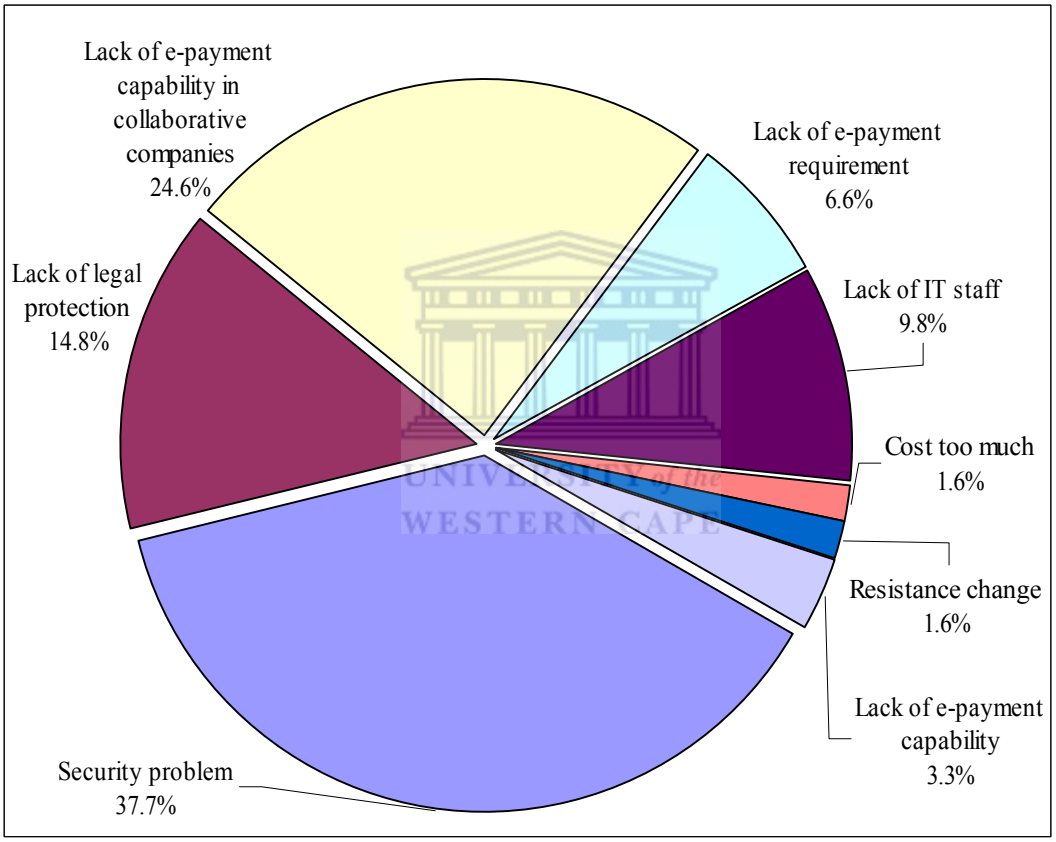

Figure 5.18 Most important factors influence e-payment usage (or adoption) in BeiJing

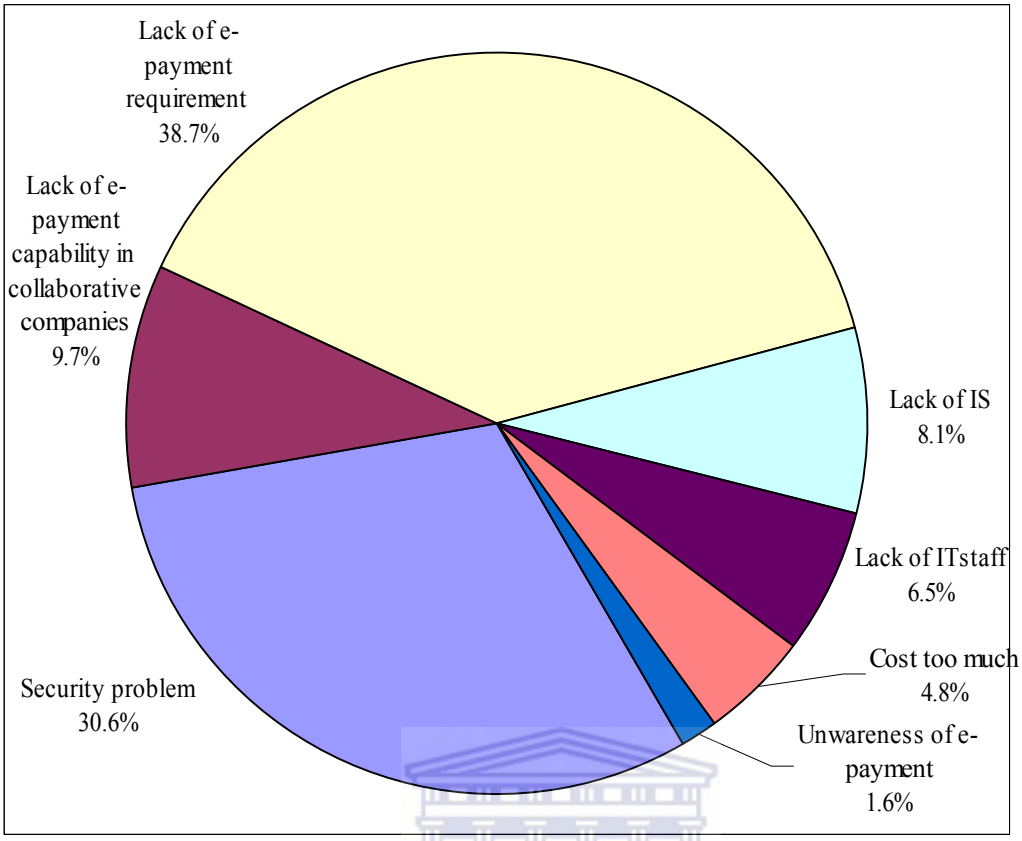

Figure 5.19 Most important factors influence e-payment usage (or adoption) in JiLin

Since only 8 SMEs from the sample have not yet adopted e-payment in BeiJing, the number is comparatively small. Thus, the e-payment adoption and usage levels differ according to the region and with different influencing factors.

5.5.1.3.2 E-payment in different industries

In this study, a survey research was conducted amongst SMEs from mainly eight industries (Figure 5.20 & Figure 5.21). Besides the response given as "other", the e-payment adoption rates are different and vary between 84% and 53.3% indicating that the e-payment adoption level in different industries is not the same. The manufacturing industry was found to have the best e-payment adoption rate, and the information service industry appeared to have the worst.

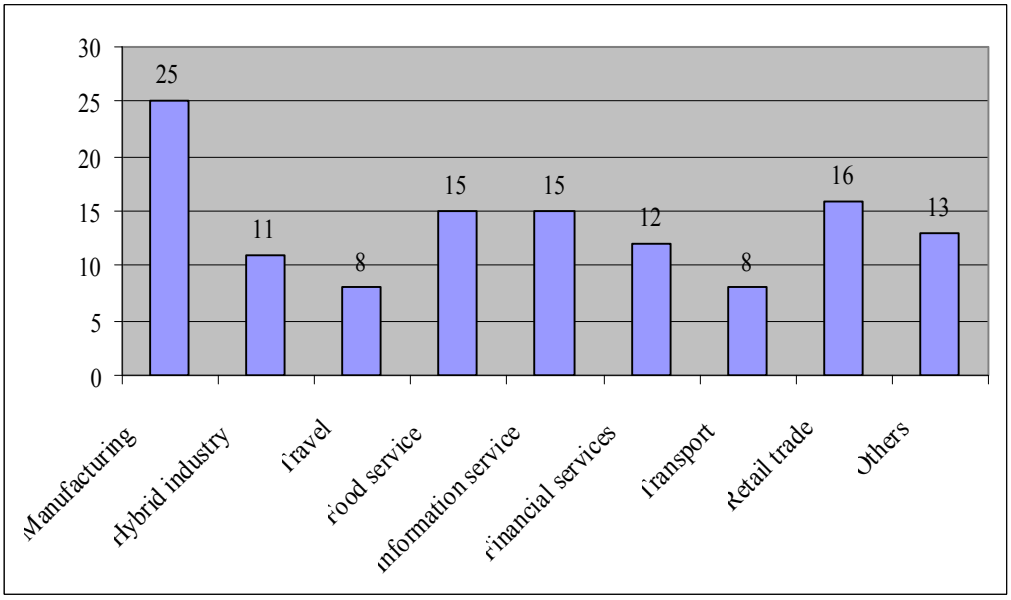

Figure 5.20 Industries of respondents

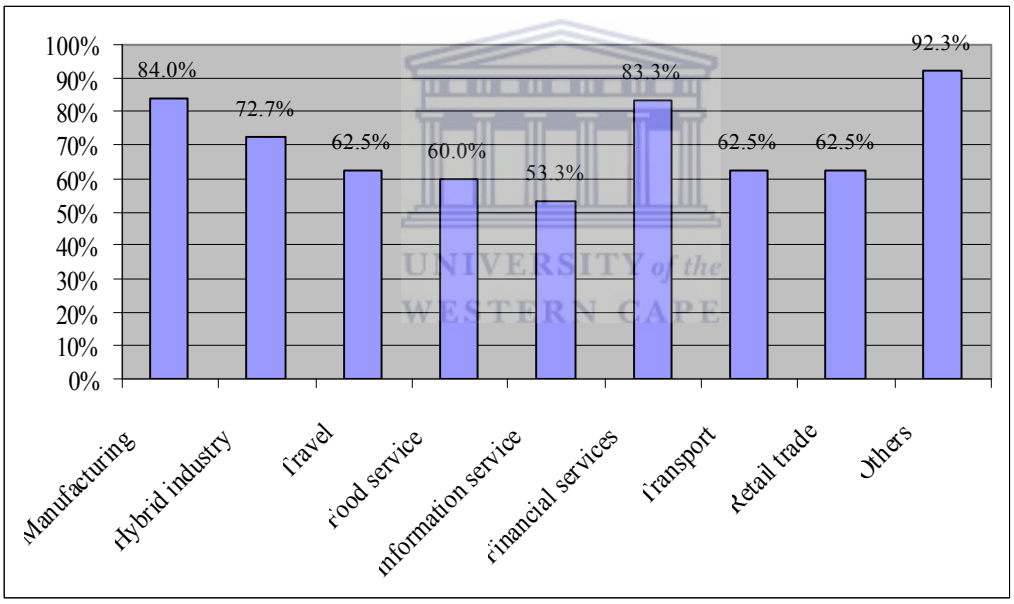

Figure 5.21 E-payment adoption levels in deferent industries

The information and manufacturing industries were selected for further analysis (Figure 5.22 & Figure 5.23). Even though no respondents from the manufacturing industry had more than 60% e-payment usage in their last financial year, the e-payment usage circumstances are better than in the information service industry. The study showed 40% of the respondents in the manufacturing industry used e-payment for financial clearing at a rate of above 30% last year, compared to only 20% in the information industry.

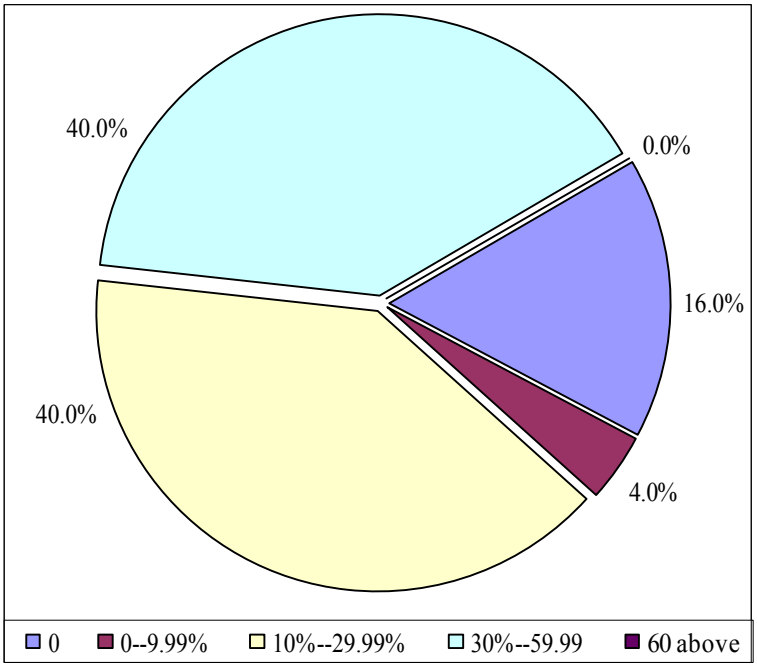

Figure 5.22 E-payment usage level of manufacturing industry

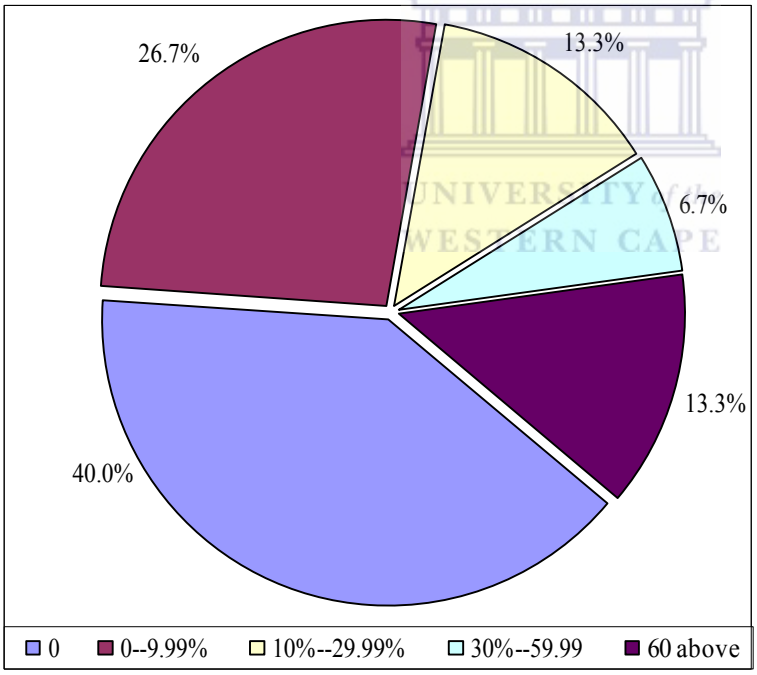

Figure 5.23 E-payment usage level of information service industry

The e-payment adoption levels in collaborative companies for manufacturing and information service industries are also different (Figure 5.24 & Figure 5.25). At least 72% of the SMEs in the manufacturing industry have more than 10% of their collaborative companies e-payment capable, compared to only 33.3% of the companies

in the information service industry. Thus, e-payment in the manufacturing industry is more than in the information service industry.

