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# Factors affecting the achievement of success in e-tailing in China's retail industry: a case study of the Shanghai Brilliance Group

Weibing Xuan  
*Southern Cross University*

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**FACTORS AFFECTING  
THE ACHIEVEMENT OF SUCCESS IN  
E-TAILING IN CHINA'S RETAIL INDUSTRY:  
A CASE STUDY OF  
THE SHANGHAI BRILLIANCE GROUP**

Weibing Xuan

BBA (Southern Cross University, Australia)

MBA (Southern Cross University, Australia)

A research thesis submitted to the Graduate College of Management,  
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in partial fulfillment of the requirements for the degree of  
Doctor of Business Administration

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## **STATEMENT OF ORIGINAL AUTHORSHIP**

I certify that the substance of this thesis has not been previously submitted for any degree. Also, I certify that to the best of my knowledge any help received in preparing this thesis and all sources used, have been acknowledged in this thesis.

Signature \_\_\_\_\_

(Weibing Xuan)

Date \_\_\_\_\_

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## ABSTRACT

The rapid growth of the internet and e-commerce provide new opportunities for China's retailers, and a new battle for China's retail industry has begun. The purpose of this research is to explore the barriers and factors for achieving successful e-tailing in China's retail industry. Some past studies have investigated the success of e-commerce in the western context. This study aims to partially fill the gap created by the lack of research into e-commerce in the Asian context, by investigating successful e-tailing in China's retail industry, and is based on a case study of the Shanghai Brilliance Group. Therefore, the research question is 'How can successful e-tailing in China's retail industry be achieved?' Accordingly, three research issues are addressed:

**Research issue 1:** How is e-tailing being used in the Shanghai Brilliance Group?

**Research issue 2:** What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?

**Research issue 3:** What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?

To investigate the research question and the three research issues, the following approaches were applied. Firstly, three parent disciplines were reviewed, namely, e-commerce, retail in China, and e-tailing success factors, in order to generate the research gap and a theoretical model. A theoretical model was developed, which included six factors and their variables. These six factors are: senior management factors, organisational factors, e-commerce strategies, external factors, consumer factors, and e-commerce system measurements. Secondly, the primary data for this research were collected from interviews (16 in-depth interviews and 3 focus group interviews) and a survey questionnaire (200 valid questionnaires).

The findings for the first research issue showed that e-commerce is poorly implemented in the Shanghai Brilliance Group and its subsidiaries, but that e-commerce in the

supermarket subsidiaries is more advanced than in the department stores. Only one department store is offering online shopping to their customers, while both supermarket subsidiaries offer online shopping. The rest of the department stores only use websites for advertising and promotion, or for limited customer service, such as award point checking. Moreover, only the Oriental Shopping Centre and Lian Hua Supermarket have specific teams or an out-sourced company controlling their e-commerce project. This shows that e-commerce is not being taken seriously in the Shanghai Brilliance Group to date.

In relation to the second research issue, a total of nineteen barriers were identified from the interview data. Those barriers can be divided into two categories, namely, external barriers and internal barriers. Most of those barriers are consistent with those mentioned in the literature. However, some new barriers emerged from the data analysis process, including the mission of the organisation, and high profit objectives.

The findings in relation to research issue 3 identified other important factors of e-tailing, besides those barriers answered in research issue 2. Most of the success factors reviewed in the literature were confirmed by the collected data and in addition, some new variables were explored.

Overall, six groups of factors and 64 variables were addressed in this research as success factors for e-tailing. This included 57 out of the 59 variables which were previously mentioned in the literature and seven emergent variables.

This research has made a contribution to both the theory and practice of e-tailing. Through qualitative analysis, this research not only identifies the important factors of e-tailing, but also generates a comprehensive model to guide the implementation of e-tailing by China's retailers, especially the Shanghai Brilliance Group. Furthermore, this is the first study to investigate successful e-tailing in China's retail industry. Accordingly, the proposed framework of this study provides a foundation for future research.

## ABBREVIATIONS

BBS	Bulletin Board System
B2B	Business-to-Business
B2C	Business-to-Customer
B2E	Business-to-employees
C2C	Customer-to-Customer
CBD	Central Business District
CCID	China Computer and Information Development Centre
CEO	Chief Executive Officer
CNNIC	The China Internet Network Information Centre
D&M	Delone & McLean IS success model
EC	Electronic Commerce
EMS	Express mail service
E2E	Exchange-to-exchange
FAQs	Frequently Asked Questions
GAF	General merchandise, apparel and furniture
GRDI	Global Retail Development Index
G2B	Government-to-business
G2C	Government-to-individual citizens
IDA	Information Development Authority
IDC	International Data Company
IS	Information system/s
IT	Information technology/ies
NAICS	North American Industrial Classification System
ROI	Return on Investment
SCU HREC	Southern Cross University Human Research Ethics Committee
SIC	Standard Industrial Classification
SPSS	Statistical Package of Social Science
WTO	World Trade Organization
WWW	world wide web

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## **Chapter 1: Introduction**

### **1.1 Background to the research**

The internet and its applications have been rapidly developing in China over the last decade. Recent data shows that China has 123 million internet users (CNNIC 2006), which makes China the second largest internet market in the world, while that number only represents 9.46% of China's total population.

The development of the internet encourages the development of e-commerce. However, e-commerce has not shown the same rapid growth as the internet in China, especially business-to-customer e-commerce. Ninety percent of the e-commerce transaction volume in the year 2000 was business-to-business related (Hong 2003). Business-to-customer e-commerce transactions only had a total transaction value of US\$700 million in 2005, with an estimated increase to US\$1 billion in 2006, which represents only around 15% of the total internet users conducted online shopping in 2006 (iResearch 2005), but it is worth noting that both the increased rates of transaction volume and users of online shopping are impressive.

Due to the opening up of China's market as a consequence of its WTO membership, China's retailers have faced competition from global retailers since the end of 2004. China's retailers therefore need more tools and strategies to compete with their giant competitors. Currently, they are speeding up their mergers and acquisitions activities to gain an advantage in terms of size, retail network and market share. The Shanghai Brilliance Group is a typical example of these activities. The Group was formed by the merger of four state-owned retailers, and currently holds the primary position in China's retail industry.

Given the benefits of e-tailing (e.g. global reach and reduced costs), it is useful to help retailers establish a competitive advantage in both the short and long terms. However, the development of e-commerce, especially e-tailing, is extremely lagging in China's retail industry; there are no famous or successful e-tailing websites in China at present.

This research therefore aims to investigate the implementation of e-tailing in China's retail industry, and to explore the success factors associated with that implementation.

This chapter introduces an overview and presents the structure of the thesis. A theoretical model is generated in Chapter 2 as a guide to the research and a single case study is deployed as the research method for the collection of data. A new model, incorporating the success factors identified in this research, is built to measure the success of e-tailing in China's retail industry.

## **1.2 Research problem, research issues and theoretical framework**

As e-tailing has been rapidly developing in China, and consequently its usefulness to China's retailers, this research investigates the factors leading to successful e-tailing in China's retail industry. A limited amount of research has been conducted in this field in China, and most of that research has only been concerned with the external environment and its influence on the diffusion of e-commerce. Therefore, this research aims to fill that gap by investigating the e-tailing operations of the primary retail group in China, the Shanghai Brilliance Group. This research will answer the following research question:

### **'How can successful e-tailing in China's retail industry be achieved?'**

To address the research question, three research issues were developed:

Research Issue 1:

- How is e-tailing being used in the Shanghai Brilliance Group?

This issue explores the current situation of e-commerce in Shanghai Brilliance Group, such as website functions, the year of the e-commerce development, and the project developer and maintainer.

Research Issue 2:

- What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?

This issue identifies the barriers to the implementation of e-commerce in the Shanghai Brilliance Group. These barriers need to be addressed in order to develop successful e-tailing.

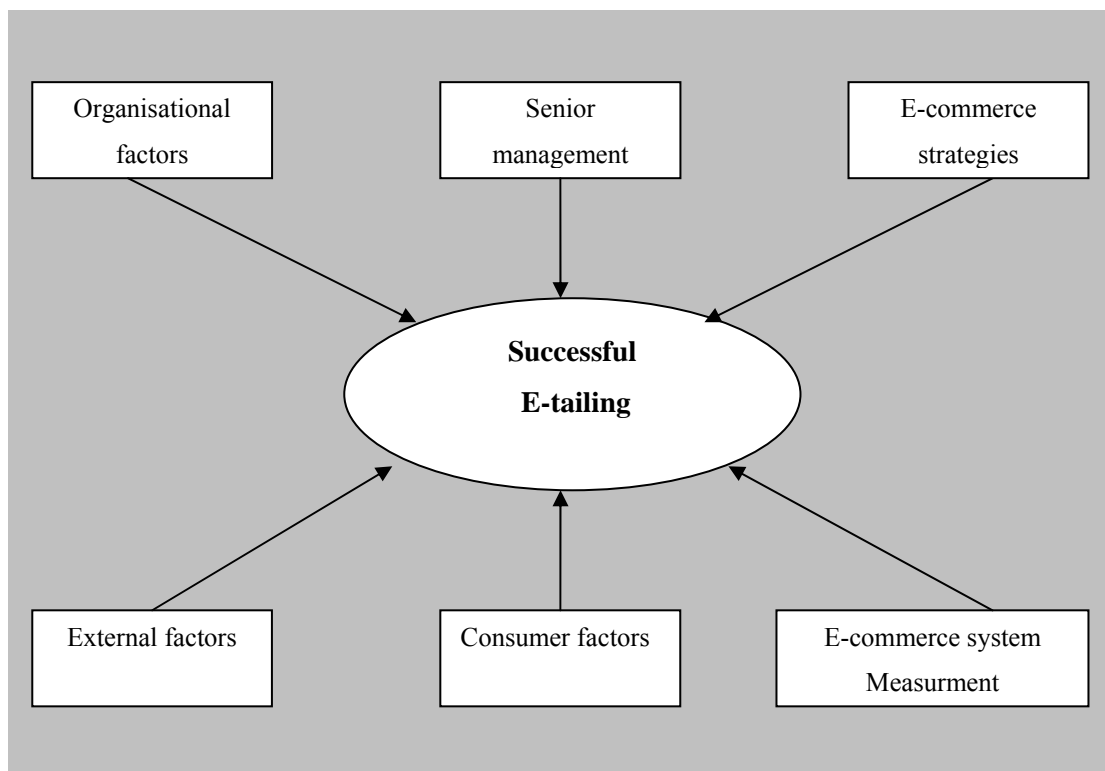
Research Issue 3:

- What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?

In addition to the barriers which need to be addressed initially, other factors and variables may play an important role in achieving successful e-tailing. Those factors and variables of success can be identified through answering this research issue.

Since this research question has not been studied previously, a theoretical model (Figure 1.1) was developed from the literature review, and used as the research guide. Six factors are included in the model, namely, (1) organisational factors; (2) senior management factors; (3) e-commerce strategies; (4) external factors; (5) consumer factors; and (6) e-commerce system measurement.

**Figure 1.1: Theoretical model**



Source: Developed for this research

This research aims to achieve the following objectives:

- to understand the use of e-commerce in China's retail industry;
- to access China's state-owned retailer and study their knowledge of e-commerce;
- to examine the factors and variables which emerge from the literature;
- to explore new and unique variables in China's retail industry;
- to build a new model to measure successful e-tailing in China's retail industry;
- to provide some suggestions to managers to implement successful e-tailing.

### **1.3 Justification for the research**

This research can be justified based on its ability to satisfy the existing gap in the literature, along with other potential benefits.