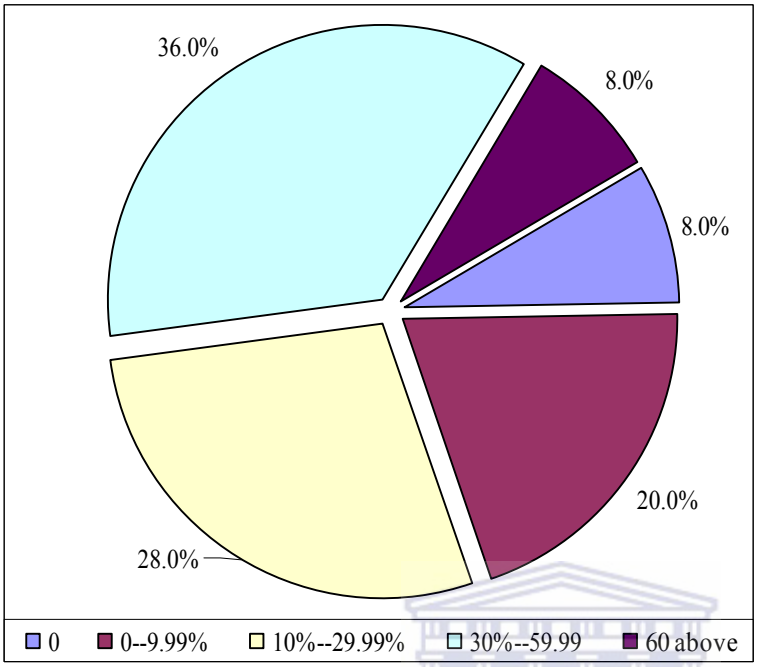

Figure 5.24 E-payment adoption in collaborative companies (manufacturing)

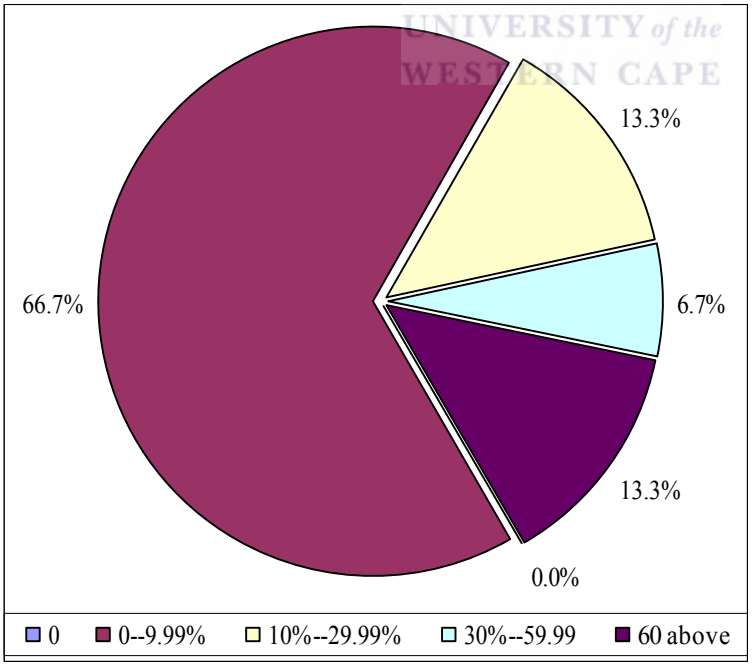

Figure 5.25 E-payment adoption in collaborative companies (information service)

Besides the different e-payment usage levels and environment, the factors that influence e-payment usage or adoption are not the same between the different industries (Figure 5.26 & Figure 5.27).

In the manufacturing industry, 76% of the respondents chose e-payment security as the most important factor influencing the usage or adoption of e-payment amongst all the other factors. For the information service industry the security problem is less important than the weakness of e-payment capability in collaborative companies and the costs of e-payment, showing that the influencing factors of e-payment usage or adoption are different amongst different industries.

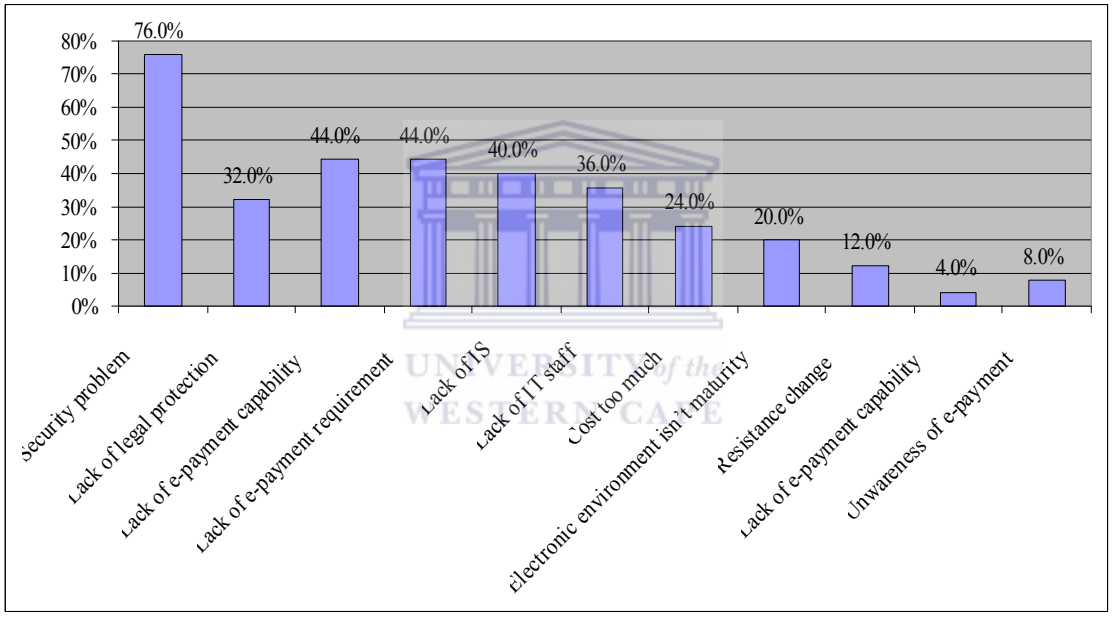

Figure 5.26 Factors influence e-payment usage (manufacturing)

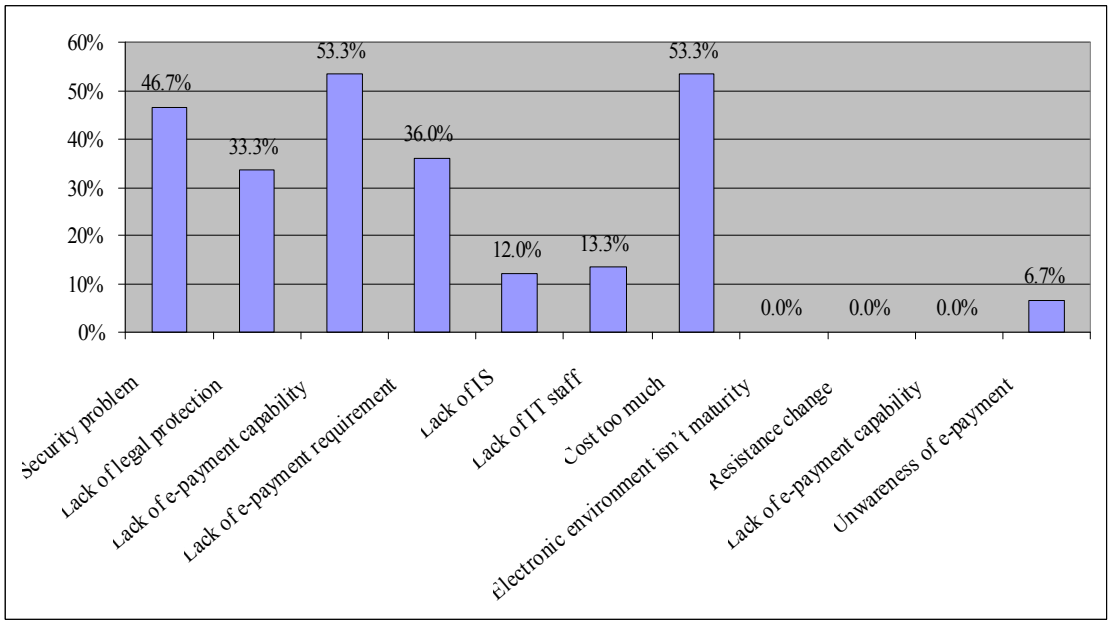

Figure 5.27 Factors influence e-payment usage (information service)

The most important factors influencing the usage and adoption of e-payment were compared between the manufacturing and the information service industries (Figure 5.28 & Figure 5.29).

Most SMEs in the manufacturing industry indicate concerns about security, lack of e-payment capability in collaborative companies and the lack of e-payment requirement. Among these three factors, the security problem was selected as the most important factor by 40% of the respondents. Although the security problem and lack of e-payment requirements are selected as amongst the most important adoption and usage factors in the information service industry, the lack of e-payment requirement was considered the most important deterrent compared to all the other factors. These differences show that the influences of a factor in one industry are not necessarily the same in another. Even though the most important factors that influence e-payment usage or adoption are similar in different industries.

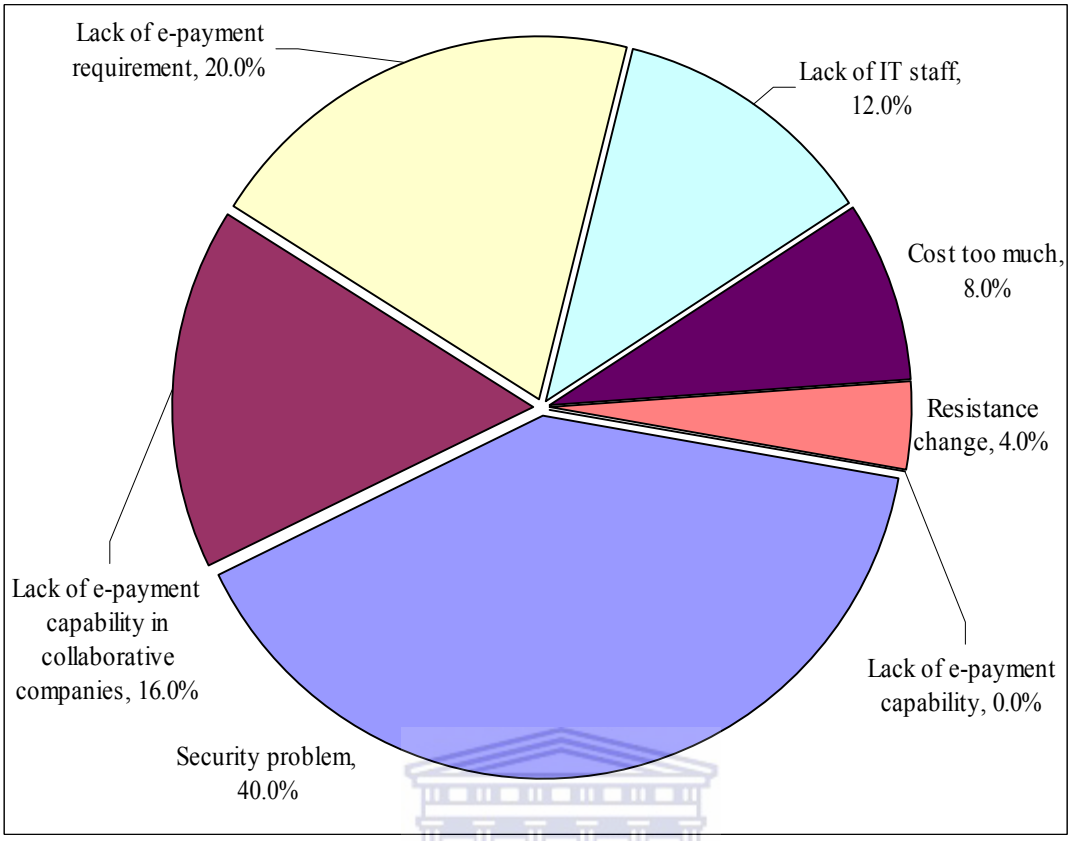

Figure 5.28 Most important factor influences e-payment usage (manufacturing)

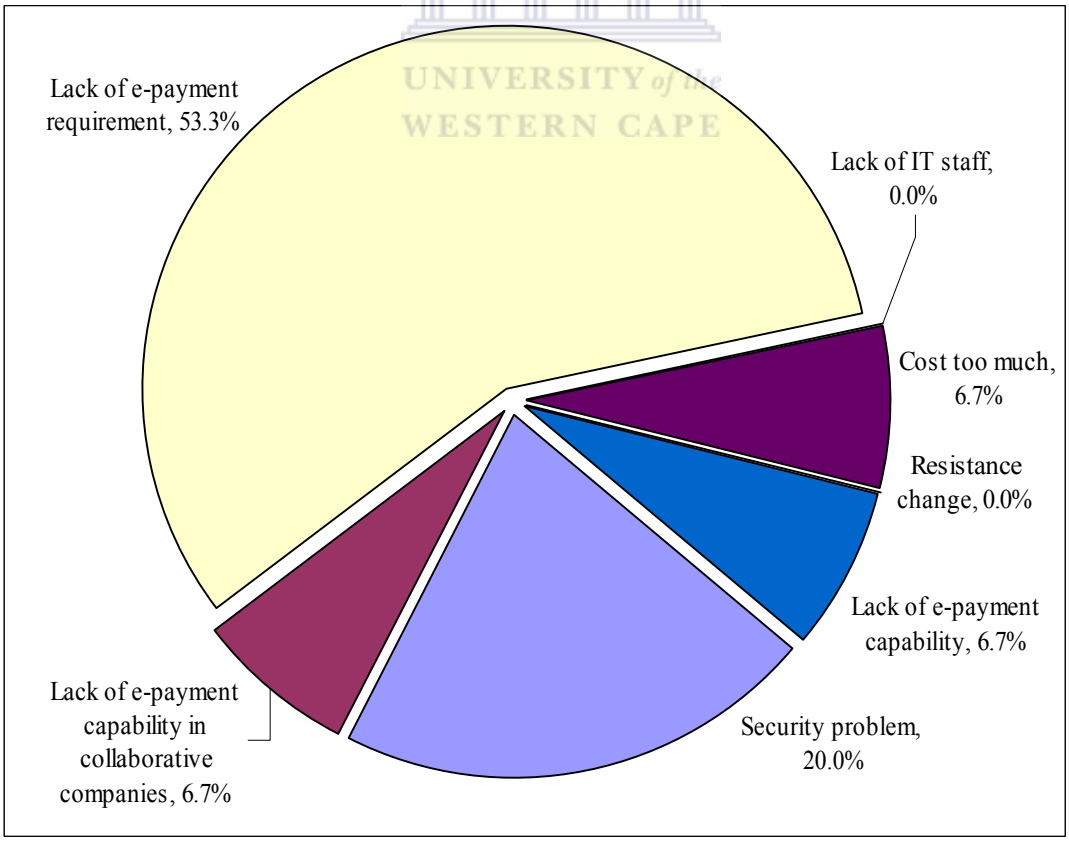

Figure 5.29 Most important factor influences e-payment usage (information service)

As discussed, data shows that the development of e-payment in different industries is not the same, including the e-payment adoption levels, usage levels, environment, influencing factors and the importance of one factor over another.

5.5.1.4 The influence of the Chinese commerce culture

The Chinese commerce culture was described in Chapter 3 as a high risk, low trust, high commerce network, and resistant to change. The Chinese commerce environment and commerce payment habits will be presented before discussing these characteristics in order to throw more light on the influence of Chinese commerce culture. In this chapter 78.9% of respondents faced defraud risk, and 59.3% of respondents worry about product quality (Figure 5.4), and only about half choose to trade with unfamiliar companies. Even though commerce risk is high in China, nearly half will try trading with unfamiliar companies. It is not clear whether confidence in Chinese commerce culture is becoming less.

The analysis in Figure 5.30 shows that most SMEs (91.9%) primarily use their traditional commerce networks to explore new business. Some of the SMEs (35.8%) are trying to use online market to advantage, and only a few SMEs (8.1%) are satisfied with the current business for their company's development. These findings show that Chinese SMEs are still closely linked in their traditional commerce network. Most SMEs are not satisfied with their current business and eagerly trying to find new trading opportunities.