Firstly, no previous research has been done to investigate the success of e-tailing in China's retail industry. A number of studies have been done to investigate the success of e-commerce, with most of them conducted in western countries (Delone & McLean 2003; Seddon 1997; Teo & Wong 1998; Wixom & Watson 2001). Some research has been done to investigate e-commerce in China, but has only focused on the external environment, and not investigated e-commerce in China's retail industry (Dedrik et al. 2001; Efendioglu et al. 2004; Ernst & He 2000). The success of e-tailing in China has not yet been studied, especially in China's retail industry.

Secondly, the retail industry plays an important role in China. Data shows that retailing sales will represent almost 50% of total GDP in 2010 (ATKEARNEY 2005). Since the end of 2004, China's retailers have faced more competition from foreign competitors. Chinese and foreign retailers are competing to gain an increased market share of China's retail industry and enhance their competitive advantage. New retail formats and technology such as e-tailing offer opportunities and channels for Chinese retailers to compete with their rivals. Therefore, an in-depth investigation is necessary to formulate a guide for retailers in the implementation of e-tailing.

Thirdly, case study is the research method used in this study, whereas most previous research conducted in China has been quantitatively-based (Dedrik et al. 2001; Ernst & He 2000; Gibbs et al. 2002; UNCTAD 2003). The dual methods of interview and survey



are used to investigate the factors and variables from both the business and customer perspectives.

Lastly, this research makes valuable contributions to theory, policy and practice, as the first paper to investigate the success of e-tailing in China, and it is also the first study focused on China's retail industry. Thus, as a result of this research, a new model will be constructed as a guide to the implementation of e-tailing. Moreover, the research addresses the barriers and important variables of e-tailing in China. For example, current business processes do not match e-tailing operational processes, and there is a lack of senior management support for and investment in e-tailing. As a result of this research, managers will be able to design appropriate strategies to address the factors which are important in the achievement of success in e-tailing.

#### **1.4 Methodology**

The realism paradigm is used in this research for two reasons. Firstly, this research investigates real-life phenomena, and secondly the purpose of this research is to build a new model, rather than testing a hypothesis. Within this paradigm, a single case study has been selected to address the research question and three research issues for the following reasons: (1) case studies can be used to answer the research questions 'how' and 'why'; (2) the researcher has no control over the research environment; (3) this research focuses on the success of e-tailing, so basically, it is a contemporary event (Yin 2002); (4) the Shanghai Brilliance Group is the only case which meets the requirements of the selection criteria; (5) the Shanghai Brilliance Group is a unique case, as it is the largest retailer in China's retail industry.

As suggested by researchers (Gable 1994; Jick 1979; Kaplan & Duchon 1988; Trend 1979), both qualitative data and quantitative data were collected. Qualitative data mainly relies on interviews, which comprised 16 in-depth interviews and 3 focus group interviews. The data collection was finished when the data reached saturation level (Patton 1990). The participant selection was based on the selection criteria and the suggestion of the human resource manager of the Shanghai Brilliance Group.

Six main questions were developed to gain data:

- How is e-commerce being used in the Shanghai Brilliance Group?

- How can e-commerce produce a competitive advantage for the Shanghai Brilliance Group?
- How should e-commerce be used in the Shanghai Brilliance Group?
- How do the senior management factors, organisational factors, e-commerce strategies, external environmental factors and consumer factors influence the implementation of e-commerce?
- How does e-commerce change the organisational business processes, and how were these changes managed?
- Why customers would or would not like to use e-commerce.

The data analysis process employed for the qualitative data was a five-step approach summarised from the literature.

Quantitative data was collected from a self-administered questionnaire. One thousand random customers were selected for the questionnaire in the business area of the Shanghai Brilliance Group; data from 200 valid questionnaires were analysed. The quantitative data were used to investigate the consumer variables and e-commerce system measurements. Moreover, descriptive and frequency testing were employed on the quantitative data, and one way ANOVA and contingency analyses were used to surface the relationship between consumer demographics, internet usage and online shopping activities.

Further details on the research methodology are presented in Chapter 3, and the findings are presented in Chapter 4.

### **1.5 Definition of terms**

The definitions used in this research are provided below.

**E-commerce:** ‘e-commerce describes the process of buying, selling, transferring, or exchanging products, service, and/or information via computer networks, including the the internet.’ (Turban et al. 2006, p. 4)

**E-tailing:** ‘Retailing conducted online, over the internet.’ (Turban et al. 2006, p. 83)

**Retailing:** ‘the sale of goods or commodities in small quantities directly to consumers.’  
(Ogden 2005, p. 6)

**WTO:** ‘World Trade Organization’

**Click-and-mortar:** ‘These are traditional retailers with a supplementary website.’  
(Turban et al. 2006, p. 86)

**Pure-play e-tailers:** ‘These e-tailers have no physical stores, only an online sales presence.’ (Turban et al. 2006, p. 86)

### **1.6 Limitations**

This research focuses on the context of China, therefore the findings may or may not be generalisable to other countries. This could be seen as one of the main limitations to this study.

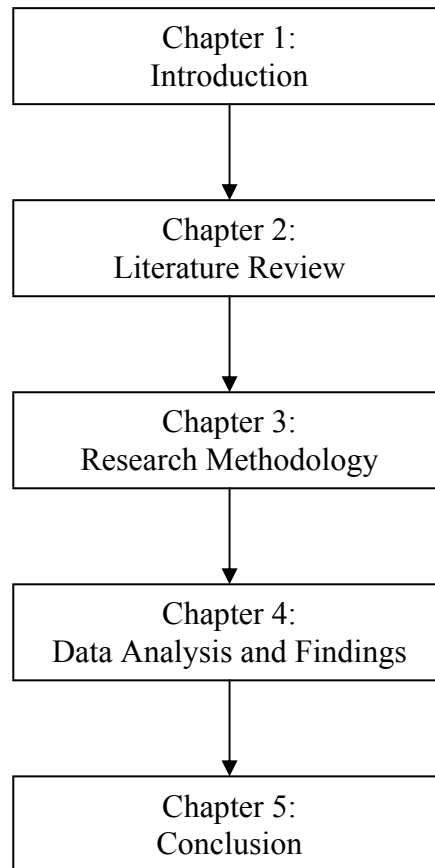
Moreover, the use of a single case study may be another vital limitation of this research. The subject for the case study was selected from the list of the top 10 retailers published by The Economist (2006). Also, the findings need to be carefully discussed before they can be used by other organisations and a further study will be necessary to test the model and its generalisability.

Thirdly, as the case is a state-owned enterprise, it is possible that the interviewees concealed some information in the interview process, due to privacy or security concerns. Therefore, some important factors or information may not have been mentioned by the interviewees.

## 1.7 Outline of the thesis

This thesis follows the standard framework as suggested by Perry (2001). The five chapters of this thesis are presented in Figure 1.2:

**Figure 1.2: Outline of the thesis**



Source: Developed for this research

Chapter 1 introduces the background information to the research and justifies the research on the basis of its important contributions to both theory and practice. The research question and issues are presented, followed by an introduction to the research methodology. Finally, the limitations of the research are proposed.

Chapter 2 reviews the body of knowledge relating to the three parent disciplines: e-commerce (Section 2.2), the retail industry and retailing in China (Section 2.3), and success factors of e-tailing (Section 2.4). Therefore, the discipline can be generated: ‘the success factors of e-tailing in China’s retail industry’ (Section 2.5). Chapter 2 concludes

with a presentation of the research gaps, the research question and research issues (Section 2.6). The final section, Section 2.7, concludes this chapter.

Chapter 3 begins with the justification of the chosen research paradigm (Section 3.2), and identifies the appropriate research method within the paradigm (Section 3.3). The criteria for judging the quality of case research is discussed (Section 3.4) and the case selection is discussed (Section 3.5). The data collection procedure is presented (Section 3.6), followed by the data analysis method (Section 3.7). The limitations and ethical considerations constitute the last two Sections of Chapter 3 (Sections 3.8 and 3.9). The final section, Section 3.10, concludes this chapter.

Chapter 4 discusses the research findings, including a description of the case (Section 4.2) and data display (Section 4.3). Based on the collected data, the three research issues are answered (Sections 4.4, 4.5, and 4.6). This chapter concludes with a discussion of the factors (Section 4.7), and the final combined model (Section 4.8). The final section, Section 4.9, concludes this chapter.

Chapter 5 presents the conclusions of the research. Firstly, the three research issues and the research question are discussed (Section 5.2) and the contribution to both theory and practice are presented (Section 5.3), followed by the limitations of the research (Section 5.4). Section 5.5 presents the recommendations for further research. Section 5.6 presents the conclusion to this research. The final section, Section 5.6, concludes this chapter.

### **1.8 Chapter summary**

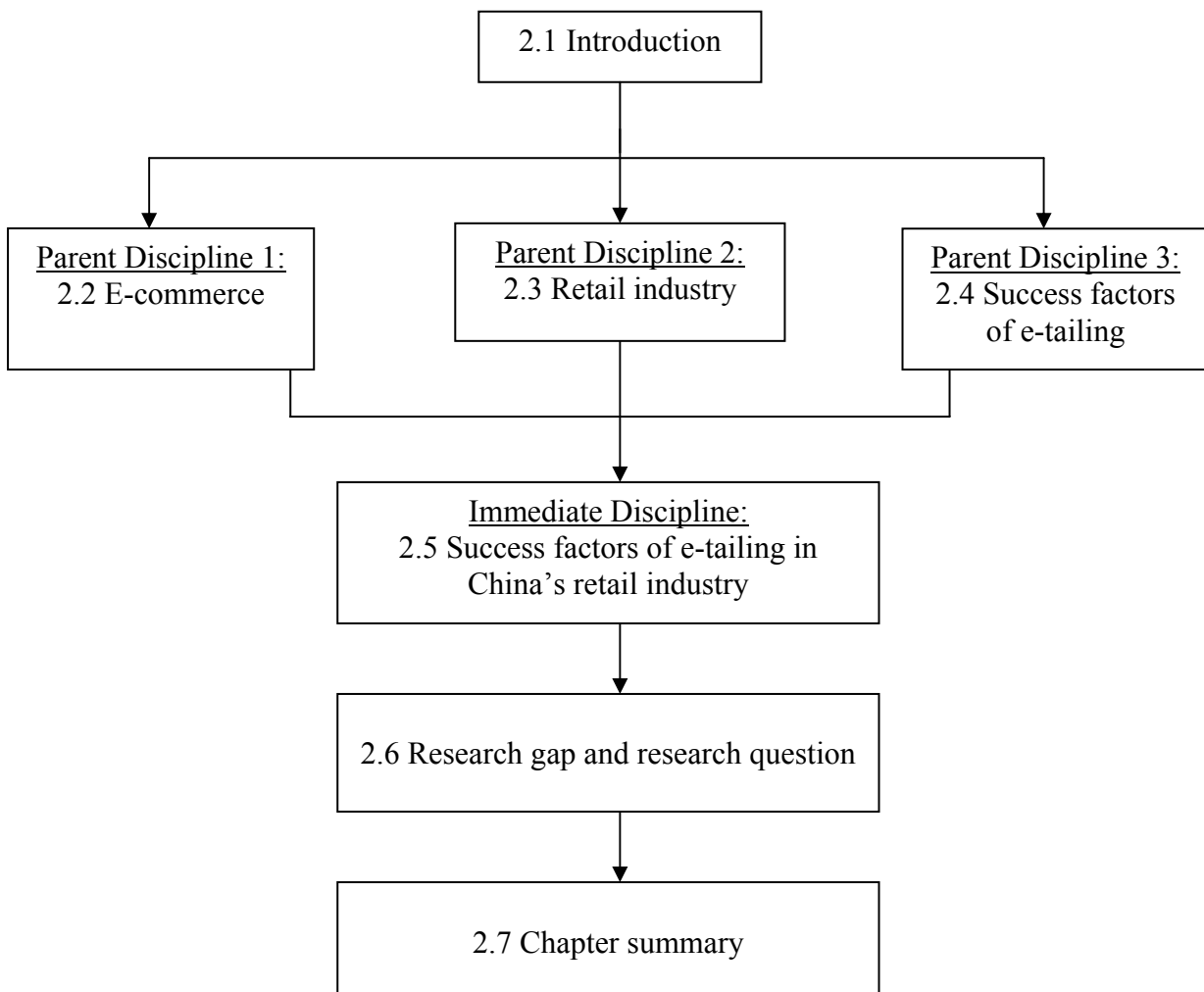
This chapter has provided a brief introduction to the thesis, followed by the research question and issues and a justification for the research. The methodology employed for this research has also been introduced and briefly discussed. Definitions of terms used in this research were provided and the research limitations were defined. Lastly, the thesis outline was presented.

## Chapter 2: Literature Review

### 2.1 Introduction

Chapter 2 reviews the existent literature relating to the three parent disciplines of this research, namely, e-commerce (Section 2.2), the retail industry (Section 2.3), and e-tailing success factors (Section 2.4). The chapter then focuses on the immediate discipline (Section 2.5), which relate to the research question: ‘How can successful e-tailing in China’s retail industry be achieved?’ The three parent disciplines provide the basic background and the body of knowledge for the immediate discipline. Chapter 2 concludes with an introduction to the research gap, and the research question and issues (Section 2.6).

**Figure 2.1: Structure of Chapter 2**



Source: Developed for this research

## 2.2 E-commerce

As this research focuses on e-tailing in China, it is necessary to review the existent literature on e-commerce. Therefore, this section aims to introduce the body of knowledge on e-commerce and e-tailing, covering the issues of benefits and limitations, applications, the development of e-commerce in China, and the barriers to the development of e-commerce in China.

### 2.2.1 Definition of e-commerce

The definition of e-commerce has been discussed by a number of researchers. The following table (Table 2.1) presents some of these definitions of e-commerce.

**Table 2.1: Definitions of e-commerce**

Zwass (1998, p.8)	'e-commerce is the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks'
Laudon & Traver (2003, p.10)	'e-commerce is the use of the internet and the web to transact business. More formally, digitally enabled commercial transactions between and among organisation and individuals.'
Schneider (2006, p.573)	'Business activities conducted using electronic data transmission over the the internet and the world wide web'
Kotler (2003, p. 40)	'e-commerce means that in addition to providing information to visitors about the company, its history, policies, products and job opportunities, the company or site offers to transact or facilitate the selling of products and service online'
Chaffey (2003, p.7)	'All electronically mediated information exchanges between an organisation and its external stakeholders'

Source: Developed for this research

As the table shows, these definitions have some similarities and also some differences. Chaffey (2003, p. 7) defined e-commerce as only being used for information exchange; Zwass (1998) and Kotler (2003) suggested that e-commerce not only conducts business transactions through the internet, but also includes other business activities; Schneider (2006, p. 573) presented a broader meaning of e-commerce, and used the word 'business activities' to cover all possibilities of e-commerce; and on the other hand, Laudon and Traver (2003, p. 10) provided a relatively narrow meaning of e-commerce, that e-

commerce is only used to transact business online. Overall, these definitions are based on the same concepts but employ different definitional approaches.

The following definition of e-commerce, presented by Turban et al. (2006, p. 4), is used as the foundational definition of e-commerce for this study. This definition has been chosen for its comprehensiveness and clarity and its relevance to e-commerce in the retail industry.

*'e-commerce describes the process of buying, selling, transferring, or exchanging products, service, and/or information via computer networks, including the internet.'*



### 2.2.2 Categories of e-commerce

E-commerce is usually classified by the types of entities participating in the transactions or business processes. Generally, e-commerce activities can be grouped into three categories: Business-to-Business (B2B), Business-to-Customer (B2C), and Customer-to-Customer (C2C), as shown in table 2.2.

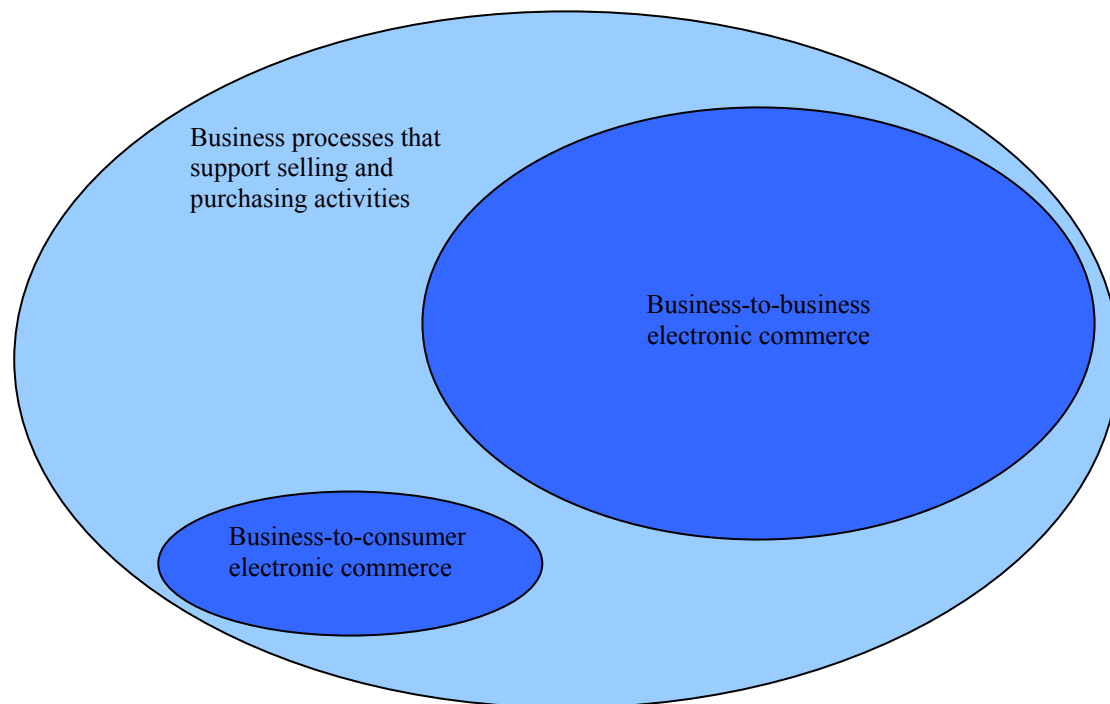
**Table 2.2: Categories of e-commerce**

	<b>Description</b>	<b>Examples</b>
<b>B2B</b>	e-commerce model in which all of the participants are businesses or organisations	Alibaba.com; Dell; grainger.com sell industrial supplies to businesses
<b>B2C</b>	e-commerce model in which businesses sell to individual shoppers	Walmart.com and Amazon.com sell products to customers through their websites
<b>C2C</b>	e-commerce model in which consumers sell directly to other consumers	eBay.com in which consumers trade with each other through an online marketplace

Source: Adapted from Turban et al. (2004) and Schneider (2006)

B2B refers to transactions between organisations which conduct their business electronically; all of the participants involved in B2B e-commerce are either businesses or organisations (Turban et al. 2006, p. 8). Schneider (2006) pointed out that in terms of dollar volume and number of transactions, B2B is much greater than B2C. Figure 2.2 shows a rough approximation of the relative sizes of these elements in terms of the dollar volume and the number of transactions. Obviously, B2B e-commerce plays a very important role in e-commerce activities, and occupies a great percentage. This is supported by eMarketer (2003, cited in Turban et al. 2004); the dollar value of B2B e-commerce comprises at least 85% of the total transaction value of e-commerce. The International Data Corporation (IDC) (2004) estimated that the world-wide B2B transaction volume has reached US\$2.4 trillion in 2004, and suggested that it is possible that it will reach US\$7 to US\$10 trillion (Mehrotra 2001).

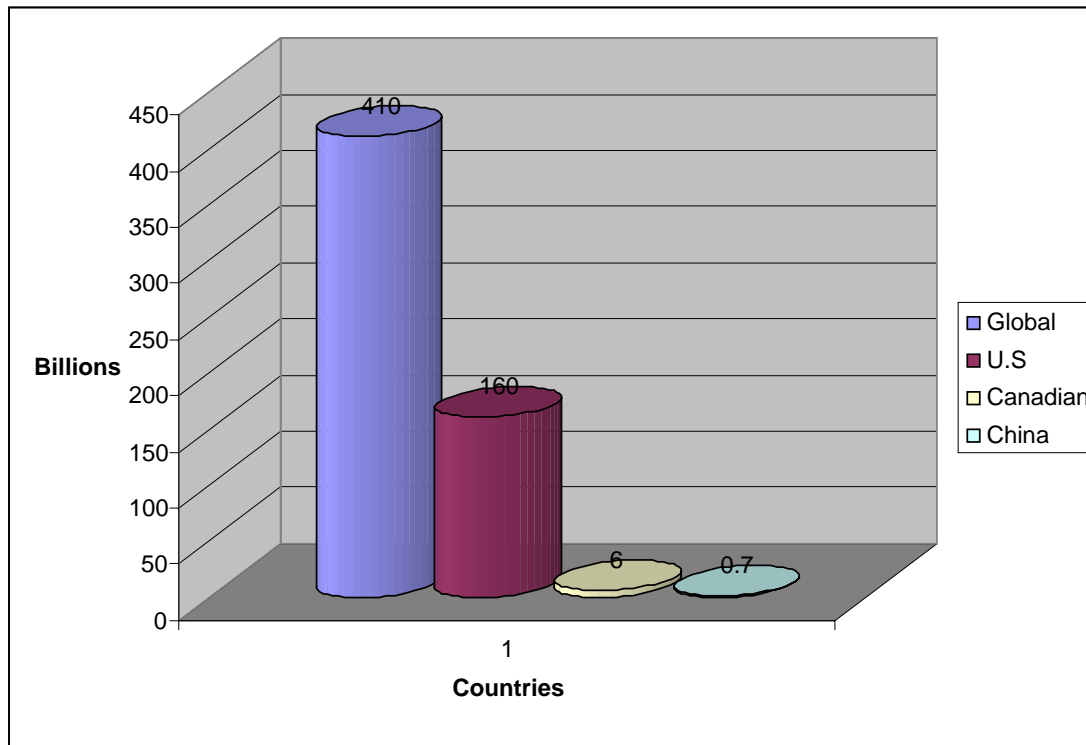
**Figure 2.2: Elements of electronic commerce**



Source: Schneider (2006, p. 6)

B2C is another of the major components of e-commerce, and includes retail transactions of products or services from businesses to individual customers, and is also call ‘e-tailing’ (Turban et al. 2006, p. 8). As the Forbes/eMarketer White Paper (2002) stated, more and more internet users are becoming online buyers. According to Cox and Koelzer (2004, cited by Turban et al. 2006, p. 83), in 2003, 101 million people purchased online in the United States and the number is predicated to reach 121 million in 2005. The revenue from B2C e-commerce also reached US\$145 billion in 2004 from US\$73 billion in 2003. Schneider (2006) estimated that online sales from B2C e-commerce will reach US\$240 billion in 2007, and it is estimated to reach US\$316 billion by 2010 (Johnson et al. 2004). Further, B2B sales will reach US\$6800 billion by 2007. The development of B2C transactions is different in different countries, for example, China has a significantly lower transaction value in the B2C e-commerce sector (Tan & Ouyang 2004), as shown in Figure 2.3.