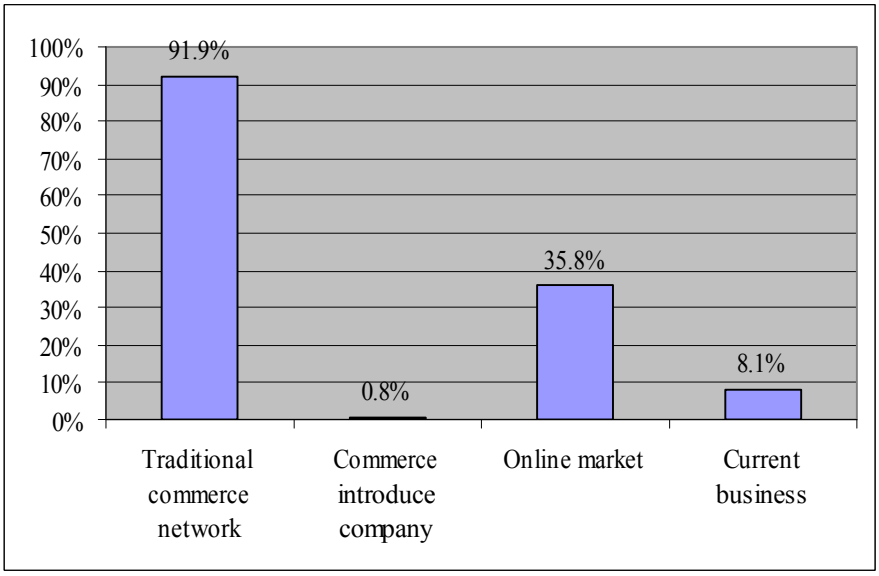

Figure 5.30 Trading niches of Chinese SMEs

8.1% of SMEs maintained that their current business is enough for their company's development, 35.8% of respondents indicated that they are trying to access the online market (Figure 5.30). This study also intended to establish if SMEs were willing to adopt e-payment without a compulsive request (Figure 5.31). More than half of the respondents were willing to change their payment method without compulsive request, showing that a culture of resistance to change is not a hindrance for Chinese SMEs.

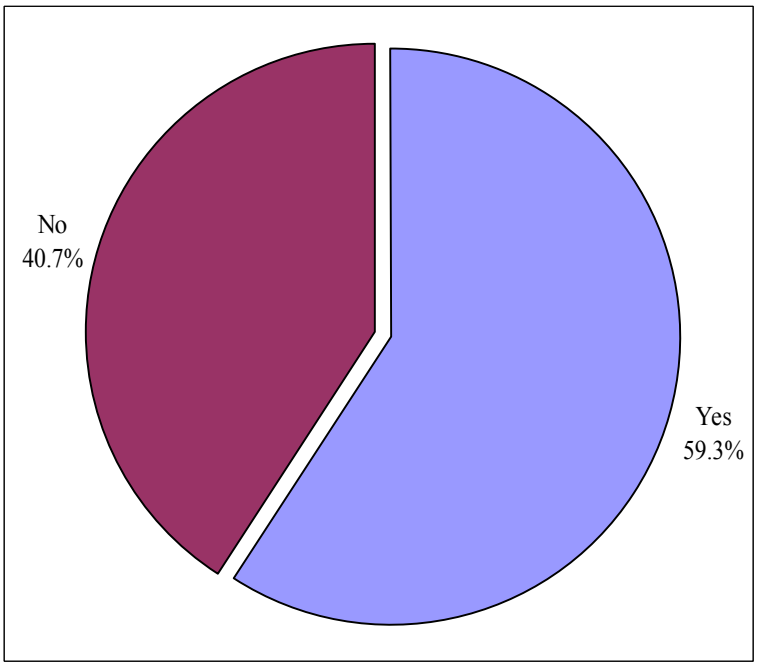

Figure 5.31 Willingness of adopt e-payment without compulsive request

Chinese SMEs are against high commerce risks and are well connected with their traditional commerce network. However, Chinese SMEs are more likely to change their commerce or payment method than previously believed, since the low trust in Chinese commerce is not clearly shown as a major inhibiting factor in this survey. The influence of e-payment usage or adoption in the Chinese culture remains a complex problem, highly linked with security and reliance on their traditional commerce network. The high traditional commerce relationship, which influences SMEs e-commerce adoption, is not important for e-payment.

5.5.1.5 The influence from Chinese commerce payment habits

The current payment methods amongst the Chinese SMEs vary as well as the problems encountered during payment progress (Figure 5.32). Even though cheques have been introduced and used for a long time, bank remittance still remains the main method of payment. E-payment has to play catch up with cheques.

The security problem is considered a most important factor influencing the choice of payment method (Figure 5.33). Even though bank remittances are still important in SMEs' payments, e-payment has a higher prospect of success because it has been used more often. The security problem is the most important factor when SMEs choose to use e-payment as a payment method.

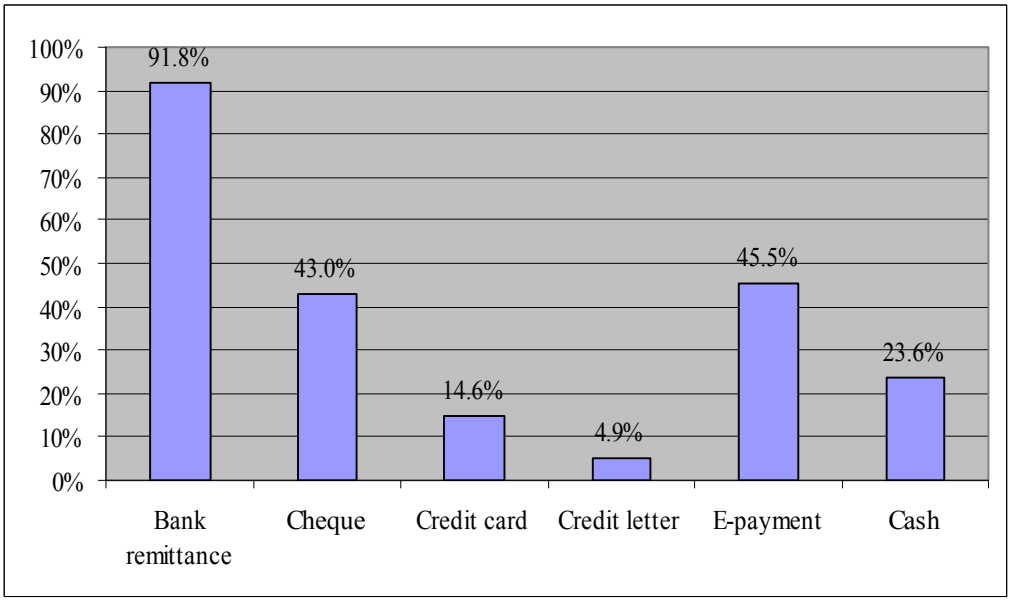

Figure 5.32 Main payment methods of SMEs currently

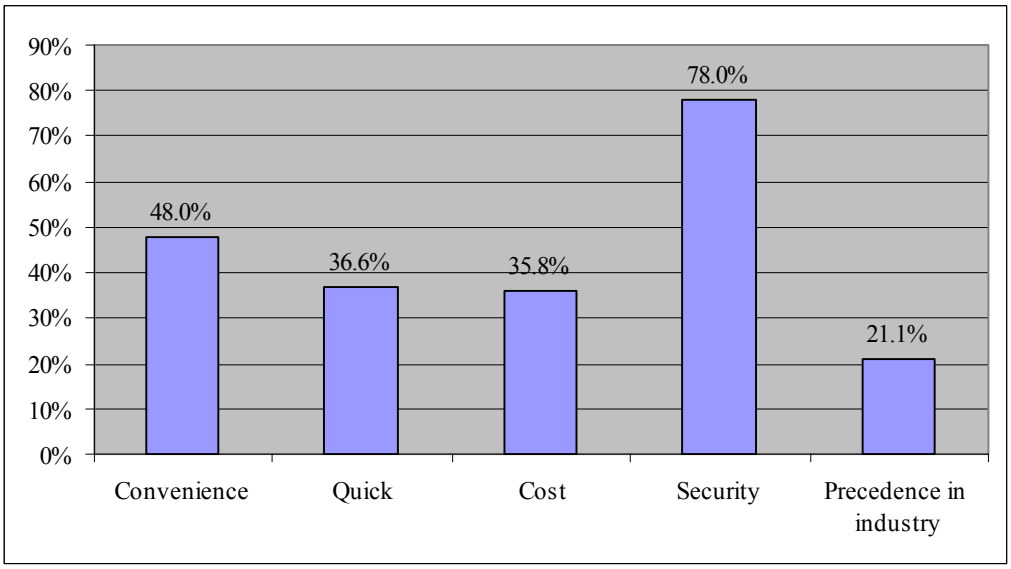

Figure 5.33 Factors that influence payment methods choice

A comparison of the domains of e-payment usage (Figure 5.34) shows that e-payment is normally used in B2B and B2C, which means commerce is the main purpose for using of e-payment. However, the use of e-payment in e-commerce is low (only 17.1%) and few of the SMEs (8.1%) indicated the possibility of using e-payment in traditional commerce, showing that e-payment can be an alternative to traditional payment methods.

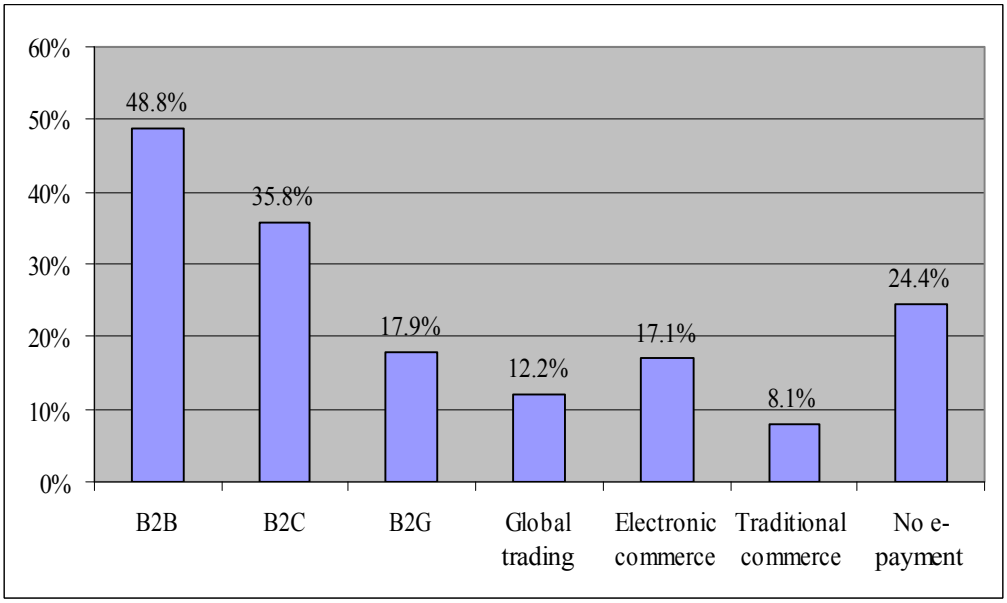

Figure 5.34 Domain of e-payment usage

Figure 5.35 shows competitive advantage as the most compelling factor that influences e-payment usage- 48% of respondents reported they wanted to improve their companies' competitive advantage by e-payment. Trading demand from collaborative companies is also important motivation for e-payment adoption. CEOs' decision is another important factor witch can influence e-payment adoption.

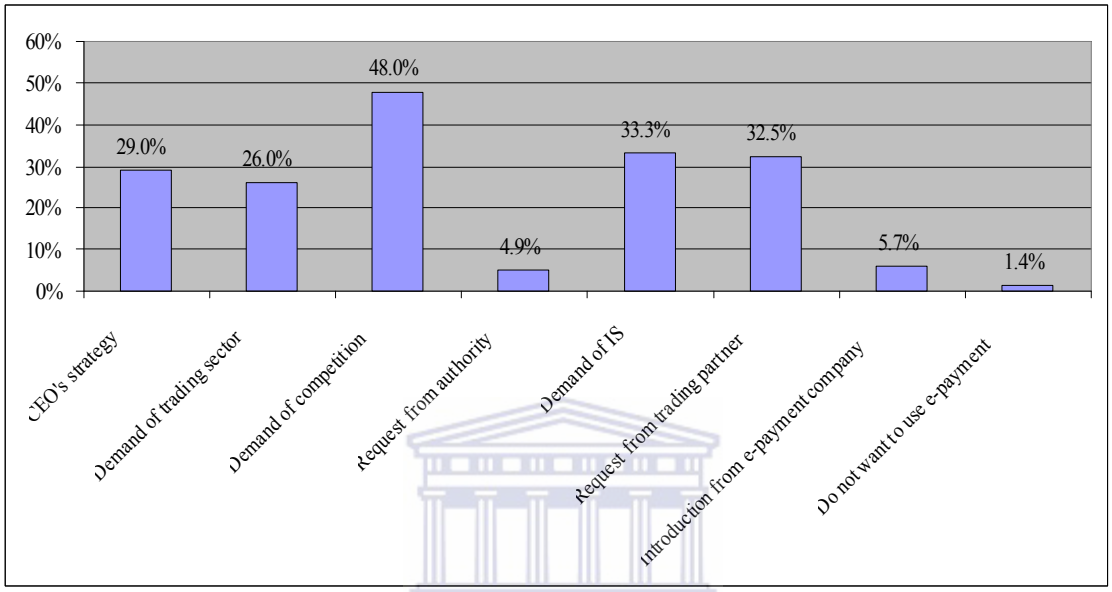

Figure 5.35 Impelling factors of e-payment adoption

There are a number of reasons why SMEs would or intend to adopt e-payment. These include the benefits of quick payment, improved competition, convenience and detracting costs were all equally identified as important factors (Figure 5.36). However, only 5.7% of the respondents indicated the need for improved payment security as their reason for adopting e-payment, which shows that the trust in e-payment security is still low.

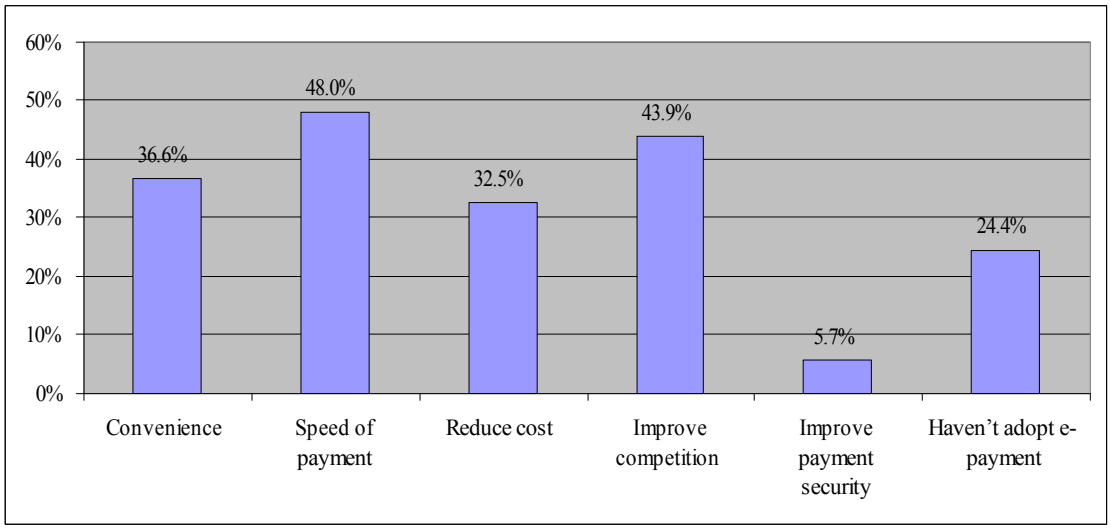

Figure 5.36 Purpose of adopting e-payment

Payment by bank remittance is also an important payment method, but e-payment has grown rapidly catching up with cheques to become the second most important payment method. Payment security, however, is the factor that worries most SMEs during payment. E-payment is primarily used for trading purposes and the pressure to adopt e-payment mainly arises from competition accelerated by the demand from collaborative companies.