**Figure 2.3: Comparison of B2C e-commerce transaction volume between different countries in 2005**

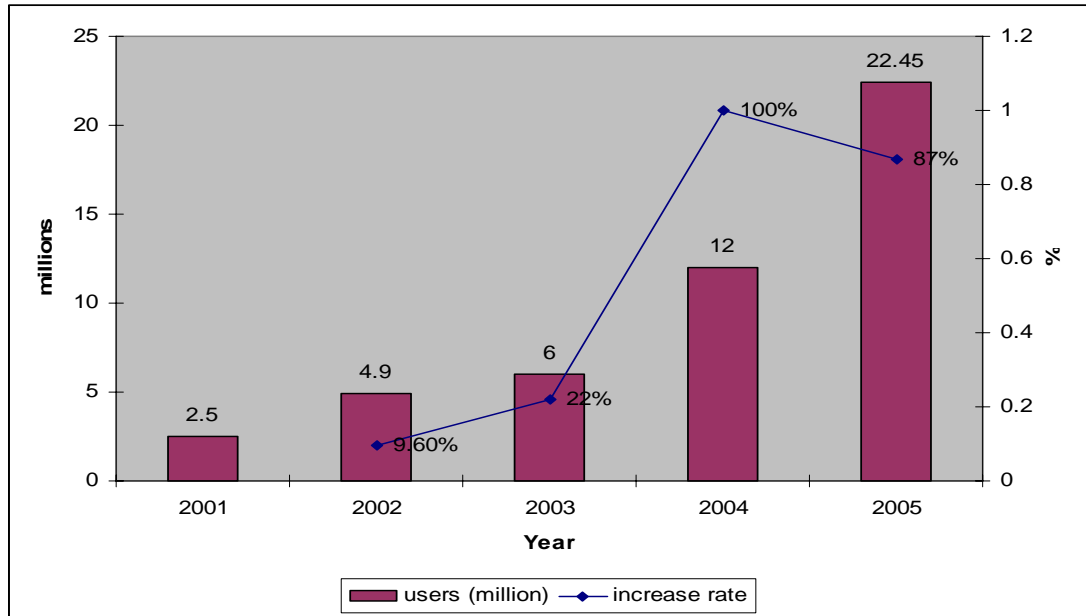


Source: Developed for this research from iResearch (2005)

Customer-to-Customer (C2C) is another form of the e-commerce business model. It refers to customers selling products to other customers, e.g. many online auction websites which allow customers to place items on the website for auction (Turban et al. 2006, p. 8). Moreover, due to the possibility that the end-user of C2C e-commerce is an organisation, a sub-category, Consumer-to-Business (C2B), has been suggested by researchers (Turban et al. 2006 p.9; Chaffey 2003). Chaffey (2003) noted that C2C and its sub-category C2B are less widely used, but have now become more common as a result of the rapid growth of online auctions and online community sites. For example, eBay.com is a typical auction site, where consumers can place the items they want sell or look for the products they want to buy. Online communities are another form of C2C, where people can meet online instead of physically, for example GeoCities.com generated 10 million members in less than two years, and had over 50 million members in 2004 (Turban et al. 2006, p. 737). Recently, C2C e-commerce has had an increased development in China, with two online auction websites, Taobao.com and eachnet.com (eBay China) have become the most famous e-commerce websites in China (see Figure 2.5). As shown in Figure 2.4, the

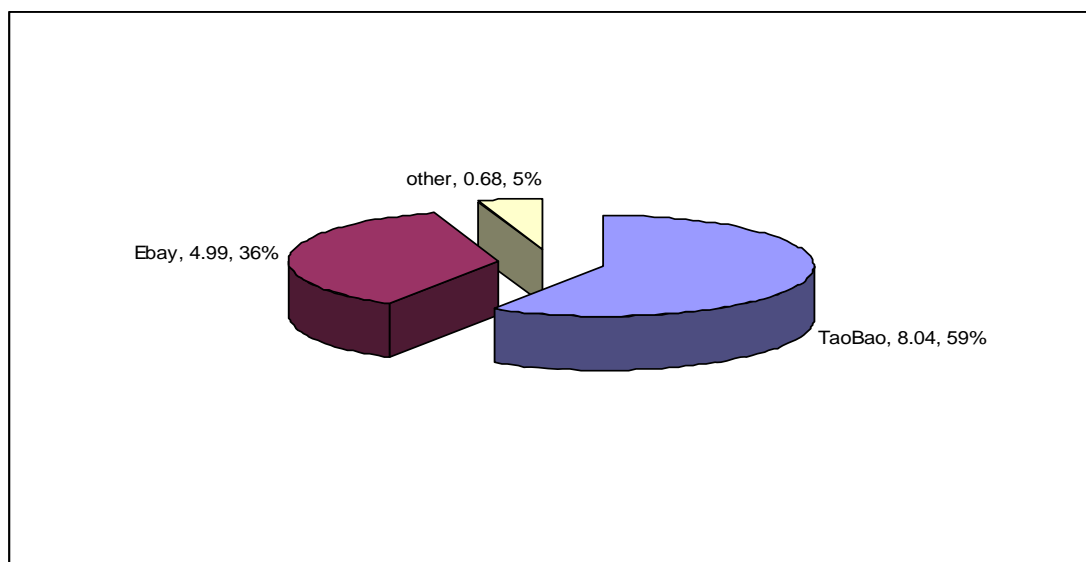
number of C2C users in China has reached 22.45 million in 2005, almost double the previous year.

**Figure 2.4: User numbers and increased rates of C2C in China**



Source: iResearch (2006)

**Figure 2.5: Transaction volume (bn) and percentage of C2C e-commerce sites in China 2005**



Source: iResearch (2006)

C2C also can be viewed as a kind of B2C. According to Chaffey (2003), both C2C and C2B sites are types of B2C, as they are set up by intermediary businesses, and the intermediary is an organisation. Therefore, those three e-commerce categories overlap to some degree. The latest research conducted by iResearch (2006) stated that in the near future, these three major types of e-commerce will disappear, and merge to become one general type of e-commerce. The major reason for this new development will be the on-going development of technology and strong competition; the main giant players have the capability and driving force to cross the board, especially in relation to B2C and C2C, for example, Alibaba (B2B) operated Taobao (C2C) in 2003.

Some other e-commerce categories, such as business to employees, exchange to exchange, government to business and government to individual citizen, have been mentioned by researchers (Turban et al. 2004; Chaffey 2003). However, these categories are less widely used than the three main categories discussed above.

## 2.2.3 Benefits and limitations of e-commerce

### 2.2.3.1 Benefits of e-commerce

The benefits of e-commerce have been discussed by a number of researchers who have categorised those benefits according to different conceptual frameworks (Chaffey 2003; Turban et al. 2004; Wang, Head & Archer 2004). For example, Turban et al. (2004) categorised the benefits of e-commerce based on the party which receives the benefit, such as the organisation, the customer, or society. Another classification provided by Chaffey (2003), was that of intangible benefits. Table 2.3 summarises the benefits of e-commerce based on Turban et al. (2006).

**Table 2.3: Benefits of e-commerce**

<b>Benefit</b>	<b>Example</b>
Organisation	Increased sales from new sales; cost reduction from marketing, supply chain, and administration; enhanced brand image; and so forth
Customer	Cheap products and services; more choices; time saving; electronic communities; and so forth
Society	Improved quality of living; availability of public services; hope for the poor; and so forth

Source: Adapted from Turban et al. (2006 p. 25-27)

E-commerce could help organisations reach both national and international markets; there is no geographic boundary for e-commerce (Wang, Head & Archer 2002). Organisations could have virtual branches all over the world; and their products and promotional information would be available globally to their potential customers. More customers would have the opportunity of accessing products and services even from a great physical distance. Consequently, increased revenue from new customers and new markets can be expected (Chaffey 2003).

In addition to sales opportunities for the sellers, e-commerce can also increase purchasing opportunities for the buyers, and thus make the supply chain more efficient and effective (Agrawal et al. 2001). Through the huge amount of information available on the internet, organisations can easily compare and identify new business partners and suppliers and achieve cheaper prices, better efficiency, shorter ordering time cycles, cost reductions and uninterrupted business availability (Chaffey 2003; Turban et al. 2004). Schneider (2006) pointed out that such benefits will create competitive advantages for organisations.

E-commerce also provides companies with more opportunities to communicate with customers (Fluss 2001), such as online communities, which enable faster responses to customer demands and expectations, help implement better marketing strategies, and enhance customer loyalty (Turban et al. 2004). Increased opportunities for business-to-customer communication also assist in building strong brand and corporate image.

### **2.2.3.2 Limitations of e-commerce**

Even though e-commerce provides numerous benefits to customers, organisations and society, there are some costs and limitations associated with e-commerce enterprises.

Chaffey (2003) pointed out that based on the current technology it is impossible for some businesses to implement successful e-commerce. For example, luxury cloth and some other expensive and customised products are hard to inspect online, and customers like to feel and touch those types of products. Burton (2005) also noted that customers will not buy an expensive luxury product without a salesperson's expertise. However, Huges et al. (2001) argued that this situation is only temporary, and with the development of technology and the maturity of e-commerce, this limitation will disappear.

Turban et al. (2004) also noted that there is lack of a universal standard for e-commerce, and a lack of standardised laws for the operation of e-commerce. At present, the legal environment for e-commerce is full of unclear and conflicting laws (Schneider 2006). Issues such as taxation and data transmission are yet to be resolved, which may be causing a lack of trust in e-commerce.

Previous studies (Schneider 2006; Turban et al. 2006,) noted that an e-commerce system is difficult to integrate with existing databases or information systems (IS) which are designed for traditional business process. Rogers (2001) noted that such integration could be risky and expensive.

A further limitation of e-commerce is that the measurement of some benefits of e-commerce, e.g. advertising, is difficult, as there is a lack of mature methodologies available to measure the benefits of e-commerce (Turban et al. 2006,). Therefore, many firms are not really willing to invest resources in e-commerce before they can see the benefits directly (Gunasekaran et al. 2005).