The decisions of CEOs are also an important factor in influencing e-payment adoption. Most of the advantages of e-payment have been understood by SMEs, but security is still a problem.

5.5.1.6 Other factors that influence the usage or adoption of e-payment by SMEs

5.5.1.6.1 CEOs' age and e-payment adoption level

The CNNIC has made a survey among Chinese Internet users to determine if there is a relationship between age and Internet users. As shown in Figure 5.37, amongst people older than 18 the older they are the less they use the Internet. The questionnaire therefore contained an item to explore the relationship between CEOs' age and e-payment adoption rate.

The findings however are inconclusive (Figure 5.38).

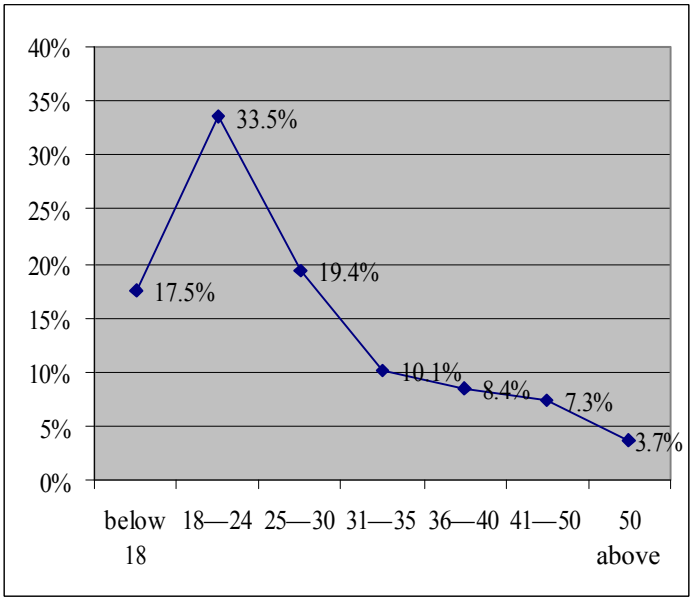

Figure 5.37 Age and Internet user (CNNIC, 2007)

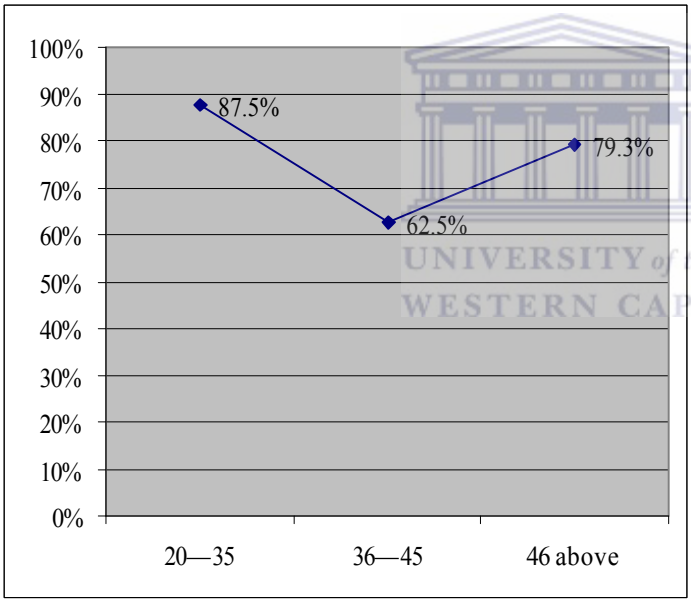

Figure 5.38 CEOs' age and e-payment adoption

5.5.1.6.2 Registration period and e-payment adoption levels

The study intended to establish if there is a relationship between the time that SMEs have been registered (and trading) and their e-payment adoption levels. The pattern from SMEs registered for 20 years shows that the longer SMEs have been established, the higher the e-payment adoption level. However this trend is slightly reduced in companies registered between 20 to 30 years (Figure 5.39).

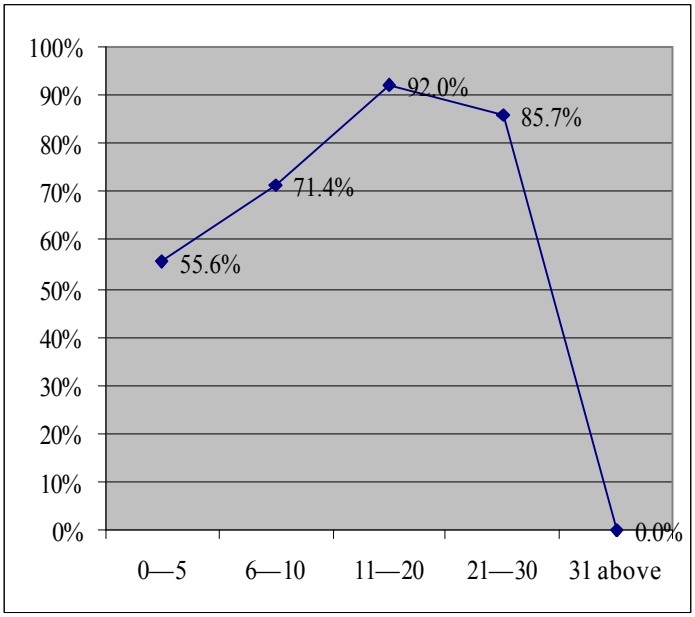

Figure 5.39 SMEs' registered year and e-payment adoption

5.5.1.7 E-commerce and e-payment

As was mentioned in Chapter 3, the researcher found out that e-payment has a strong link with e-commerce, a viewpoint that was investigated in the research survey (questions 11 & 12). Based on the functions of commerce used, 90.2% of respondents have adopted e-commerce in some way (Figure 5.40). However, as mentioned earlier in this chapter, nearly all SMEs are at low levels of e-commerce usage. Only 26.8% of respondents use e-payment as main payment method in e-commerce.

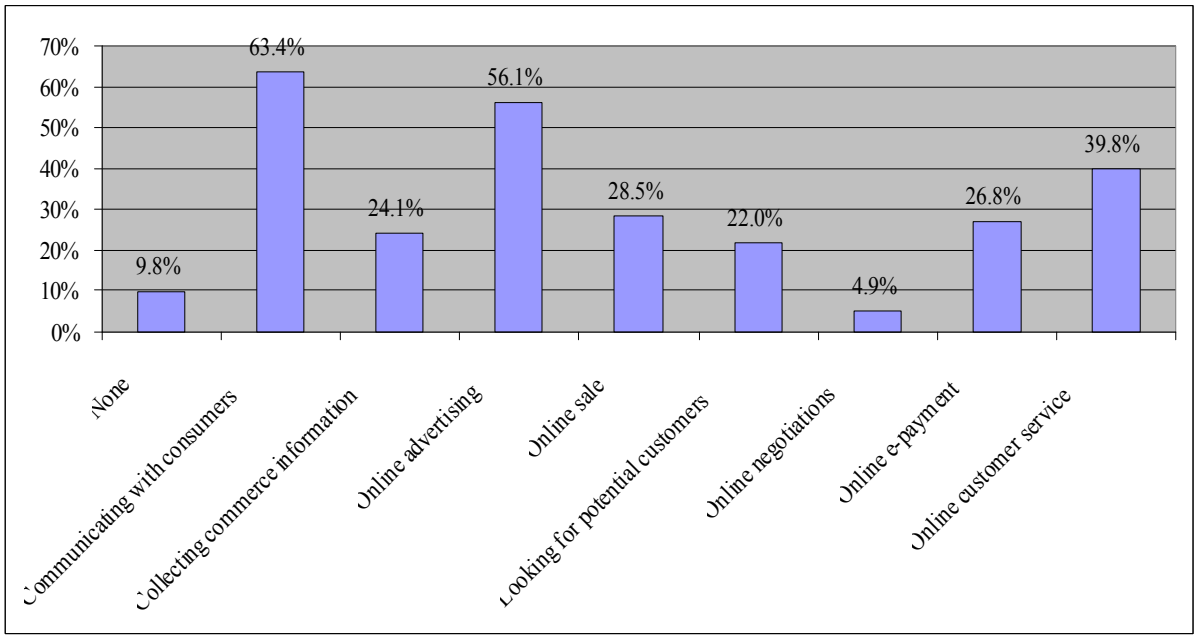

Figure 5.40 Functions of e-commerce that SMEs mainly use

Figure 5.41 shows the influencing factors for e-commerce adoption, compared to the influencing factors for e-payment. Again security is the main factor influencing online action. However, the cultural factor that claims that respondents like to use a traditional trading network more often, which influences e-commerce adoption more. No respondents reported low e-commerce adoption levels as a factor influencing their adoption of e-payment.

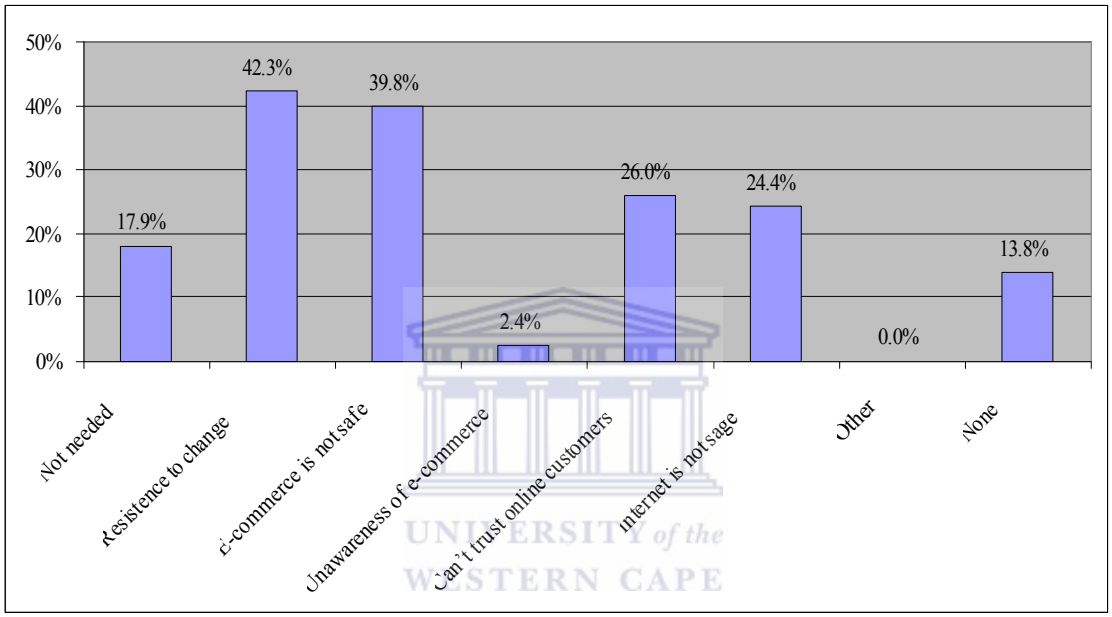

Figure 5.41 Factors that influence e-commerce adoption

Concerning the awareness and adoption levels of e-commerce and e-payment (Figure 5.42 & Figure 5.42), more respondents consider e-commerce to be more important or very important. This is reflected in the higher adoption levels of e-commerce compared to e-payment. Most importantly, however, the respondents who have used e-payment have all adopted e-commerce.

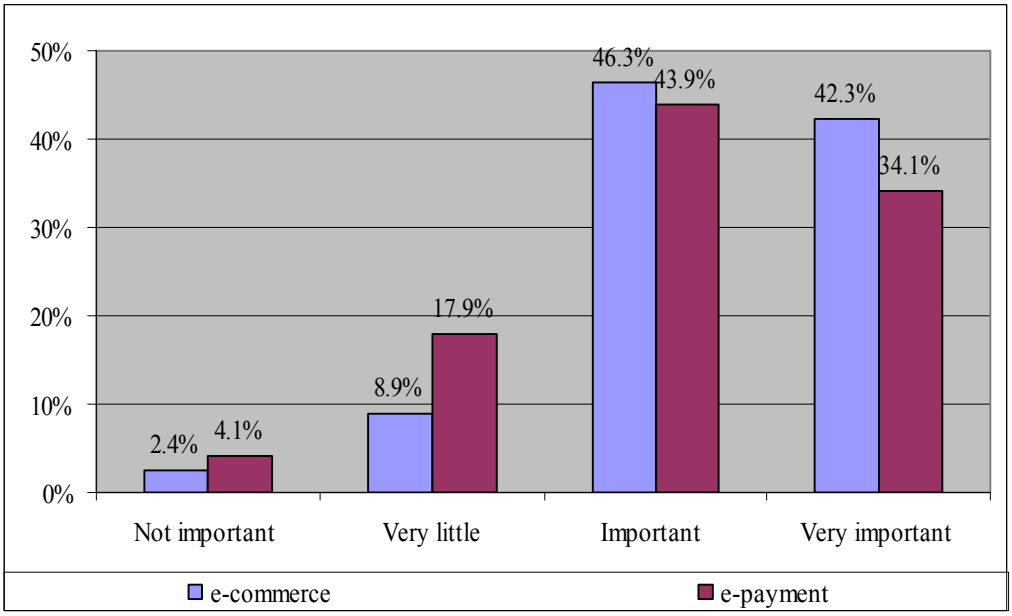

Figure 5.42 Importance of e-commerce and e-payment

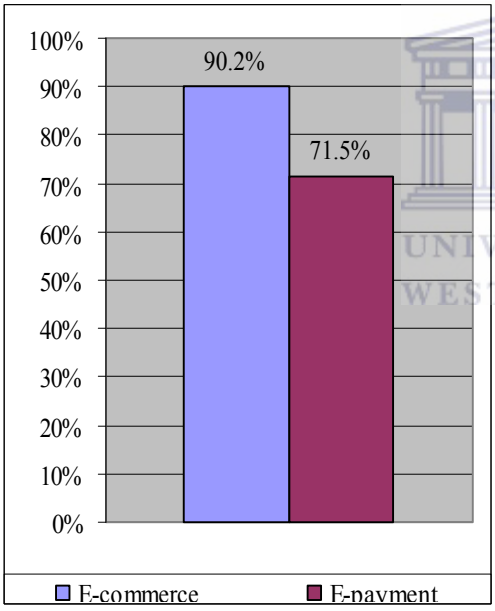

Figure 5.43 Adoption rate of e-commerce and e-payment

As discussed before, even though the usage of e-commerce is still low, most of the respondents (88.6%) saw the importance of e-commerce for their development and have made some effort to adopted e-commerce in some way.

The usage level of e-commerce (90.2%) is higher than that of e-payment (71.5%). All the SMEs who have adopted e-payment are already using e-commerce. E-payment is firmly related to e-commerce or the relationship is a result of SMEs who have adopted

e-commerce being more willing to adopt e-payment. From this contention, it can be concluded that the development of e-payment follows e-commerce, and the Chinese commerce culture can influence e-payment through e-commerce.

5.6 Conclusion

This chapter has presented the data from the survey research and discussed the factors that influence the usage and adoption of e-payment. The findings are as follows:

1. The development of e-payment is growing quickly. 71.5% of respondents in this research survey indicated that they have adopted e-payment to some extent. The e-payment usage level is still low, and most SMEs are still using traditional payment methods for financial clearing. Expanding usage levels is important, as this will lead to expanding adoption levels, ultimately resulting in the overall development of the industry.

2. The adoption of e-payment is strongly related to the adoption of e-commerce. SMEs that have adopted e-commerce are more likely to adopt e-payment. Hence, the factors that influence e-commerce adoption can also indirectly influence the adoption of e-payment.

3. Security is the most important factor that influences e-payment usage or adoption. The high risk and low trust of Chinese traditional commerce culture increases the security problem, which in turn, influences e-payment usage or adoption. Both the real and perceived concerns about IT security influence the usage or adoption of e-payment.

4. General low e-payment adoption level and demand levels, are also important factors that influence e-payment usage or adoption. These are as important as the security problem.

5. The e-payment adoption levels and the factors that influence e-payment usage and adoption are different in different regions, and in different industries.

6. The existing e-payment laws do not satisfy most SMEs. However, even though they are an important factor that influences e-payment usage or adoption, these concerns only have a slight influence on e-payment usage or adoption.

7. The influence of culture on e-payment adoption is complex but is not a major influencing factor. The low trust, high-risk paradigm in traditional commerce culture influences e-payment adoption (security concerns). The special relationships in the commerce network strongly influence the adoption of e-commerce, but not e-payment usage or adoption. Most SMEs have adopted e-commerce in some way and are trying to join into the online market to share in the gains.

8. The e-payment adoption level is related to the time the SMEs have been registered (or trading). Long-established SMEs seem to have higher e-payment adoption levels.

9. The influence of SMEs CEOs' age on adoption could not be clearly established.

10. Business competitiveness and demand from traders positively influences e-payment adoption.

The next chapter presents these findings in the context of the SMEs of China and compared with South African.

CHAPTER 6 - LESSONS FOR SOUTH AFRICA

6.1 Introduction

As a final adjunct to this study, an effort was made to determine what, if any, lessons could be helpful for South African SMEs.

This chapter begins by comparing the development of electronic commerce (e-commerce) between the two countries. Since both South Africa and China are developing countries, e-commerce development begun at roughly the same time. Both countries have therefore, experienced the same pressures of globalization and rapid liberalization of the trading policy regime and shared the same global markets.

There may be some significant comparative characteristics, relevant for further study, and useful data that could be extrapolated between the two countries. The next section reviews the factors that dominate e-commerce adoption in the respective countries.

6.2 Economic history of South Africa and the use of electronic commerce

Enterprises in South Africa (SA) have been fostered by a history of state protectionism and import-substitution industrialization (ISI) during the apartheid era. Disinvestment and the imposition of economic sanctions increased the trade isolation during 1980s and early 1990s. As a result, national enterprises were insulated from international competition for a long time. However, the twin pressures of globalization and the rapid liberalization of the trading policy regime, and plus the sudden major shift in state policy to open markets, forced SA enterprises to adjust accordingly since the year 1994. The key challenge confronting SA enterprises is not whether or not to participate in global markets, but how to do so and remain competitive (Moodley, 2003).

The global market provides the realizing scale economies, taps larger markets, and allows access to technologies and improved product standards amongst other benefits. Experience suggests that the ability to participate in this high growth path depends on the use of e-commerce (Moodley, 2004). E-commerce should be seen as an opportunity for SA to adopt practices that accelerate business and development. As a developing country, SA needs to take note of important changes in the global

environment such as e-commerce and make a concerted effort to ensure that the development of business practices are in line with the rest of the word (Rooyen & Reitsma, 2004).

The importance of e-commerce in helping enterprises to join in global market has recently come under the spotlight in South Africa. The ability to sell production through the national markets and, further, to a much broader region using the online market is therefore, likely to have a significant impact on the competitiveness of SA firms. Such a development is especially important because it leads to the development of a stronger economy for a developing country (Moodley, 2003).

SA has produced some very successful e-commerce companies and e-commerce online procurement hubs since 1994. In 2003, SA was ranked amongst the world's top 20 countries in terms of the number of Internet sites. In addition, the potential of e-commerce in SA is promising, due to the rapid growth of Internet usage. However, the current extent of e-commerce usage amongst SA enterprises is limited. The volume of transactions in online markets represents only a small percentage of the total transaction volume of the market (Moodley, 2004). Even though the SA businesses have witnessed the advantages and possible benefits of the Internet environment for developing countries, these have only appeared recently (Moodley, 2004). The SA technology and market dynamics are still heavily dependent on old commerce behaviour and SA e-commerce is still in the embryonic stages (Moodley, 2003).

6.3 Economic characteristics of the two countries

Even though the two countries are from vastly different regions, with different political backgrounds, sizes, and cultures, they share similar characteristics in the development of economies and online markets. Thus, their economies are not as strong as those in developed countries, and are characterized by an almost total lack of competitive advantage in the global market. In addition, there are other competitors to snatch the only share on the global market (Moodley 2003; MCC, 2005). Both countries also share the experience of surviving in economies closed to the global market, each entering the on-line market using different methodologies and achieving great successes (Moodley, 2003; MCC, 2005). These precious experiences are worth sharing

between the two countries in order to improve on their economic shortfalls, since their e-commerce developments begun in the same era. The rapid development of e-commerce in South Africa has occurred since 2000 after realizing the success of e-commerce in Western countries (Cloete & Fourie, 2005), and in China since 1998 after realizing how successful companies in the developed regions could help them enter the global market (CIW, 2006).

Since there are many similarities between SA and China, it is worth comparing the developments of e-commerce and sharing experiences. The following is a comparison of factors that influence e-commerce adoption by enterprises in both SA and Chinese enterprises.

6.4 Research findings among Chinese enterprises

As mentioned in chapter 3, e-commerce and e-payment share the same online market. E-payment exists as the payment method of e-commerce; hence they have similar new technologies based on the Internet and suffer similar problems regarding their adoption by enterprises. Therefore, a number of the factors that influence e-payment and that hamper adoption by enterprises also affect e-commerce. For the purposes of this study, to enable the discussion of the relationship between e-commerce and e-payment, a set of items were designed in the questionnaire in order to identify those factors influencing e-commerce adoption by enterprises in China. The data obtained can be directly used for this discussion.

The definition of e-commerce differs in each context. In China, e-commerce and e-payment are widely used separately with their single functions of commerce and payment. However, e-payment is included as the payment method of e-commerce in SA, thus only enterprises with e-payment capability can adopt e-commerce and this is the reason e-payment related research is limited. However, since most factors influencing e-payment usage have the same effect with regard to e-commerce, a comparison of the findings from the present research in China, with the factors that influence e-commerce usage by SA enterprises is possible. This chapter will show the different characteristics of the SA and Chinese online markets. The comparison is

expected to help in further studies that would facilitate the development of SA e-commerce.

As mentioned by the MCC (2005), the purpose for Chinese enterprises adopting e-commerce is to increase sales on the national or international markets. However, the advantage of reducing cost does not attract attention. Thus, the problems those influence the usage or adoption of e-commerce by Chinese enterprises centre around the process of trading, rather than other functions that e-commerce provided.

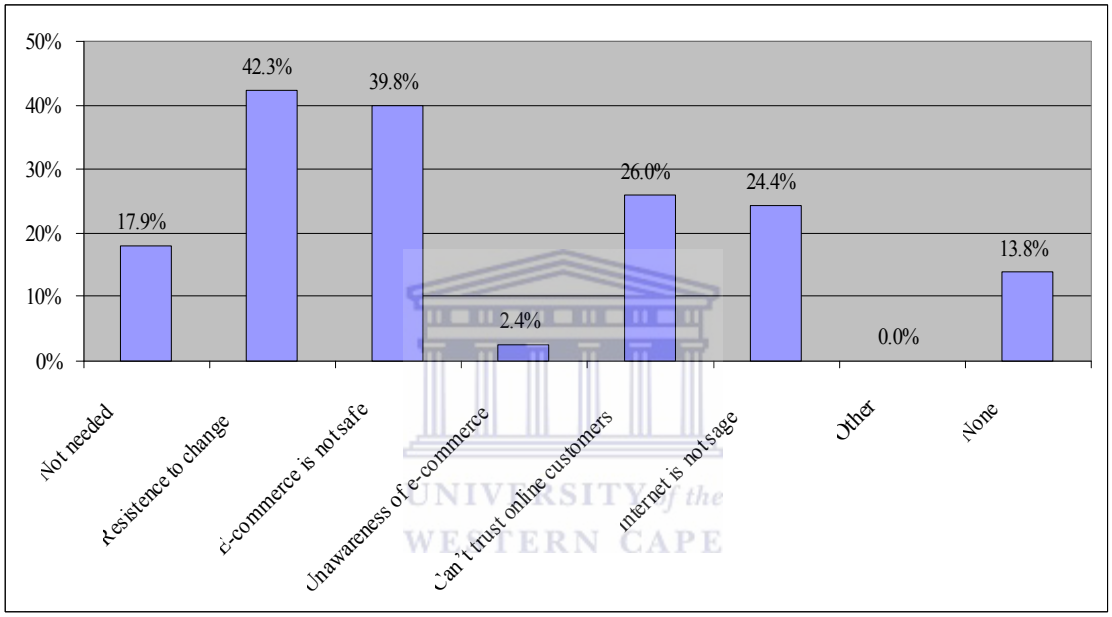

Figure 5.41 Factors that influence e-commerce adoption

The findings from the present study show that resistance to change is the most important factor influencing the adoption of e-commerce by Chinese SMEs (Figure 5.41). As discussed in chapter 3, China conducts business through a culture of contact and trust in a special traditional commercial network which is based on individual relationships aimed at reducing the high risks of commerce. At present, most enterprises (91.9%) in China are still using this culture as the most important way to enlarge their businesses. For Chinese enterprises, e-commerce not only changed their manner of trading, but also increased the commerce risk when entering unfamiliar online market. Thus, most enterprises are used to the traditional commerce network and are insecure about commerce risk, which discourages them from using e-commerce.

The commerce risk is another important factor that influences e-commerce adoption. The physical separation between the buyer and seller in online markets makes it impossible to know the real situation or to verify the quality of products, which increases the risk that already existed in traditional Chinese commerce market. The commerce risk resulted to an attitude of not trusting online consumers, which is the first premise of all businesses.

IT risk is mainly linked to the security of private data. As discussed in chapter 3, the information stored on the Internet can be read, altered, or stolen, with any of these actions translating into direct financial losses. The security concerns raise the levels of apprehension about using IT. Even though the MCC (2005) announced that IT is secure in China, the perceived risk is still seriously influencing e-commerce adoption.

E-commerce and e-payment are both influenced by the adoption levels in the online market and generally, more merchants will accept e-commerce as more people use this technology. Thus, the value of e-commerce will not be clear before there is a critical mass of users.

6.5 Findings from other studies among South African enterprises

Cloete and Fourie (2005) found that most SA enterprises believe e-commerce is all about reducing transaction costs than any other benefits. The argument was aimed at popularizing the establishment of e-commerce markets to attract participants, since the exact figures of cost reduction were easier to quote than the other intangible benefits. However, this argument increases the difficulties of introducing the benefits of collaboration and improved supply chain management, the advantages of new chances of finding business in online markets, and the ease of entrance into the global market (Cloete & Fourie, 2005).

Even though the current SA online market is trying to expand the volume of e-commerce participants, e-commerce in SA is currently a small proportion of the total economic activity, with potential not yet fully realized. Although 30 percent of the mediums to large manufacturing companies have adopted e-commerce, the impact on

the SA economy is uneven and there are many critical problems that hamper e-commerce development (Moodley, 2003).

Cloete and Fourie (2005) believe that limited and high-cost bandwidth is the most important influencing factor that frustrates users of e-commerce in South Africa. The obstacle is mainly a result of the monopoly of the telecommunication services throughout South Africa. A similar opinion was expanded on by Moodley (2003), when he claims that the slow pace of the planned liberalization of the telecommunications sector and the unexpectedly high cost of broadband connectivity are the major problems for e-commerce development in SA.

Cloete and Fourie (2005) found that resistance to change is another important factor influencing e-commerce adoption. In SA, companies are deeply entrenched in old processes and heavily dependent on legacy systems. They also suggest that companies are not easily inclined to alter or change existing processes to e-commerce within a short time frame. Many companies also suffer from employee resistance with regards to new projects, since they are not willing to learn about e-marketplaces with their potential benefits (Cloete & Fourie, 2005).

Commerce risk is an important problem for the SA online market. In 2002, the Electronic Communications and Transaction (ECT) Act was promulgated in South Africa to protect the rights of consumer marketing online. However, a survey has shown that only one company completely followed the ECT Act amongst 607 SA websites examined (Pather, Remenyi & Harpe, 2006). These findings suggest marketing online is not fully secure in SA and will influence the use of e-commerce by consumers. Likewise, Singh (2004) mentioned that the fear of an unsafe transaction is an important factor hampering online action.

IT risk is another security problem and uncertain technology security is a latent risk for e-commerce development (Moodley, 2004). In a survey conducted by Naicher (2007), 38.7% of the respondents reported exercising the practice of consistently altering their passwords at regular intervals and could not be re-used. However, 38.7% of the respondents reported that their electronic confirmation receipts were not been received

after sending documents to external parties. Thus, Naicher (2007) found out that IT risk is an important factor that influences e-commerce adoption.

6.6 The factors influencing e-commerce adoption between SA and China

As was mentioned before, most SA enterprises believe that e-commerce is all about reducing transaction costs. Cloete and Fourie (2005) claim that most SA enterprises will adopt e-commerce because Western Countries are satisfied with the technology, and embrace a strategy of just trying to catch up with the revolution. Even though e-commerce in SA grew rapidly over the past few years, it was used to play the role of reinforcing existing relationships with partners, and the application of exploring new markets has been limited (Moodley & Morris, 2004).

Compared to the SA enterprises, Chinese adopted e-commerce clearly for the purposes of exploring new trading markets and searching for new business chances. The access to e-commerce simply requires the use of services provided by already established e-commerce companies and through their own web site trying to do business with new partners. The quick growth of e-commerce market volumes proves that the technology has acquired large-scale success in the market place (MCC, 2005). However, while the limited use of e-commerce does not help in collaboration and in improved supply chain management, it has no help reducing production costs.

Table 6.1 Factors that influence e-commerce adoption between South Africa and China

factors	Present study	Naicher (2007)	Cloete and Fourie (2005)	Singh (2004)	Moodley (2003)	Rooyen and Reitsma (2004)	Moodley (2004)	Pather, Remenyi and Harpe (2006)
Internet cost			√		√			
Resistance to change	√		√					
Commerce risk	√			√				√
Internet technology risk	√	√				√	√	
Adoption level	√				√		√	

The findings from this study and other articles based on South Africa are summarized in Table 7.1 for the purpose of comparison with China.

Cloete and Fourie (2005) maintain that high Internet cost is the major factor that hampers SA e-commerce development, they found out that the monopoly in telecommunication services is another major problem in SA. Unlike in SA, the Chinese telecommunications industry is not a monopoly. For instance, in BeiJing, the capital of China, the lowest price of 1MB/S broadband Internet for the private Internet user is less than 100 Rends per month (CCW, 2008). The similar broadband Internet service price 799 Rends per month in Cape Town (iburst, 2008). The present author agrees with Cloete and Fourie, that the lack of competition is the main reason for the high Internet cost in SA. China has five competitive companies in the telecommunication sector, providing similar services for Internet connection. Hence the price of broadband Internet is lower as a result of competition amongst these companies. SA should introduce competition into the telecommunication industry in order to improve the development of this sector by reducing the relative price, and thereby solving the problem of high Internet costs in e-commerce.