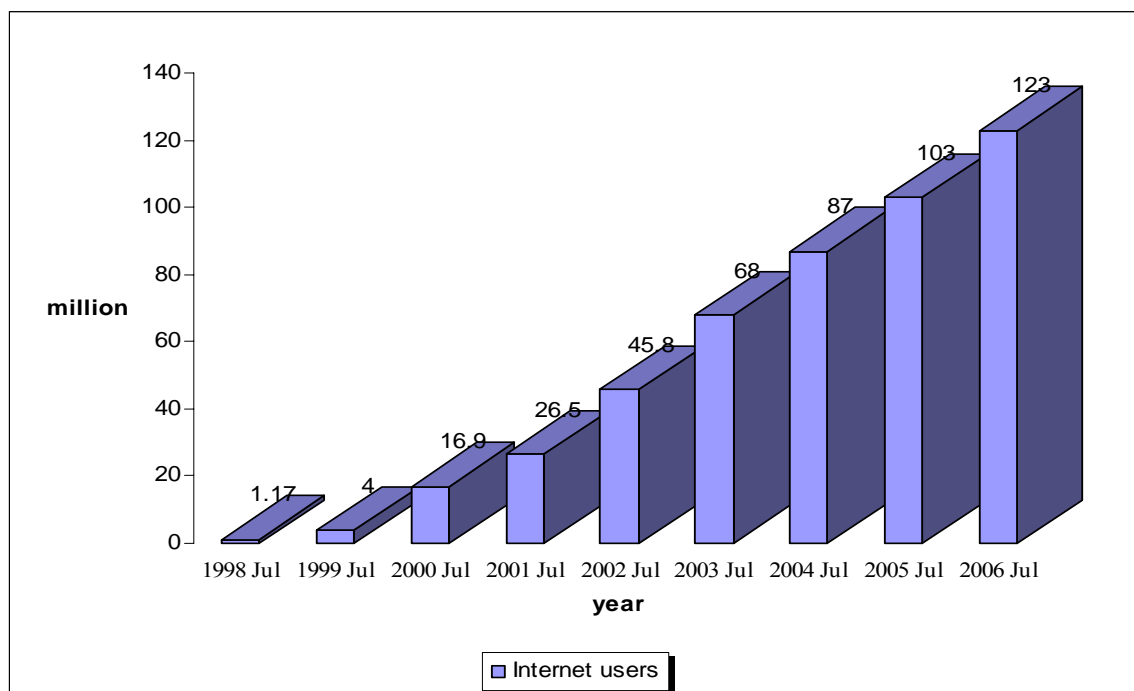
## 2.2.4 Development of the internet and e-commerce in China

This section summarises and reviews the development of e-commerce in China, beginning with the development of the internet in China, followed by a discussion of the development of e-commerce. Following these discussions, some important barriers and obstacles to the development of e-commerce in China are analysed.

### 2.2.4.1 Internet development in China

As shown in Figure 2.6, the number of internet users in China has grown markedly since 1998. This growth reached a 20% rate of increase in 2006 and has made China the world's second largest internet market. In July 2006, the number of internet users in China had reached 123 million, rising from only 1.17 million in 1998. As the current number of users accounts for only 9.46% of the country's total population, it shows the huge potential for internet usage in China, which has a total current population of 1.3 billion.

**Figure 2.6: Number of internet users in China**



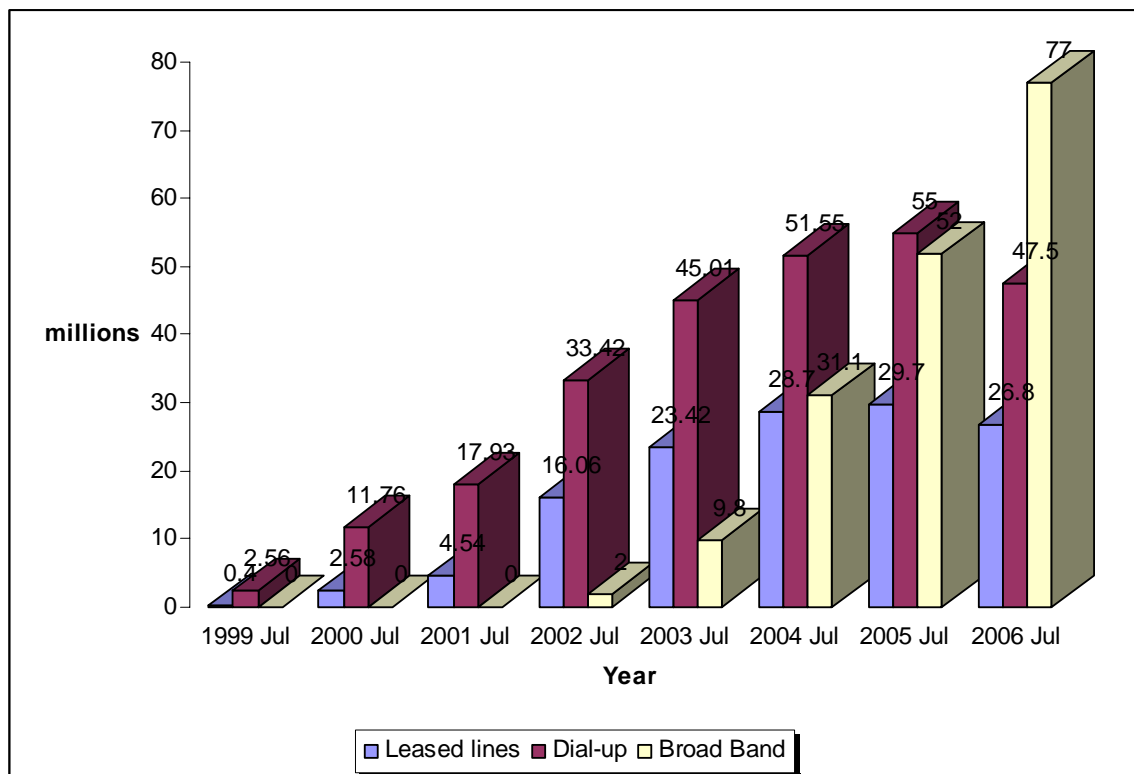
Source: Adapted from CNNIC report (1998-2006)

Based on the data provided in Figure 2.7, over the last seven years broadband has become the major internet access method in China. In July 2006, broadband was used by 77



million internet users, increasing from only 9.8 million in 2003. Therefore it has become the most popular internet access method in China. Dial-up was the most popular access method from 1999 to 2005. However, the number of dial-up users has dropped rapidly, from 55 million to 47.5 million from July 2005 to July 2006. Also since 1999, leased-line access has been another fast-growing method, however, this method has shown a slight decrease, from 29.7 million in July 2005 to 26.8 million in July 2006. (CNNIC 1999-2006).

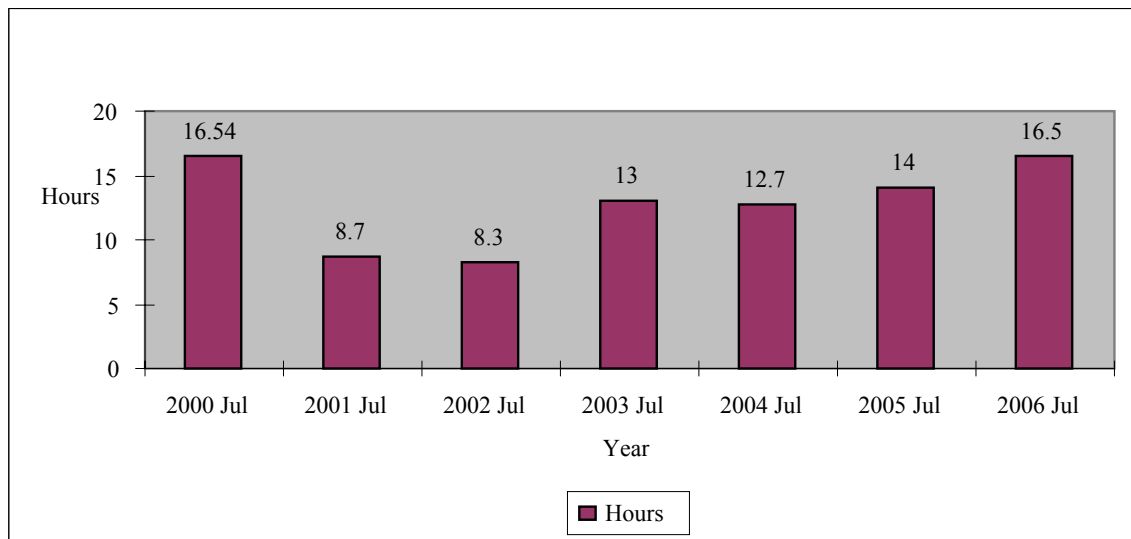
**Figure 2.7: Internet access methods in China**



Source: adapted from CNNIC report 1999-2006

Average weekly internet usage time has shown a similar increase to that of the numbers of internet and broadband users. As Figure 2.8 shows, the average weekly internet usage time has increased from 8.7 hours in July 2001 to 16.5 hours in July 2006. But surprisingly, within these 16.5 hours of weekly internet usage time, 11 hours were spent on online gaming, which accounts for almost 67% of total weekly internet usage time. This may be because of the age and educational level of the majority of internet users, as indicated in Figures 2.9 and 2.10.

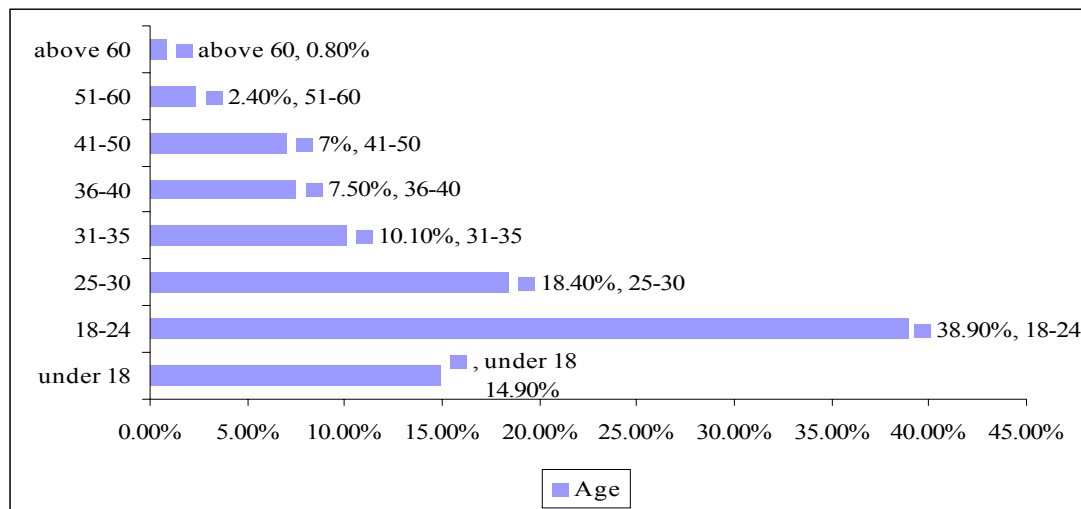
**Figure 2.8: Average weekly internet usage time**



Source: Adapted from CNNIC report (2000-2006)

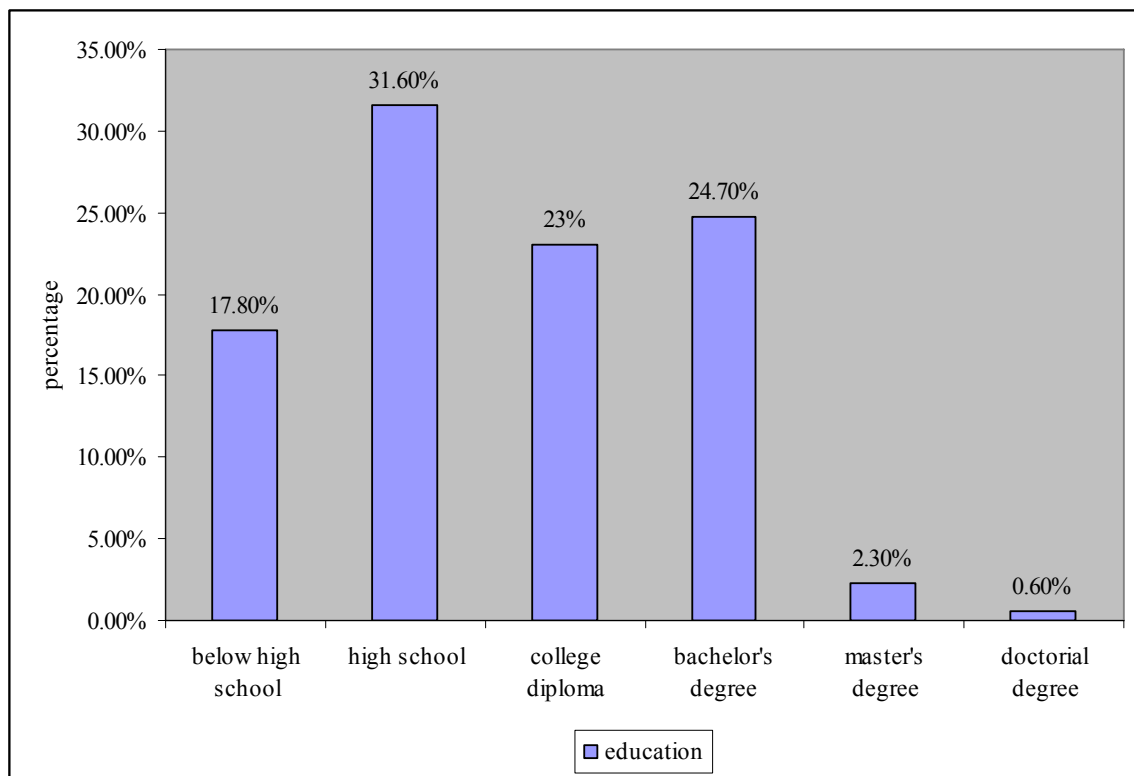
The statistics conducted by CNNIC (2006) show that over 50% of internet users are under 25 years old and a total of 90% are under 40 (Figure 2.9). Almost 50% of internet users have a high school or under high school educational level (Figure 2.10). Accordingly, most internet users are young people with a lower educational level.