In both the current study and that conducted by Cloete and Fourie (2005), it was established that enterprises are reluctant to change their current commerce processes for unfamiliar online-based e-commerce, showing that both SA and China share a similar problem with e-commerce development. Even though the two countries have different cultures and different market fashions, they have both developed their own market cosmos and commercial behaviours, and both, have the problem of resistance to change. This seems prevalent in both countries. However, no respondents from China mentioned that their employees were resistant to adopting e-commerce, most likely because of the enormous employment pressure.

Commerce risk and IT risk in e-commerce were described as a security problem in chapter 3, and they influence e-commerce development in both SA and China. Pather, Remenyi and Harpe (2006) mention the commerce risk in SA amongst those using e-commerce on a website, and claim that trading is not safe in nearly all the e-commerce websites. Singh (2004) also mentioned the occurrence of fraud in online transactions, as a factor that increases the insecurity around the adoption of e-commerce. Chinese enterprises have the same problem as SA enterprises, regarding the uncertainty of products quality and fraud. In IT security concern, Naicher (2007) mentions the loss of

data and having passwords changed as some of the unsafe Internet practices in SA. Similarly, Moodley (2003) noted the uncertainty of technology security as a latent risk for e-commerce development. Above all, even though Chinese enterprises are anxious to adopt IT security, but the worry about IT risk is much higher than originally presumed.

Currently, the SA online market is small, contributing a small influence relative to the size of the total economy (Moodley, 2003). Moodley (2004) also mentions that the benefits of e-commerce will not fully appear until a large enough online market is in place. As was mentioned in chapter 5, the adoption of the electronic market in the total Chinese economic market is still low, resulting in the unevenness of the electronic market development. The advantage that the SA market has is its smaller size, which makes it easier to carry through a new technology such as e-commerce.

6.7 Conclusion

The SA economy shares a lot of similar characteristics with the Chinese economy. The comparison of factors that influence e-payment development in these two countries helps in establishing the disadvantages intrinsic to the electronic market development in SA. Furthermore, these studies with the aim of improving the SA e-commerce sector; also yield useful data that can be used to Chinese online market.

The Chinese telecommunication services are much cheaper compared to SA; hence the adoption of e-commerce is more active in Chinese than in SA enterprises. However, the comparative ease of use of e-commerce by Chinese enterprises has only helped entering the global market, but has no significant for reducing commerce cost. The adopted of complete e-commerce by SA enterprises benefited with the reduction of transaction costs, but this has not helped in expanding their markets. The resistance to change, security problems, and low adoption levels are the main factors that act as a deterrent to e-commerce adoption amongst both SA and Chinese enterprises.

CHAPTER 7 - CONCLUSION

7.1 Introduction

This chapter forms the conclusion of this study. It will show the entire view of e-payment usage in China. Factors that influence e-payment adoption by SMEs will be discussed next. Comparison will be made between South Africa and China and similar factors will be discussed that can influence both e-payment and e-commerce development in developing countries. Recommendation for further study will be presented at the end.

7.2 Electronic payment usage by Chinese SMEs

In all, 71.5% of SMEs in China have adopted e-payment to some extent. The usage level remains quite low as 91.8% are still using bank remittance as their main payment method. As an online payment method, the development of e-payment is closely linked with e-commerce. Factors that influence e-payment adoption, normally also affect e-commerce. Competition and trading demands improve the adoption of e-payment. The e-payment adoption level seems higher with enterprises that have longer commercial history.

Security is the most pressing factor hampering e-payment adoption. The open environment of the online market increases the commercial risk, and together with uncertain IT security influences e-payment usage or adoption.

Low e-payment adoption or usage is also an important factor that influences e-payment adoption. Importantly, trading demand from partners tends to improve e-payment adoption. On the other hand e-payment adoption levels are not the same in different regions nor in different industries. The factors that influence e-payment usage or adoption are also not absolutely the same in different regions and industries.

Traditional commerce culture influences e-payment adoption, but does not constitute the main influencing factor. The low trust and high risk in Chinese commerce culture did influence e-payment usage or adoption, however, both the high risk connected to the traditional Chinese commerce network and the resistance to change were found to

influence enterprises on e-payment only slightly. On the other side, resistance to change influenced Chinese e-commerce development strongly.

7.3 Factors that influence electronic commerce development in developing countries

Since both South Africa and China are developing countries, findings between these two countries in online markets will be significant for broader market of developing countries. As e-payment and e-commerce were found to share most influencing factors (except resistance to change) in this research, findings from this study in China were used for a comparative study on e-commerce influencing factors in South Africa.

Even though there is a different commerce culture and market fashion in South Africa and China; enterprises in both countries were found to be reluctant to change their current commerce procedures to online market based e-commerce. Both South Africa and China have developed their own commerce market and commerce behaviour.

Commerce risk and IT risk in online markets were described as security problems in this research. These have been found to be key factors influencing e-commerce development in both China and South Africa.

The openness of Internet standards increases the commerce security risk in online markets. The predictable high risk of online trading also hampered enterprises in adopting e-commerce. Similarly, IT risks also influences e-commerce development. However, unlike South Africa, the IT concerns are much higher in China. Both the real IT risk and perceived associated concerns influence the development of e-commerce in China.

Currently, the online market in both South Africa and China is relatively small, the ability to impact the economy is still weak. Since the financial benefits have not been obvious as there are not enough enterprises trading online, most companies are still hesitant and have adopted a “wait-and-see" attitude towards the development of e-commerce. Unfortunately, the low level of e-commerce adoption, negatively impacts on e-commerce development.

7.4 Recommendations for further study of e-payment industry

Even though Chinese e-payment industry has developed quickly, SME e-payment usage level is still low. As frequently noted, the e-payment industry of China is still in its infancy. Compared to the history of e-payment in other countries, the development of e-payment in China should take some time before it is completely accepted by all enterprises and individual Internet users. This study could be helpful in assisting the e-payment industry to develop new strategies to improve the usage or adoption of e-payment. However, more data needs to be collected around the parameters that different regions and different industries bring to bear on the development of e-commerce - there remains much work that need to be done.

Security concerns were found to be the most important factor influencing e-payment adoption. There are some differences between IT security and Chinese traditional commerce security. Even though IT is secure, the SMEs perceived concerns still strongly influence their e-payment adoption attitudes. How to reduce this apprehension was not addressed in this research, is worthy of further research.

This study found that e-payment is closely linked with e-commerce, and share similar influencing factors, such as IT technology and the same online market. However, there are still slight differences. Discussions about these different influencing factors could form the basis for additional research.

It was found that pressure from trading partners can raise the adoption levels of e-payment, but it is not enough to increase the usage of e-payment. To improve e-payment usage level is as important as adoption. A study on how to improve e-payment usage would also be most useful.

This research found e-payment adoption and usage levels in different regions, not to be the same. The region with the best basic equipment and economic will had a better e-payment adoption and usage level. The factors that influenced e-payment adoption by SMEs although similar differed slightly, which information would influence e-payment companies' strategy. Investigations in target regions before marketing would be crucial for e-payment companies.

E-payment adoption or usage level in different industries was found to be quite varied. SMEs that had a higher demand for payment online or competed strongly in the online market were found to have a much better e-payment adoption or usage level. SMEs in different industries have different requirements of e-payment, hence an individual service would be popular and could improve e-payment adoption or usage. Research into different industries will help e-payment companies improve their services.

It was found in this research that, the time SMEs have been in operation influence the e-payment adoption, it seems the longer SMEs have operated, the more willingness for enterprises to adopt e-payment. As there were not enough respondents that had been registered for more than 20 years in present survey, a more widely conducted survey could investigate this further.

This study highlighted some of the problems found to be influencing SA e-commerce development. By analysing the differences in e-commerce development between SA and China, this study opened up a field for further investigation. These findings could help improve the SA online market environment, and may even have significance for other developing countries. Further comparative studies could be done.

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APPENDIX I: QUESTIONNAIRE

QUESTIONNAIRE

RESEARCH SURVEY ON THE DEVELOPMENTS IN USE OF ELECTRONIC PAYMENT BY CHINESE SMEs

By
Guo Dong Hu
2007

Introduction: The use of electronic commerce has enormously, increased in recent decades; notably helping the small to medium sized enterprises (SMEs) to enter the global and online markets, accelerating their expansion in online markets, and to prosper. However, electronic payment, which is posited to be the ultimate payment method of electronic commerce, has seen a huge block when electronic commerce has being adopted by more and more companies. This questionnaire was created to establish the reasons SMEs are not willing to use electronic payment as their payment method.

This questionnaire should be completed by top-management staff for SMEs located within any of the two cities of China (BeiJing or JiLin). Your cooperation will be sincerely appreciated.

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SECTION A: YOUR COMPANY DETAILS

Please fill in the most appropriate responses (A, B, C, or D……) in space provided in brackets.

1. Companies registered in: ( )
   A. Beijing B. Jilin

2. Value of company's registered assets (million $): ( )
   A. 0-38.5 B. above 38.5

3. Age category of company CEO: ( )
   A. 20-35 B. 36-45 C. 46 and above

4. Age category of company: ( )
   A. 0-5 B. 6-10 C. 11-20
   D. 21-30 D. 30 and above

5. Number of company's employees by end of 2006: ( )
   A. above 3001 B. 3000-2001 C. 2000-801
   D. 800-501 F. below 500

6. Trade industry of your company: ( )
   A. manufacturing B. hybrid industry
   C. Travel D. food service
   E. information service F. financial services
   G. transport H. retail trade
   I. others

Section B: the details of company related to electronic payment

Please fill in the most appropriate responses (A, B, C, or D……) in space provided in brackets. Separate by comma (,)if more than one response is selected.

7. Has your company suffered any kinds of fraud in last 3 years? ( )

A. yes B. no

8. Has your company had the problem of the quality of goods during trading? ( )

A. yes B. no

9. Will your company conduct business with another company with which it has not developed the trust relationship? ( )

A. yes B. no

10. How does your company find new businesses? ( )

A. from the current commercial relationship

B. through introduction from third part commercial service company

C. from the online markets

D. the current business is enough for company, not need to find new businesses

11. Which functions of electronic commerce does your company use for trading? ( )

A. None B. communicating with consumers

C. collecting commerce information D. online advertising

E. online sale F. looking for potential customers

G. online negotiations H. online electronic payment

I. online customer service J. others

12. For which reasons is your company unwilling to use electronic commerce for trading: ( )

A. current business is sufficient for the development of the company

B. most people like to use traditional face to face trading method

C. the risk in electronic commerce is high

D. because of unawares about electronic commerce

E. difficulty in trusting businessmen that you meet online

F. the Internet technology is not safe

G. electronic commerce is well to use

13. The importance of your company to adopt electronic commerce: ( )

A. none B. a little C. important D. quite important

14. The importance of your company to adopt electronic payment: ( )

A. none B. a little C. important D. quite important

Section C: payment method for company transactions

Please fill in the most appropriate responses (A, B, C, or D……) in space provided in brackets.

15. The current payment method of your company is: ( )

A. bank transfer B. check C. credit cards

D. credit letter E. third-part online electronic payment service

F. online bank service G. cash H. others

16. What is the main reason for selecting the above mentioned payment method (in question 14): ( )

A. Ease of use B. Quick transaction C. Lower cost

D. Payment security E. Leading in your industry F. others

17. Will your company change current payment method without special requirements? ( )

A. yes B. no

18. What forced your company to use electronic payment services: ( )

A. Strategic considerations of business

B. the request of trading department

C. the need of competitiveness

D. the need for authority

E. the need of electronic commerce

F. the need of corporate businesses

G. introduction from company operating through electronic services

H. has never used electronic payment service

I. other reasons

19. What your company got by using electronic payment services: ( )

A. has never used electronic payment service

B. to achieve efficiency C. to lower costs

D. to have business convenience E. to have assured payment security

F. to increase competitiveness G. others

20. The restricting factor for your company to use electronic payment service: ( )

A. the lack of electronic transaction security

B. the lack of regulation protection

C. the low level of electronic payment capability of cooperation businesses

D. the shortage of electronic payment requirements

E. the weak foundation of electronic commerce

F. the shortage of skilled people

G. the high cost adopting electronic payment service

H. the immature electronic payment environment

I. the unwilling to change current payment method

J. the lack of electronic capability

K. the unknown of electronic payment

21. The most important factors (in question 20): ( )

22. To what extent does your company consider information technology reliable? ( )

A. not sure B. unreliable C. reliable D. very reliable

23. Does your company adopt for Certificate Authority (CA) :( )

A. yes B. no C. has not adopt online trading

24. What level of safety does your company regard the use of electronic payment? ( )

A. not sure B. unsafe safe C. unsafe D. very safe

25. What are the main security factors that deter your company from using electronic payment services: ( )

A. the weak of Internet technology (IT)

B. the risk of traditional commerce

C. Certificate Authority (CA) needs to be perfected

D. the weak of electronic related legal protection

E. other reasons

26. What is your company's opinion about China's current electronic payment related law? ( )

A. not aware of it B. it is not good C. it is a little good

D. it is good

27. Does your company think the electronic payment divergence can be solved by current legislation? ( )

A. not sure B. no C. sometimes D. yes

28. Does your company think the Certificate Authority (CA) is good enough in China? ( )

A. yes B. no C. not sure

29. Indicate the level(s) of business for which your company uses electronic payment: ( )

A. Between traditional enterprises B. Between company and consumer

C. Between companies and authority D. In global transactions

E. In online electronic commerce

F. In traditional transactions

G. Have not adopted electronic payment

30. What percentage of your organization's cooperate companies has the capability of electronic payment? ( )

A. 0 B. less than 9.9 C.10 - 29.9

D.30 - 59.9 E. more than 60

31. What is the percentage of clearing by electronic payment in your company (last year):

( )

A. 0 B. 0-9.9 C. 10 - 29.9

D. 30 - 59.9 E. 60 and above

32. In your company's trade industry, the percentage of your company's electronic payment capability is: ( )

A. 0 B. less than 9.9 C.10 - 29.9

D.30 - 59.9 E. more than 60

33. Does you company use any kind of electronic payment facilities? ( )

A. Yes B. No

If NO, please complete the questions below,

If YES, please go to section D and provide your personal details and signature.

Section D: the factors that influence electronic payment adoption

Please fill in the most appropriate responses (A, B, C, or D……) in space provided in brackets.

34. Indicate the reason(s) your company has not adopted electronic payment:

( )

A. Online electronic payment not safe
B. Most partners do not have electronic payment capacity
C. Lack of related law unsafe
D. Lack of corresponding technical personnel
E. Satisfied with current payment system
F. Cost too high
G. Lack of based infrastructure/ technology
H. Have no idea of electronic payment
I. Planning on use

J. Insecurity of online trading

K. Worried about the fraud

L. Worried about the quality of goods

M. Other reason(s) (specify):

_____

_____

_____

_____

_____

_____

35. From question 32, what is the most important reason your company has not adopted electronic payment: ( )

Section D: Your Personal & Contact Detalis

Your name :

Company name :

Company position :

E-mail:

Signed:_____ Date: _____

APPENDIX II: BASIC STATISTICS

	Responds 1	Responds 2	Responds 3	Responds 4	Responds 5	Responds 6	Responds 7	Responds 8	Responds 9	Responds 10
Item 1	A	A	A	A	A	A	A	A	A	A
Item 2	A	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	A	A	A	A	A	A
Item 4	AD	A	D	A	AC	A	AC	AD	A	A
Item 5	B	A	B	A	A	A	A	B	B	B
Item 6	C	A	C	A	A	B	A	A	A	A
Item 7	B	A	B	A	A	A	A	A	A	A
Item 8	D	AD	AD	CD	CE	D	D	D	D	D
Item 9	F	ACD	F	ABCD	ABCD	A	AB	CD	CD	ABD
Item 10	B	C	B	B	C	A	C	C	C	C
Item 11	B	A	B	C	C	A	B	B	C	B
Item 12	A	A	A	A	A	A	A	A	A	A
Item 13	B	A	B	B	B	A	B	A	B	B
Item 14	A	B	B	B	B	C	B	C	B	B
Item 15	B	B	B	A	B	A	A	B	B	B
Item 16	H	BC	H	AC	AC	F	BCEF	ACEF	ACF	ACEF
Item 17	A	BCDE	A	BCDHI	BCDEGHI	BCEF	BHI	BCDH	BDHI	BCH
Item 18	BD	ABCD	AD	ABCD	ABD	A	AD	BC	BC	BC
Item 19	G	AE	G	E	E	B	AD	ACDE	ACDE	ACDE
Item 20	A	A	A	A	A	A	A	A	A	A
Item 21	A	D	B	D	D	D	D	B	B	C
Item 22	A	B	B	B	B	D	D	C	C	C
Item 23	A	B	B	C	C	C	D	C	C	C
Item 24	B	C	B	C	D	D	C	C	B	B
Item 25	A	C	B	D	D	D	D	C	C	C
Item 26	E	D	E	C	D	E	E	B	E	E
Item 27	A	D	A	D	D	E	D	D	C	D
Item 28	A	B	A	D	D	D	D	D	D	D
Item 29	A	D	B	D	D	E	D	D	D	E
Item 30	A	AB	AB	ABDF	ABF	AF	AB	AF	AF	ABF
Item 31	ACE	BCF	AE	G	G	G	E	BCEF	BCE	BCE
Item 32	AIK	AEFI	ABDG	BCGH	ABCH	ABDE	ABEF	AFHI	ACD	AC
Item 33	I	A	G	C	C	D	F	F	F	C
Item 34	ABJ		EJK							
Item 35	A		K							

	Responds 11	Responds 12	Responds 13	Responds 14	Responds 15	Responds 16	Responds 17	Responds 18	Responds 19
Item 1	A	A	A	A	A	A	A	A	A
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	A	A	A	A	A
Item 4	AD	C	A	A	AC	C	AC	C	C
Item 5	B	B	A	B	B	B	A	A	A
Item 6	A	A	A	B	A	A	C	A	B
Item 7	A	A	A	A	A	A	B	A	A
Item 8	BCD	C	ACD	D	D	D	B	A	ABD
Item 9	DE	B	ABCDE	ABC	ABCD	D	A	AB	AD
Item 10	C	C	B	B	B	C	B	C	B
Item 11	B	D	C	B	A	B	B	C	B
Item 12	A	A	A	A	A	A	B	B	B
Item 13	B	B	B	A	B	A	B	A	A
Item 14	B	B	B	C	B	B	A	B	B
Item 15	B	B	B	B	B	B	B	B	B
Item 16	ACF	BEF	F	CEG	CEG	CF	C	ACF	ACG
Item 17	BCDEF	BC	DI	BH	BEF	BDEI	BDFGH	DEHI	DEHI
Item 18	BC	B	BD	AB	AD	AD	A	AB	AD
Item 19	ACDE	ACF	ADE	B	A	ACD	G	AB	AB
Item 20	A	B	B	B	B	B	C	C	C
Item 21	C	D	D	D	D	D	C	D	C
Item 22	C	A	B	C	C	C	A	C	D
Item 23	C	C	C	C	A	D	A	C	C
Item 24	C	C	C	C	C	D	C	B	C
Item 25	D	D	D	D	D	C	D	D	D
Item 26	E	B	E	D	D	E	D	E	E
Item 27	C	B	C	C	B	E	C	E	D
Item 28	C	C	B	C	C	C	A	E	E
Item 29	D	C	C	C	C	C	C	E	D
Item 30	ABDF	A	ABF	AF	AB	ABF	AF	ACF	ABF
Item 31	BCE	A	A	BF	DF	EF	G	BCF	C
Item 32	ABF	BDI	BCEG	DHIJ	CK	ACI	AB	BFJ	ADK
Item 33	A	A	F	A	B	A	A	F	D
Item 34							BDJ		
Item 35							J		

	Responds 20	Responds 21	Responds 22	Responds 23	Responds 24	Responds 25	Responds 26	Responds 27	Responds 28
Item 1	A	A	A	A	A	A	A	A	A
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	B	B	A	A	B
Item 4	AC	A	AD	A	AC	A	AD	AC	AC
Item 5	A	A	A	A	A	A	A	A	B
Item 6	B	A	C	A	A	A	B	A	A
Item 7	A	A	B	A	A	A	A	A	A
Item 8	BCD	ABCD	C	CD	ADE	ABCD	ADE	ABE	BCD
Item 9	AB	ABD	F	AB	ABDE	AB	AD	AB	D
Item 10	B	B	B	C	C	C	B	C	C
Item 11	B	B	B	B	A	A	B	C	B
Item 12	B	B	A	A	B	B	A	A	A
Item 13	A	B	B	B	B	B	B	B	B
Item 14	B	B	C	B	B	A	B	B	B
Item 15	B	B	B	B	A	A	B	B	B
Item 16	BC	BC	H	ACF	ACF	ABCD	ACF	CF	AC
Item 17	BCEFI	BCDEFHI	D	DI	BD	BDI	DHI	DHI	BDH
Item 18	BD	BD	A	BCD	AB	BCD	BD	D	BC
Item 19	BE	BE	G	AB	BF	BF	ABCF	ABF	AB
Item 20	C	C	D	D	D	D	D	D	D
Item 21	C	C	A	D	D	D	D	D	D
Item 22	C	C	A	D	C	C	C	C	C
Item 23	C	C	A	C	B	C	B	C	C
Item 24	B	C	C	C	A	C	A	C	D
Item 25	C	D	D	C	D	C	D	D	C
Item 26	E	E	D	D	E	E	E	D	B
Item 27	E	E	C	D	E	D	E	D	C
Item 28	D	E	B	E	E	E	E	E	E
Item 29	E	E	E	E	E	E	E	E	E
Item 30	AF	F	AG	AB	ACF	CG	AF	ACG	ACFG
Item 31	F	G	B	E	BC	BC	BEF	F	CEF
Item 32	AK	K	DEI	ABH	BH	AB	BEFGK	GK	BD
Item 33	A	K	D	A	K	A	B	K	B
Item 34			ACJ						
Item 35			A						

	Responds 29	Responds 30	Responds 31	Responds 32	Responds 33	Responds 34	Responds 35	Responds 36	Responds 37
Item 1	A	A	A	A	A	A	A	A	A
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	B	A	B	B	B	A	B
Item 4	A	A	AC	AC	A	A	C	AC	AB
Item 5	A	A	B	A	A	A	A	A	A
Item 6	C	A	B	A	C	A	A	A	A
Item 7	B	A	A	A	B	A	A	A	A
Item 8	AD	ADE	CD	C	D	D	BD	CD	AD
Item 9	F	CD	ABCD	CD	BEI	A	BC	ABCD	AB
Item 10	C	C	C	A	B	C	C	B	C
Item 11	B	D	C	B	B	A	B	C	B
Item 12	A	A	B	B	B	B	B	B	B
Item 13	B	B	A	B	A	B	A	A	A
Item 14	B	B	B	B	A	C	A	B	A
Item 15	B	B	B	B	B	B	B	B	A
Item 16	H	ABC	AF	BF	BCF	E	ABC	AC	ABCDF
Item 17	DH	DFH	BD	BC	B	I	BGHI	BDEGHI	BCI
Item 18	BCD	BCD	ABCD	A	A	B	ACD	ABCD	AD
Item 19	G	AB	AC	C	G	A	AB	A	ABF
Item 20	D	D	E	E	E	E	E	F	F
Item 21	A	D	C	C	C	C	D	D	D
Item 22	D	C	B	B	C	C	C	B	C
Item 23	C	D	B	B	C	C	D	C	C
Item 24	C	C	B	C	B	D	C	C	B
Item 25	A	D	C	D	C	B	D	C	D
Item 26	E	E	E	E	E	D	D	D	E
Item 27	B	D	C	C	B	E	D	D	C
Item 28	B	E	B	B	A	E	D	D	E
Item 29	E	E	B	A	C	E	D	D	E
Item 30	AG	BCF	ABCF	A	AF	A	AB	ABF	ABF
Item 31	G	CF	BF	BE	F	B	CE	AF	BC
Item 32	EFK	BK	AK	ABG	AJ	J	BGK	BCG	BDH
Item 33	A	B	A	A	J	A	C	C	B
Item 34	DHK				CDHJ				
Item 35	D				J				

	Responds 38	Responds 39	Responds 40	Responds 41	Responds 42	Responds 43	Responds 44	Responds 45	Responds 46
Item 1	A	A	A	A	A	A	A	A	A
Item 2	A	A	A	A	A	A	A	A	A
Item 3	B	A	A	A	A	A	A	A	A
Item 4	AC	C	A	A	A	A	AC	AC	A
Item 5	A	A	A	A	B	B	B	B	A
Item 6	A	A	B	A	A	C	A	A	A
Item 7	A	A	A	A	A	B	A	B	A
Item 8	ABCD	CD	BCD	ABCDE	CD	CD	BD	ADE	DE
Item 9	ABC	AB	AB	AB	AB	F	D	F	AI
Item 10	C	C	C	C	C	C	B	C	B
Item 11	B	D	C	D	B	B	C	B	C
Item 12	B	B	B	B	B	B	B	B	B
Item 13	A	A	A	A	B	B	B	B	B
Item 14	C	C	C	C	A	B	B	A	B
Item 15	B	B	B	A	B	B	B	B	B
Item 16	BEF	BEFG	ACF	ACF	ACEF	H	ACEF	H	ABCEF
Item 17	BHI	BDEHI	BH	CDH	DEH	BDF	BEF	BCD	BCDEFH
Item 18	BCDE	AD	AD	BC	BC	BCD	BC	BCD	BC
Item 19	ABCE	ABC	BC	ABF	AD	G	AE	G	DEF
Item 20	F	F	F	F	G	G	G	G	G
Item 21	C	C	D	C	D	A	D	B	D
Item 22	C	D	C	C	C	B	C	D	C
Item 23	C	C	C	C	C	C	C	B	C
Item 24	C	C	C	C	C	B	D	B	C
Item 25	C	C	D	D	D	C	D	C	D
Item 26	E	E	D	D	E	E	E	E	E
Item 27	C	E	E	E	E	B	D	B	D
Item 28	B	E	E	E	D	A	D	A	D
Item 29	E	E	E	E	D	C	E	C	E
Item 30	AF	ACF	ABCF	CF	A	A	AB	A	ABF
Item 31	EF	E	G	F	E	BCDE	AEF	BCE	AE
Item 32	ABCF	BCH	B	BF	AB	BDFJ	ABCH	DJK	ABH
Item 33	F	B	B	F	A	F	A	D	B
Item 34						DHK		DEHK	
Item 35						D		E	

	Responds 47	Responds 48	Responds 49	Responds 50	Responds 51	Responds 52	Responds 53	Responds 54	Responds 55
Item 1	A	A	A	A	A	A	A	A	A
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	A	A	A	A	A
Item 4	A	AC	A	A	AC	A	A	AC	A
Item 5	A	A	A	A	B	B	B	A	B
Item 6	B	B	A	A	A	B	B	A	A
Item 7	A	A	A	A	A	A	A	A	A
Item 8	D	A	B	D	ACD	ABD	AD	ADE	DE
Item 9	A	B	B	AB	ACD	ABD	ABD	ABD	CD
Item 10	C	B	C	B	B	B	C	C	C
Item 11	B	B	C	D	C	B	C	B	C
Item 12	A	A	A	A	A	A	A	A	A
Item 13	A	A	B	B	A	A	B	A	A
Item 14	C	C	A	B	D	B	C	C	B
Item 15	B	B	B	B	B	B	B	B	B
Item 16	E	B	B	E	ABC	ACF	BCE	CEF	AC
Item 17	H	D	DH	H	BEFGH	BDF	DEI	BCHI	DEI
Item 18	A	A	A	AD	BCD	ACD	AD	BD	AB
Item 19	F	B	B	A	AE	ABE	AB	ABC	ABE
Item 20	H	H	H	H	H	H	H	H	I
Item 21	D	D	D	C	D	D	B	C	C
Item 22	D	D	C	C	C	C	C	C	C
Item 23	C	C	C	B	C	C	D	D	D
Item 24	C	C	C	B	C	C	C	D	D
Item 25	D	D	D	B	C	D	C	C	C
Item 26	A	D	D	D	E	D	E	E	E
Item 27	E	E	E	D	E	D	E	C	E
Item 28	D	D	E	C	D	D	C	D	E
Item 29	E	E	E	C	E	E	D	E	E
Item 30	CF	AF	ABF	CF	ACF	ABF	AF	AF	AF
Item 31	B	B	G	CF	BCE	AF	BEI	BCE	BEF
Item 32	A	ABE	B	A	BCD	ABD	ABGF	ABC	ACI
Item 33	A	B	B	A	C	A	B	A	A
Item 34									
Item 35									

	Responds 56	Responds 57	Responds 58	Responds 59	Responds 60	Responds 61	Responds 62	Responds 63	Responds 64
Item 1	A	A	A	A	A	A	A	B	B
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	B	A	A	A	A
Item 4	A	C	A	A	A	C	A	A	A
Item 5	A	A	A	B	A	A	A	B	A
Item 6	A	A	A	B	B	B	A	C	A
Item 7	A	A	A	A	A	A	A	B	A
Item 8	ADE	CD	CD	ABDE	BDE	BCDE	CD	ABCDE	E
Item 9	D	AD	BDE	ACDE	ACD	BD	BE	F	CD
Item 10	C	C	C	C	C	C	C	C	B
Item 11	B	C	B	B	A	B	C	B	A
Item 12	A	A	A	A	B	A	A	B	A
Item 13	B	B	B	B	B	B	B	A	A
Item 14	B	B	B	B	D	B	B	A	B
Item 15	B	B	A	B	B	B	B	C	B
Item 16	ABC	ABC	ACF	AC	ABC	AC	ABCF	H	C
Item 17	BCHI	BCDEHI	BCDEFHI	DEHI	BDEHI	DEHI	BDEHI	A	B
Item 18	BCD	AB	AB	D	AB	AB	ABD	ABCD	C
Item 19	ADE	BE	ACDE	B	ABE	ABEF	ABCD	G	B
Item 20	I	I	I	I	I	I	I	A	A
Item 21	C	C	C	C	C	C	C	B	C
Item 22	C	C	C	D	C	C	C	A	C
Item 23	C	D	D	D	D	C	C	B	C
Item 24	B	C	D	C	C	C	B	B	C
Item 25	C	C	D	D	C	C	C	B	C
Item 26	E	E	D	E	E	E	D	E	E
Item 27	D	D	C	E	D	D	D	B	D
Item 28	C	D	C	E	E	E	D	A	C
Item 29	D	D	E	E	E	E	E	B	B
Item 30	ABF	AB	AF	ABF	ABDF	ABDF	AF	AB	A
Item 31	CEF	BEF	CEF	BCF	EF	EF	EF	BD	C
Item 32	ACD	AC	AC	BI	AC	AC	AC	ADEG	ADEG
Item 33	C	A	C	C	C	A	C	A	D
Item 34								ABCFG	
Item 35								A	