**Figure 2.9: Age of internet users**



Source: adapted from CNNIC report 2005-2006

**Figure 2.10: Educational level of internet users**



Source: Adapted from CNNIC report (2005-2006)

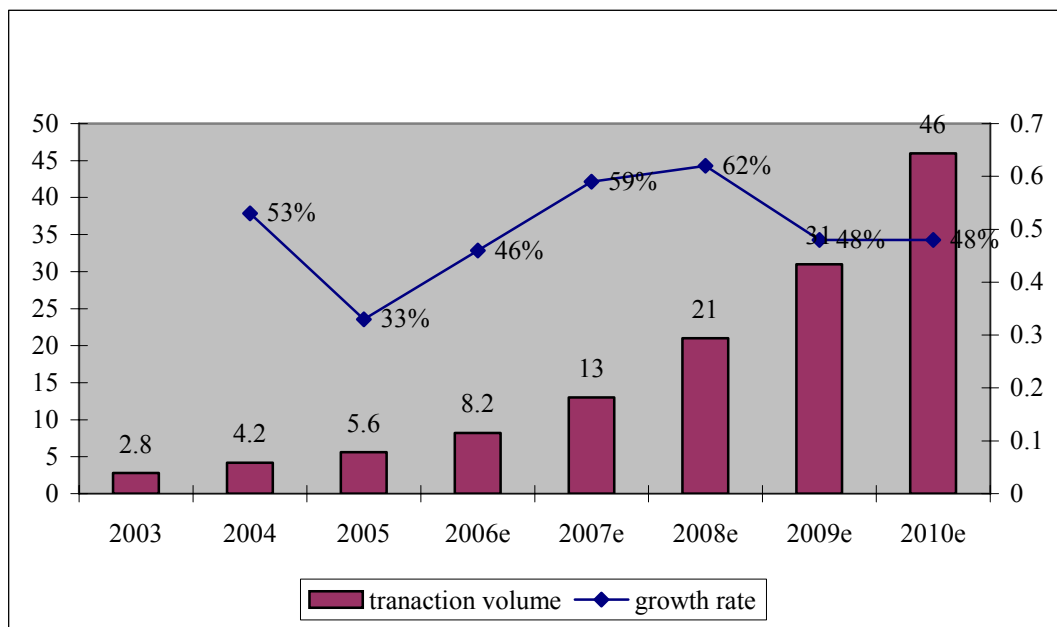
As can be seen from the above graphs, the internet and telecommunications have undergone rapid development in China over the last decade, especially in the last two years. From July 2005 to July 2006, the number of internet users grew 20%. However, more than half the internet users are under 25 and just starting their careers, and to the present, the majority of internet usage is for the purpose of online gaming.

#### 2.2.4.2 Development of e-commerce in China

Since 2002, China has become the second largest internet market and the biggest mobile phone market in the world, with 123 million internet users (CNNIC 2006) and 426 million mobile phone users (Burns 2006). However, the development of e-commerce in China has been slow.

Both B2B and B2C e-commerce in China are still in the preliminary stages despite their rapid growth in recent years. According to Hong (2003), the total of China's e-commerce transaction volume was RMB9.33 billion in 2000; and B2B accounted for more than 90% of the total e-commerce transaction volume. Figure 2.11 presents the total volume of China's B2C e-commerce from 2003 to 2010, showing that the transaction volume of B2C in China went up to RMB5.6 billion (US\$700 million) in 2005, and is estimated to reach RMB8.2 billion in 2006. However, compared to the global B2C e-commerce market, US\$700 million is a very small percentage and is not in proportion with China's large internet population, even though the growth rate is impressive.

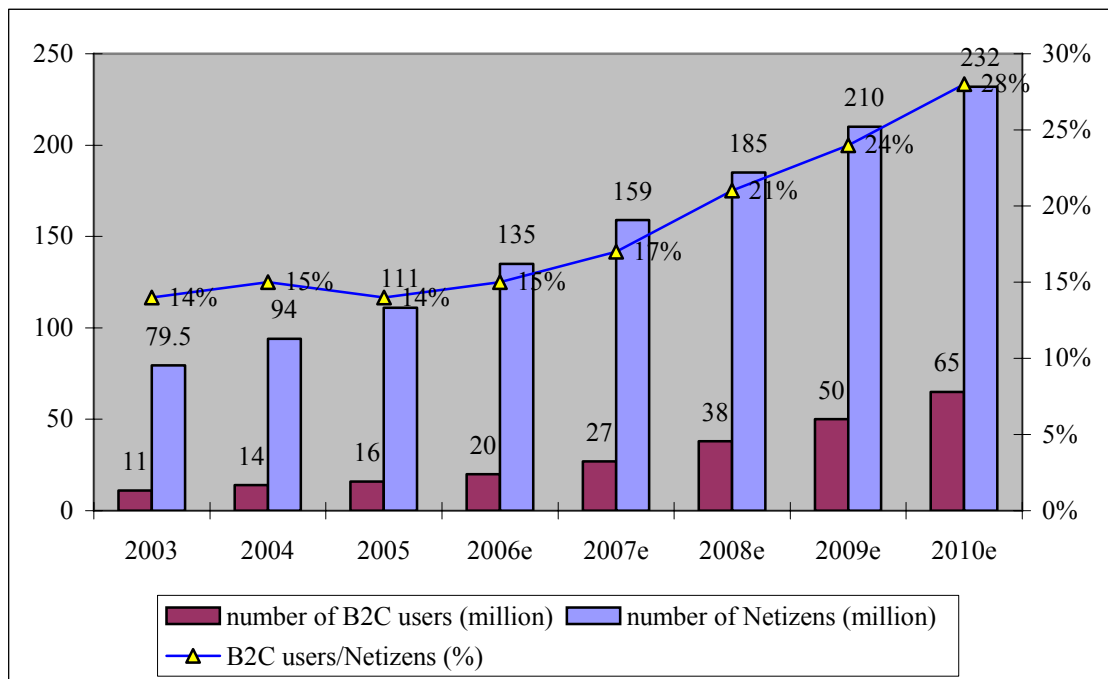
**Figure 2.11: Transaction volume of China's B2C e-commerce 2003-2010**



Source: iResearch (2005)

iResearch also summarised the number of China's B2C users and the percentage of the total of China's netizens (internet users) from 2003-2010, as shown in Figure 2.12. The iResearch report (2005) showed that there were only 16 million B2C users in 2005, while the total number of internet users had already reached 111 million by the end of that year. The report also predicted that there will be 20 million B2C users at the end of 2006 and that this number will finally reach 65 million in 2010. A recent report published in July 2006 by CNNIC (2006) shows that the number of B2C users had already reached 30 million in mid-2006, which is higher than the prediction made by iResearch, suggesting that the speed of B2C user growth is faster than predicted. In addition, one-quarter of the B2C users shop online very frequently.

**Figure 2.12: Percentage of China's B2C e-commerce users of the total of China's netizens, 2003-2010**



Source: iResearch (2005)

In summary, on the one hand, the internet has enjoyed rapid development in China in the last decade, as shown in Figures 2.6 and 2.7. On the other hand, the development of e-commerce in China has been slow compared to the strong growth of the internet in China. The follow section investigates the barriers to the development of e-commerce in China.

### 2.2.4.3 Major barriers to e-commerce development in China

As an application of the internet, e-commerce is a booming new business model in China, as an adjunct to the growth of internet usage. China is one of the most attractive e-commerce markets in the world in terms of market size, internet user numbers, and potential B2C users; but in reality, China's e-commerce is lagging far behind other countries in terms of market size and scope (Ernst & He 2000), as mentioned in the previous section. Many studies have been undertaken to investigate the reasons for this discrepancy in internet and e-commerce uptake in China, and Table 2.4 summarises the barriers to e-commerce identified in previous studies, and some important barriers are analysed in more detail.

**Table 2.4: Profile of the barriers to development of e-commerce in China**

<b>Barriers</b>	<b>Literature</b>
High cost of internet access	Dedrik et al. (2001); Ernst & He (2000); UNCTAD (2003); Gibbs et al. (2002)
Lack of payment mechanisms	Dedrik et al. (2001); Ernst & He (2000); Wong et al. (2004); Stylianou et al. (2003); UNCTAD (2003); Efendioglu et al. (2004)
Advanced retail networks	Dedrik et al. (2001); Wong et al. (2004)
Lack of trust	Dedrik et al. (2001); Ernst & He (2000); Efendioglu et al. (2004)
Poor delivery networks	Dedrik et al. (2001); Anonymous (2005); Ernst & He (2000); Wong et al. (2004); Efendioglu et al. (2004); Tan & Ouyang (2004); Hong (2003)
Lack of commercial banking facilities	Dedrik et al. (2001); Efendioglu et al. (2004)
Legal issues and regulations on e-commerce	Dedrik et al. (2001); Ernst & He (2000); Stylianou et al. (2003); Efendioglu et al. (2004); Tan & Ouyang (2004)
Lack of the necessary information system and infrastructure	Dedrik et al. (2001); Tan & Ouyang (2004)
Education in e-commerce	Zhang et al. (2005)
Product considerations	Wong et al. (2004)
Need for physical shopping experience	Wong et al. (2004); Efendioglu et al. (2004)
Product prices	Wong et al. (2004)
Culture	Stylianou et al. (2003); UNCTAD (2003); Efendioglu et al. (2004); Tan and Ouyang (2004)
Internet security	Efendioglu et al. (2004); Tan & Ouyang (2004); Gibbs et al. (2002); Hong (2003)
After-sales service	Efendioglu et al. (2004); Tan & Ouyang (2004); Hong (2003)
Integration of business processes with information systems	Tan & Ouyang (2004); Gibbs et al. (2002)

Source: Developed for this research

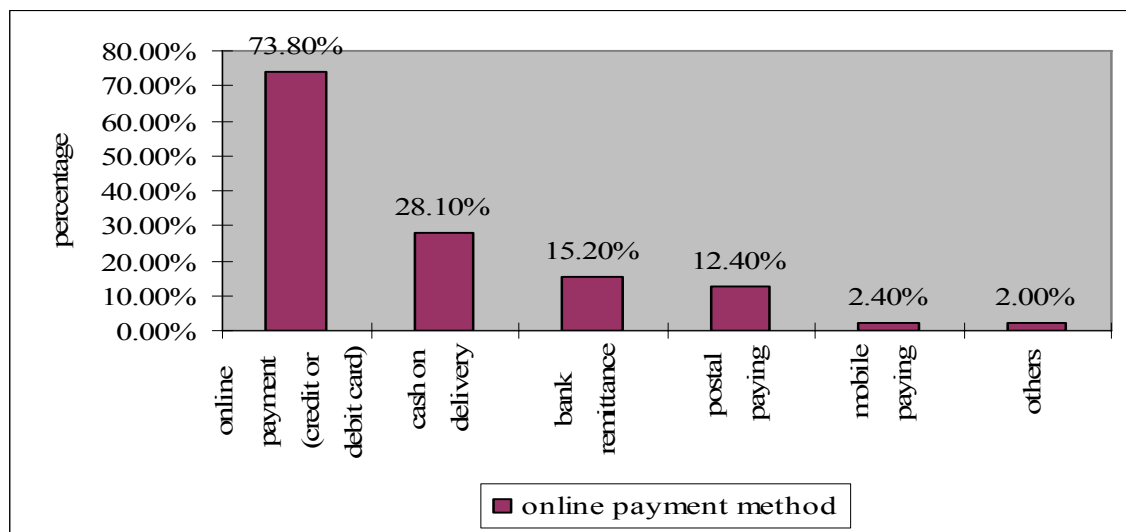
### **Speed and cost of internet access**

Ernst & He (2000) listed four constraints that delay the development of e-commerce in China within the current Chinese system. The low speed and high cost of online access were mentioned first, as compared to the United States the cost of internet access is relatively high in China, and therefore creates limitations for internet users. Other researchers (Gibbs 2002; UNCTAD 2003) have also found the same results, for instance, a United Nations report (2003) noted that the majority of developing countries face the problem of low income levels in the development of e-commerce. According to the recent CNNIC report (2006), the average monthly cost of an internet connection in China is RMB102, but compared to the current income of internet users, the cost of internet access has reduced to a much lower level than Ernst mentioned. Therefore, the cost barrier appears to be temporary, and it is possible that it will disappear in the future, if the Chinese economy continues to boom.

### **Online payment methods**

A second barrier is the online payment systems, arising from high banking charges and inefficiencies in online checkout services, which demotivate most companies from implementing online checkout services. China's substandard IT/electronic payment infrastructure is not fully ready to implement credit card payments online (Stylianou 2003). This situation was supported by the United Nations report (2003). Cash-on-delivery is the second biggest payment method used by B2C users, followed by bank remittance and postal payments. However, as Figure 2.13 shows, a recent report by CNNIC (2006) found that an increasing number of B2C users are willing to shop online by credit or debit card.

**Figure 2.13: Online payment methods**



Source: Adapted from CNNIC report (2006)

### **Delivery systems**

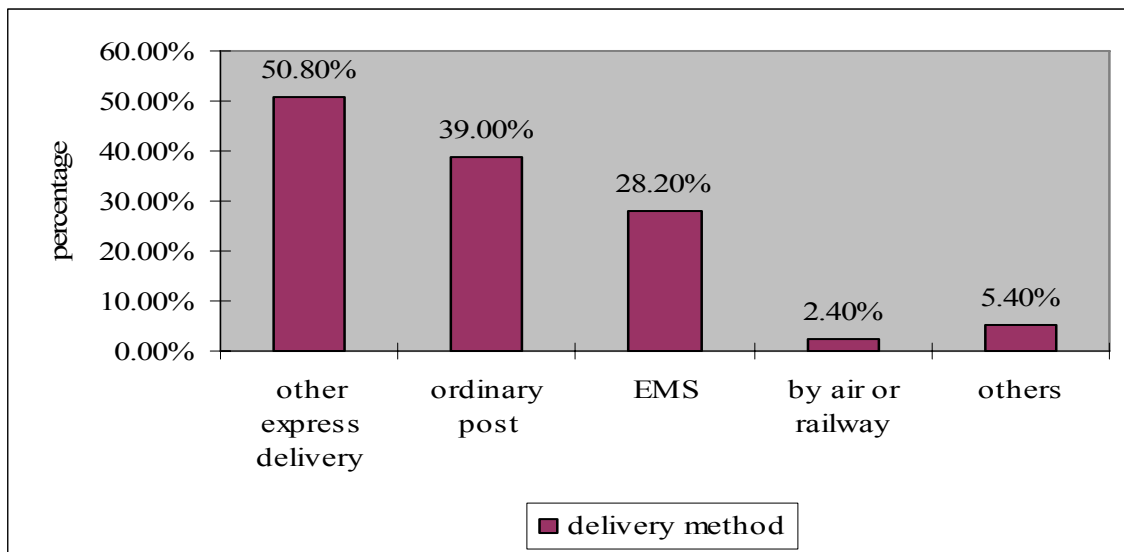
The third barrier to the growth of e-commerce in China is the supply and delivery system. Currently, China primarily relies on the traditional labour-intensive delivery system, which is inadequate for increased e-commerce usage. This is supported by the recent CNNIC report (2006). Figure 2.14 lists the five most popular delivery methods in China and the percentage of the total of these methods. Ordinary post occupies 39% of all deliveries, followed by Express Mail Service (EMS) with 28.2%. The major delivery method is difficult to identify and is named ‘other express delivery’, This is because the majority of those express delivery companies are small and medium business, and occupies 50.8% of all deliveries. However, the quality of those express deliveries can be doubted.

### **Online security**

The fourth barrier to increased e-commerce in China is online security. Companies require protection for their system from hackers in addition to enhanced commercial credibility; customers often worry about theft of their personal information, such as a credit card number. Both technological and legal tools should be used to enhance the security of e-commerce (Ernst & He 2000).



**Figure 2.14: Delivery methods**



Source: Adapted from CNNIC report (2006)

### **Advanced retail networks**

Wong et al. (2004) generated further variables influencing the development of China's e-commerce. One of those variables was an advanced retail network. They argued that the existing traditional retail networks have served consumers well, partly because most retail networks are within walking distance of residents. This makes e-commerce less of a convenience than it might be in the United States, United Kingdom or Germany (Dedrik et al. 2001).

### **Education**

Education is another barrier identified by previous studies. Brin (1999) pointed to the increasing demand for professionals who have the capability, experience and knowledge to conduct electronic businesses, as e-commerce continues to grow. This is supported by the People's Daily (2003). The demand for e-commerce related positions will rise to more than 2,000,000 in the next ten years, but there were only 100,000 staff members working in e-businesses in 2003. Zhang et al. (2005) pointed out that based on China's current education system, the total number of students enrolled in e-commerce courses is about 130,000 each year. According to the China Ministry of Education (2002), less than 400 colleges out of a total of 2598 colleges have established e-commerce related programs, still far below the demand. One important reason is an insufficient network of computing resources and limited on-campus internet access.

On the other hand, China's problem of education in e-commerce is not only related to the quantity of courses, but also to educational quality. Song (2002) mentioned that many certified trainees from e-commerce training programs lack systematic study, preventing them from acquiring the latest knowledge of e-commerce. Zhang et al. (2005) summarised three factors which relate to the quality of e-commerce programs. Firstly, there are not enough qualified lecturers due to the issues of cost, and more importantly, some lecturers were unqualified to teach an e-commerce class. Secondly, lacking quality textbooks, as Chen (2003) noted, most of the textbooks are translated from English, which may render the content and some case studies obsolete, due to the time lag, and some of the content may not be related to Chinese context.

Lastly, on a global level, China lags far behind in academic research on information systems. There is not enough advanced research to refuel e-commerce education. According to Zhang et al. (2005), until 2003 no research paper was published by China's researchers on the International Conference on Information Systems. Because of these wide-ranging limitations in China's education in e-commerce, the country currently has a vital shortage of e-commerce professionals, and e-commerce education is poor in both quantity and quality.

### **Culture**

Culture may also play an important role in the development of e-commerce. Stylianou et al. (2003) pointed out that online purchases mainly rely on credit card transactions, which contrasts to China's cash-based consumer culture. This finding has been supported by the United Nations report (2003), namely, cultural resistance to online trading.

### **Information system quality and integration**

Tan and Ouyang (2004) identified two barriers from the organisational perspective. Their findings suggest that internal information systems are under-developed and not properly utilised, and that most Chinese firms do not integrate their business processes with an information system.

#### **2.2.5 E-tailing**

The previous section provided a discussion on e-commerce and its development in China. This section continues with a discussion of the characteristics of e-tailing. Firstly, the

definition of e-tailing, types of e-tailing and applications of e-tailing are discussed. Secondly, the advantages and disadvantages of e-tailing are presented, and lastly, the most important issues in relation to e-tailing are explored in more detail.

### **2.2.5.1 Definition and applications of e-tailing**

As this research explores the factors for success in e-tailing, a classic definition will be used as the conceptual framework for e-tailing, provided by Turban et al. (2006, p. 83)

*‘Retailing conducted online, over the internet.’*

Many researchers have provided similar definitions and have noted that the concept of e-tailing is the same as that of B2C e-commerce (Doolin 2004; Rao 1999; Turban et al. 2004; White 2001). Wang (2002, p. 1) provided a broad definition of e-tailing by defining it as ‘the selling of goods and services to the consumer market via the internet.’ Turban et al. (2006) and Doolin (2004) specifically pointed out that e-tailing (B2C) is the sale of products and services to individual customers. However, the application of the traditional concept of the individual customer seems too narrow for today’s e-tailing situation, as e-tailing customers increasingly form shopper groups, to price-bargain with retailers. Therefore, ‘individual customer’ is not the most applicable way to describe the e-tailing customer. Accordingly, e-tailing and B2C e-commerce are viewed as equivalent, and these two terms are used interchangeably in this research.

The definition of e-tailing used for this research indicates that the most common use of e-tailing is the sales of products or services online, but online retailing businesses do not only undertake simple sales, they also include other applications, as do physical retailing outlets. Some examples of such implications include:

1. **Selling goods and testing new products.** Many giant retailers use the internet as a tool to test new products or services. For example, the company Gap Inc tested plus-size women’s underwear online to see if the new products were accepted by the customer before sold from their physical shops. This strategy is useful to reduce the risk in the early stages of new product sales. Wal-Mart also sells some products online which are not stocked in its stores (Mullaney et al. 2004).

2. **Market research.** Retailers can use their online presence as a tool to gain valuable customer information to forecast future customer demand. In the offline environment, such data are difficult and expensive to collect and analyse (Rao 1999). As Baker (2005) mentioned, online market research has some powerful advantages, such as monitoring real-time buying decisions. In addition, online customers are already 'prequalified' due to the fact that they must already have the knowledge and experience necessary to answer the questions, which produces more accurate and reliable data.
3. **Promotional tool.** Following on from market research, valuable customer data can be used to conduct pricing and promotional experiments. A website can be used as a tool to conduct promotional experiments, due to the wide reach of the internet, and the low cost (Rao 1999).
4. **Marketing tool.** As indicated by Peterson et al. (1997), a website is also an effective channel to communicate with customers. Organisations do not need to rely solely on one-way communication media, such as TV and newspapers. The internet provides a two-way communication channel. As a new communication channel, the internet can provide benefits to retailers, such as low costs, interactivity, personalisation, and continuous communication. Wang et al. (2002) suggested that by better understanding consumers through customer relationship management, marketers can employ relationship marketing techniques in the retail market to provide personalised services.
5. **Online customer service.** As websites become new channels for conducting customer service, their general acceptance level in the population will increase, due to the benefits provided. For example, a customer could ask for a product introduction or a personalised product in the pre-purchase stage, and could also check the delivery status online. All such services can be available uninterrupted online, which is almost impossible in the physical world, due to the cost.