	Responds 65	Responds 66	Responds 67	Responds 68	Responds 69	Responds 70	Responds 71	Responds 72	Responds 73
Item 1	B	B	B	B	B	B	B	B	B
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	A	A	A	A	A
Item 4	AC	AC	A	AC	AC	A	AC	AD	A
Item 5	A	A	B	A	A	A	B	B	B
Item 6	A	A	A	A	A	A	A	A	C
Item 7	A	A	B	A	A	A	A	A	A
Item 8	AB	ABCD	ABCDE	B	ABCD	AC	D	D	C
Item 9	B	BCD	F	BC	BCD	CD	BD	BD	C
Item 10	B	C	B	C	B	C	B	B	A
Item 11	B	B	B	B	B	B	B	B	B
Item 12	A	A	A	A	A	A	A	A	A
Item 13	A	B	B	A	B	B	B	B	B
Item 14	B	B	B	B	B	B	A	A	B
Item 15	B	B	B	B	B	B	A	A	B
Item 16	B	ABE	H	C	E	E	EF	CEF	C
Item 17	BCF	BF	BDEF	BDF	BE	BEF	BCDEF	BCDEFG	D
Item 18	B	AB	C	BC	B	B	BD	B	A
Item 19	AB	A	G	A	B	B	AC	AD	D
Item 20	A	A	A	A	A	A	A	A	A
Item 21	C	C	B	C	D	D	B	C	C
Item 22	C	C	C	C	C	C	B	C	A
Item 23	C	C	B	C	C	C	C	C	C
Item 24	C	B	B	C	B	C	C	C	C
Item 25	C	C	C	D	D	C	C	D	D
Item 26	E	C	E	C	C	D	C	D	E
Item 27	B	E	B	C	D	C	B	C	C
Item 28	D	C	A	C	D	D	C	C	C
Item 29	C	C	B	C	C	B	B	C	C
Item 30	AF	AB	A	AB	ABF	AF	A	AB	ABCF
Item 31	C	CE	CE	CE	C	E	BEF	ACE	ABCE
Item 32	ACD	CDFH	AE	BEF	ABCDEFG	ABCE	DEF	AFJ	CD
Item 33	C	F	A	F	D	A	D	A	D
Item 34			ABDG						
Item 35			A						

	Responds 74	Responds 75	Responds 76	Responds 77	Responds 78	Responds 79	Responds 80	Responds 81	Responds 82
Item 1	B	B	B	B	B	B	B	B	B
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	A	A	A	A	A	A	A
Item 4	A	AD	AD	A	A	A	A	A	AC
Item 5	A	A	B	A	A	B	B	B	B
Item 6	A	A	C	A	A	C	A	A	A
Item 7	A	A	A	B	A	B	B	A	A
Item 8	D	D	A	D	CDE	ABCDE	B	AD	ABCD
Item 9	AD	ABC	B	BD	BCD	F	F	BC	BD
Item 10	B	B	B	C	B	B	C	A	A
Item 11	B	B	C	E	A	B	A	B	A
Item 12	A	A	A	A	A	A	A	A	A
Item 13	B	B	B	B	B	A	A	A	B
Item 14	B	B	C	B	B	A	A	B	B
Item 15	B	A	B	B	B	B	B	B	B
Item 16	BCEF	ABEG	C	AE	AE	E	C	EG	E
Item 17	BCDF	DH	A	DI	BI	A	BCDE	I	BEF
Item 18	B	D	B	AD	BD	C	B	AD	B
Item 19	AC	A	A	C	A	G	G	B	B
Item 20	A	A	A	B	B	B	B	B	B
Item 21	C	D	C	C	C	B	B	B	C
Item 22	C	C	C	C	C	A	C	C	C
Item 23	C	C	C	C	C	A	B	C	C
Item 24	C	C	C	B	C	A	A	B	B
Item 25	D	D	C	C	B	C	D	B	D
Item 26	E	C	E	B	C	E	D	E	E
Item 27	C	D	B	B	D	B	B	B	D
Item 28	C	C	C	A	D	A	A	B	D
Item 29	B	D	B	C	B	B	B	C	C
Item 30	ABF	AB	A	AG	AF	AB	AB	AG	A
Item 31	BCEF	CF	BE	AB	ABC	ABC	BCE	ABC	CE
Item 32	ACD	GH	FJ	ABCDG	ACDF	AF	ACDI	ACD	ADEFG
Item 33	A	G	A	A	C	F	D	A	A
Item 34				ABCDEF		ACD	ABCDE		
Item 35				A		A	B		

	Responds 83	Responds 84	Responds 85	Responds 86	Responds 87	Responds 88	Responds 89	Responds 90	Responds 91
Item 1	B	B	B	B	A	B	B	B	B
Item 2	A	A	A	A	A	A	A	A	A
Item 3	A	A	B	A	B	A	A	A	A
Item 4	AC	AC	AC	AD	AC	A	A	A	AC
Item 5	B	B	A	B	B	B	A	B	A
Item 6	A	B	A	A	B	B	A	B	B
Item 7	B	B	A	B	B	B	A	B	A
Item 8	AD	CD	CD	AC	ABCDE	BC	AD	ACD	ABDE
Item 9	F	F	BCD	F	F	F	AD	BC	BCD
Item 10	B	B	A	C	B	C	B	C	B
Item 11	E	B	A	D	A	A	B	C	B
Item 12	B	B	B	A	A	B	A	A	A
Item 13	B	A	B	B	A	A	A	A	A
Item 14	B	B	B	B	A	A	B	B	B
Item 15	B	B	B	B	C	B	B	B	B
Item 16	E	D	CE	H	A	H	F	A	AC
Item 17	BE	BDI	BDI	A	BDI	A	BDI	D	DFI
Item 18	A	C	C	B	ABD	C	B	AB	A
Item 19	G	G	B	G	G	G	AB	G	A
Item 20	C	C	C	D	D	D	D	D	D
Item 21	C	C	D	C	C	B	C	C	D
Item 22	B	C	C	A	C	A	C	C	C
Item 23	B	B	C	A	C	A	B	B	C
Item 24	C	B	B	B	A	A	B	B	C
Item 25	C	D	D	A	D	B	D	C	D
Item 26	E	E	E	E	E	E	E	E	E
Item 27	C	B	D	D	NO IDEA R	B	B	B	E
Item 28	A	A	B	A	A	A	B	A	D
Item 29	D	C	D	B	C	B	B	B	C
Item 30	AB	BG	ABC	AG	AG	G	CG	ABG	CG
Item 31	BC	C	G	A	G	B	G	BC	G
Item 32	CDEJ	ACEF	CEG	BCD	ABDG	AEG	AD	CF	ABDEG
Item 33	E	A	C	D	D	E	A	C	D
Item 34	ABCG	ABD		BCE	ABCE	ACDG		ABCDE	
Item 35	G	A		E	A	A		B	

	Responds 92	Responds 93	Responds 94	Responds 95	Responds 96	Responds 97	Responds 98	Responds 99	Responds 100
Item 1	B	B	B	B	B	B	B	B	B
Item 2	A	A	A	A	A	A	A	A	A
Item 3	B	B	B	B	B	B	A	A	A
Item 4	AC	A	A	AC	A	A	A	AC	A
Item 5	B	B	B	A	A	B	A	A	B
Item 6	C	C	B	B	B	B	B	B	C
Item 7	A	B	B	A	A	B	A	B	B
Item 8	D	B	D	BD	ABDE	AD	ABD	ABD	ABD
Item 9	BC	F	F	BD	BD	C	CF	CD	F
Item 10	B	B	B	B	A	C	C	A	C
Item 11	B	A	B	B	A	C	C	A	B
Item 12	B	B	B	B	B	B	A	B	B
Item 13	A	A	A	A	A	A	A	A	A
Item 14	C	B	B	B	B	A	B	B	B
Item 15	B	B	B	B	B	A	B	B	B
Item 16	E	H	H	E	E	A	E	C	ADF
Item 17	CDF	B	B	D	B	BD	BDI	BDEI	B
Item 18	B	AD	A	C	D	D	A	D	ABCD
Item 19	G	G	G	C	B	C	A	B	G
Item 20	E	E	E	E	E	E	E	E	E
Item 21	C	C	B	B	B	C	D	C	B
Item 22	C	B	B	C	C	C	D	C	C
Item 23	C	B	B	B	C	C	C	C	C
Item 24	C	B	B	C	B	A	C	B	B
Item 25	D	C	C	C	C	C	D	D	C
Item 26	E	E	E	E	E	E	C	E	C
Item 27	B	B	B	B	B	B	E	B	B
Item 28	C	A	A	C	B	A	E	B	A
Item 29	B	B	B	C	B	B	D	B	B
Item 30	ADE	A	AB	AB	AB	AG	AFG	A	ABG
Item 31	E	BC	C	C	C	AB	G	G	A
Item 32	CD	ABCDGJ	CDG	ACDG	BDEFG	D	D	ABCDEG	CDEF
Item 33	D	G	D	D	D	D	D	D	D
Item 34		ABCF	ABCDF			ABCE		ABCF	BCDEF
Item 35		F	B			B		B	B

	Responds 101	Responds 102	Responds 103	Responds 104	Responds 105	Responds 106	Responds 107	Responds 108
Item 1	B	B	B	B	B	B	B	B
Item 2	A	A	A	A	A	A	A	A
Item 3	B	B	B	B	A	A	A	B
Item 4	A	A	A	A	A	A	A	AC
Item 5	A	A	A	B	A	A	A	A
Item 6	B	A	B	B	A	B	B	A
Item 7	B	A	A	B	B	A	A	A
Item 8	BD	AC	AD	A	AD	ABD	ABCDE	ABCDE
Item 9	F	BC	D	F	F	AD	ABCD	CD
Item 10	B	B	C	C	B	C	C	A
Item 11	B	B	A	A	A	A	D	B
Item 12	B	B	B	B	B	B	B	B
Item 13	A	A	A	A	A	A	A	A
Item 14	B	B	B	A	B	B	B	B
Item 15	B	B	B	C	A	B	B	B
Item 16	E	BD	CF	H	AF	BE	ABE	F
Item 17	B	B	B	BI	I	BI	BDI	B
Item 18	C	C	A	A	A	A	BD	B
Item 19	C	A	C	G	G	A	AB	A
Item 20	E	F	F	F	F	F	F	G
Item 21	A	D	D	B	C	C	D	D
Item 22	C	C	C	C	C	C	D	C
Item 23	B	C	C	A	C	C	D	C
Item 24	B	C	C	A	B	B	C	C
Item 25	C	C	C	C	C	C	D	D
Item 26	E	D	E	E	E	E	C	E
Item 27	B	E	C	C	B	D	D	E
Item 28	A	E	B	A	A	D	D	D
Item 29	C	E	D	B	B	B	E	C
Item 30	AB	ACF	ACF	AG	AG	AF	ABCF	ABF
Item 31	C	G	BC	AB	BC	AB	G	C
Item 32	ACDG	ACDEF	ABDFG	DEF	A	EC	ABCDF	ABDEF
Item 33	D	D	A	D	A	C	F	D
Item 34	ABF			ABDEFG	AB			
Item 35	B			G	A			

	Responds 109	Responds 110	Responds 111	Responds 112	Responds 113	Responds 114	Responds 115	Responds 116
Item 1	B	B	B	B	B	B	B	B
Item 2	A	A	A	A	A	A	A	A
Item 3	B	A	A	A	A	B	A	B
Item 4	A	A	AC	A	A	A	A	A
Item 5	A	B	A	B	B	A	B	A
Item 6	A	B	A	B	B	B	C	B
Item 7	A	B	A	B	B	B	B	A
Item 8	ACD	DE	D	D	ABD	ABD	AD	D
Item 9	ABC	F	BCD	F	F	F	F	BD
Item 10	B	B	B	C	B	B	B	C
Item 11	A	A	B	A	A	C	B	B
Item 12	B	B	A	A	A	B	A	B
Item 13	A	A	A	B	B	A	B	A
Item 14	B	B	B	B	B	B	B	B
Item 15	B	B	B	B	B	B	B	B
Item 16	A	F	CE	H	BE	ABC	C	AF
Item 17	DI	B	BDEI	BI	A	A	A	I
Item 18	C	B	BD	B	ABD	AD	A	ABC
Item 19	B	B	A	G	G	B	G	A
Item 20	G	G	H	H	H	H	H	H
Item 21	C	B	D	B	B	C	B	C
Item 22	C	A	C	C	C	C	C	C
Item 23	C	B	C	C	C	C	C	C
Item 24	C	B	B	C	B	B	C	C
Item 25	C	C	D	C	B	C	B	C
Item 26	E	E	E	E	E	E	E	D
Item 27	D	B	E	B	B	B	B	D
Item 28	C	A	C	A	A	A	A	D
Item 29	B	B	E	B	B	C	B	C
Item 30	AG	ABG	AG	AG	AG	AG	AG	AG
Item 31	AB	BC	B	AB	A	A	B	AB
Item 32	AEFGHJ	AGF	BDG	AEF	ABDE	BDE	ABDE	AEG
Item 33	D	A	D	A	D	D	A	A
Item 34		ABCF		ABDE	ABC	ABCDEG	ABCE	
Item 35		A		A	C	B	A	

	Responds 117	Responds 118	Responds 119	Responds 120	Responds 121	Responds 122	Responds 123
Item 1	B	B	B	B	B	B	B
Item 2	A	A	A	A	A	A	A
Item 3	A	A	A	A	A	A	A
Item 4	A	A	A	AC	AC	A	AC
Item 5	A	B	B	A	A	B	A
Item 6	B	B	A	A	A	A	C
Item 7	B	B	B	A	A	A	A
Item 8	AD	AC	AB	ABE	D	B	A
Item 9	F	F	F	BD	AB	B	CD
Item 10	B	B	B	B	B	B	B
Item 11	B	A	A	C	B	C	C
Item 12	A	A	A	A	A	B	A
Item 13	B	A	B	B	B	B	A
Item 14	B	B	B	B	B	B	B
Item 15	B	B	B	B	B	B	B
Item 16	C	C	H	F	ABEG	E	ACD
Item 17	BDI	D	BCF	BDEF	DFH	A	A
Item 18	AD	A	C	C	AD	A	B
Item 19	G	G	G	AD	A	A	A
Item 20	H	H	I	I	I	I	I
Item 21	C	C	B	C	D	C	C
Item 22	C	C	C	C	C	B	C
Item 23	C	B	B	C	C	B	C
Item 24	B	B	B	C	C	C	B
Item 25	C	B	C	C	D	B	C
Item 26	E	D	D	E	E	E	E
Item 27	B	B	C	E	C	C	A
Item 28	A	A	A	E	C	B	C
Item 29	B	B	B	D	C	E	B
Item 30	AG	AG	AB	AB	ABD	ABF	AF
Item 31	G	AB	BC	C	CE	B	B
Item 32	ACD	ADE	BCEFG	EF	GH	ACHK	K
Item 33	D	A	C	E	G	A	D
Item 34	AB	ABE	ABCFG				
Item 35	B	A	B				