#### **2.2.5.2 Types of e-tailing**

According to the information found by prior studies, e-tailing business models can be classified in several ways, such as the scope of items handled, the scope of sales region covered, the degree to which the retailer is online and a revenue model (Turban et al.

2004). Chen et al. (2004) divided e-tailing into three categories: (1) pure online players, (2) click-and-mortar retailers, and (3) retailers who replace the physical store with a wholly-online operation. Calkins et al. (2000) also pointed out that e-tailing can be used as a channel supporter, category killer, auctioneer, and virtual portal. Table 2.5 presents and shows examples of these most common types of e-tailing.

**Table 2.5: Profiles of e-tailing types**

<b>Categories</b>	<b>Definition</b>	<b>Examples</b>
Mail-order retailers that go online	Firms with established, mature mail-order businesses doing their business online	Sharper Image, and Lands'End
Manufacturers	Manufacturers market directly online from company sites to individual customers	Sony, iPod, and Lenovo
Pure-play e-tailers	Firms that sell directly to consumers over the internet without maintaining a physical sales channel	Amazon.com and eBay
Click-and-mortar retailers	Brick-and-mortar retailers complementing their physical business with online operations	Walmart.com, Sears.com, and Lian Hua

Source: Adapted from Turban et al. (2004) and Chen, Gillenson & Sherrell (2004)

Of the above four categories, pure-play and click-and-mortar are the most common e-tailing models in the business world, and a number of researchers have investigated their nature. Most of those researchers (Barsh 2000; Burton 2005; Calkins et al. 2000; Donlan 2000; Gaffney 2001; Lao & Hu 2005; McIntosh 2003; Scally 2000) suggested that the click-and-mortar e-tailing model has some advantages over the pure-play model. For example, Mullaney (2004) stated that even though pure-players such as Amazon and eBay continue to post strong growth rates, they are increasingly facing competition from a number of large retailing companies. According to Pauly (2000), of the top fifteen online retail sites during the 2000 Christmas holiday season, eleven were brick-and-mortar. Only few of the pure-players will be able to compete. The advantages of click-and-mortar have been generated by research, and include: the capability of the customer to physically touch and feel the product, relatively low costs and high profit margins and expertise in the traditional retail industry.

Calkins et al. (2000) stated that store-based retailers provide the opportunity for customers to see, touch and try out products before they buy. Donlan (2000) shared the same view and believed that the pure e-tailer lacks the provision for this product tangibility, and that most e-tailers are finding ways to combine the old economy businesses with the new technology, and take the advantages from both. Therefore, click-and-mortar e-tailing could offer the customer the opportunity to see and touch the products, and then buy them online.

Barsh (2000) advised that cost is another huge challenge that pure-players face. As Eaton (2002) noted, pure-play e-commerce firms may not take advantage of the new dot-com world. The cost advantage would lie with the bricks-and-mortar firms that expand to develop a web presence (click-and-mortar). The fixed cost of building a web presence is low for both the click-and-mortar and pure-player, but those costs for an existing firm should be even lower. According to Quick (2000), pure-players spend US\$82 on acquiring a new customer, whereas click-and-mortar businesses only need US\$31 for the same purpose. This view has also been supported by McIntosh (2003), in that, due to the issue of cost, the anticipated return on investment of pure web-based retailers might be harder to attain than for multi-channel retailers. Another study (Anonymous 2000) also suggested that pure-players expend higher marketing costs than multiple-channel retailers to obtain an order, with marketing costs to generate an order online at US\$26 for pure-players, compared to only US\$2 for click-and-mortar businesses. This may be because click-and-mortar retailers can take advantage of their existing brand image and physical marketing tools to conduct their marketing, generating profits faster and easier than pure-players.

Further, in the case of e-tailers not reaching breakeven point, a click-and-mortar business is much stronger and more able survive whereas the pure-player may not be able to hold their business long enough to reach the breakeven point. The cost of building an effective distribution system is also different for click-and-mortar and pure-player e-tailers. For example, the click-and-mortar company, Tesco, set up an online grocery business, filling orders more cheaply from the shelves of its existing stores (Anonymous 2001).

Overall, click-and-mortar is the stronger and more effective competitor in the e-tailing industry; one important reason being that click-and-mortar e-tailers enjoy cost advantages

over pure-players, including costs of acquiring new customers, marketing costs, and the costs of a support system.

Rao (1999) found that traditional retailers have several competencies that pure-player e-tailers can find hard to match, but which are also important in the digital world, such as merchandising skills or assortment planning, forecasting and demand management. Merchandising skills and assortment planning are two of the most important competences for a retailer, as retailers need the capability to plan their assortment of merchandise based on predictions of customer demand, and organise an effective supply chain to allocate adequate resources to the market. Click-and-mortar businesses have the necessary knowledge and experience to understand the requirements of the merchandise assortment planning process, and their website might be just another retail outlet for them, where they can repeat merchandising operations they know to be successful. However, merchandise planning and assortment operations might be a totally new experience for a pure-player.

Forecasting and demand management is another essential competence for the retailer. New information technology provides large and accurate data warehouses to both the click-and-mortar and pure-player, but digital data is not necessarily easier to analyse than traditional-form data. Pure-players must also address problems which have been traditionally faced by retail operations, and click-and-mortar businesses will have prior experience and knowledge to assist in their analysis of the large amount of digital data. Therefore, click-and-mortar businesses have more experience and greater capability than pure-players, to succeed in e-tailing.

Click-and-mortar retailers also enjoy the advantages inherent in selling existing brands and the advantages of operating traditional physical stores. Customers are more likely to shop online if they know there is a physical shop behind the scenes and people on the end of a telephone line to advise them and answer their questions during the purchasing process (Burton 2005). According to Page and Lepkowska-White (2002), traditional brand awareness and brand image are useful to build web equity, and they concluded that strong equity provides added value to customers and helps them make wiser decisions about their purchases. Therefore, customers are willing to go to a website which demonstrates strong equity, to conduct their online purchase. Obviously, it is easier for

click-and-mortar businesses to obtain web equity than pure-players in the early stages of an e-tailing operation. Gaffney (2001) also confirmed that an online presence with a brick-and-mortar backup will be more successful than a pure online operation.

Accordingly, click-and-mortar retailing is the appropriate business model of e-commerce for the majority of businesses in the future (Barsh 2000; Burton 2005; Rao 1999) in terms of cost issues, existing brands, and retail industry experience. However, most online retailers in China are pure-players, such as DangDang, JoYo, and TaoBao. Most traditional retailers in China do not yet seem to plan to enter the e-tailing market on a large scale (Lao & Hu 2005), and there is currently a lack of research into the reasons for this disinclination.

### **2.2.5.3 Advantages of e-tailing**

E-tailing tends to enjoy the same benefits as e-commerce. A number of studies (Agrawal 2001; Dabholkar 1996; La 2002; Sullivan 2004; Wang et al. 2002) have investigated the advantages and disadvantages of e-tailing in detail.

Wang et al. (2002) identified several advantages of e-tailing over traditional retailing. E-tailing provides additional distribution channels. Customers can visit the website, browse the products, and make an order as they do in a traditional store. With the support of advanced information technology, there are no temporal or geographic limitations for retailers or customers. This therefore helps marketers reach larger audiences more efficiently.

La (2002) pointed out that a virtual market space such as the internet usually enjoys much lower costs than their brick-and-mortar competitors. Through e-tailing, retailers can provide various payment and delivery options to customers with very limited operational costs (Dabholkar 1996).

The world wide web also can be used as a communication media, as it offers simplex (one-way), duplex (two-way), or multiplex (multiple-way) communication (Wang et al. 2002), unlike most traditional communication media which only allow one-way communication, such as TV, radio and newspapers. Through online stores, customers can provide feedback to and communicate with retailers about their reactions to the products



and services. Marketers are also able to discover what the customers want and what their interests are, within a short timespan.

Online merchants can offer a far broader array of merchandise than specialty brick-and-mortar retailers, and online retailing also allows customers to access and compare product information, such as price, color, and shape (Rao 1999).

E-tailing can also provide unique gifting opportunities (Agrawal 2001). For example, the sporting goods store Recreational Equipment Inc. also offers in-store kiosks which include gift registries that are tied to the company's website. This initiative has helped boost sales, and customers are encouraged to set gift registries or order online when the product is not available offline (Sullivan 2004). For example, Apple only offer the personalised engraved iPod products from its online store.

#### **2.2.5.4 Disadvantages of e-tailing**

The disadvantages of e-tailing have also been discussed by previous researchers. Lack of physical touch and inspection (Caplan 2004), security and privacy concerns are still the challenges retailers face as customers may rely on purchasing familiar brands in order to reduce the risks associated with their purchase (La 2002). Another issue is that, even though the internet has had an impressive growth rate in the last decade, not everyone has access to a computer and the internet, especially in developing countries. For example, as discussed, China has become the second largest internet market in the world in terms of internet user numbers, but still over 90% of the population does not use the internet (Anonymous 2005(a)). However, such disadvantages will probably disappear in the future, as the development of technology could effectively reduce the risks of online purchasing, for example, better online payment platforms. Also, social developments such as improved banking services, increased incomes and decreased costs of information technology could enable more people to afford the basic hardware and software required to access the internet.

#### **2.2.5.5 Important issues in e-tailing**

The term electronic commerce was coined in 1990, since which time e-commerce has undergone a rapid expansion due to the development of new electronic networks, protocols, and e-commerce software. More e-commerce models have appeared since

1999, including B2B, B2E, e-government, e-learning, and m-commerce (Turban et al. 2006). The transaction volume of e-commerce has also increased rapidly as discussed in Section 2.2.2. However, since 1999, a large number of e-tailing companies have failed (Turban et al. 2004), including some famous e-commerce failures such as eToys, Drkoop.com, webvan.com, chemdex.com and 8848.com. Many studies have investigated the reasons for e-tailing failures and some important issues have been identified. This section discusses some of the important issues in e-tailing arising from previous studies.

E-tailers are facing the problem of low profit margins. According to Willoughby (2000), many retailing sites are still struggling with making profits and there are several reasons for the difficulty e-tailing sites experience in generating profits. The trouble with most e-tailers, especially pure-players, is that they lose money on every sale as they try to grow to a profitable size and scale, for example, Amazon is losing about US\$7 per order on its non-book sales because of shipping and fulfilment costs. This may be for the following reasons: each order is very small and the delivery costs and the packing costs are fixed; inflating fulfilment costs; price competition; problems with inventory management; and cost of product returns.

E-tailing does enjoy some cost advantages, such as cheaper rents, less equipment costs, and lower labour costs. But Barsh (2001) argued that e-tailing is not a free channel. Many fixed costs are not truly fixed in e-commerce, some supposedly fixed costs actually increase in line with revenue growth, as he noted, the expense associated with hardware and software increases with site traffic and therefore with revenue growth, and also costs such as warehousing grow as a percentage of revenue. Lee and Brandyberry (2003) argued that building, operating and maintaining an e-commerce platform is very costly, especially when the firm wants to provide reasonable response times and distribution facilities, build brand names and attract customers. Smith (2000) has also argued that the cost advantages of e-tailing could be offset by higher advertising, delivery and maintenance costs. For example, e-tailers need extra staff to operate an uninterrupted online environment to provide a reasonable response time; also, e-tailers require heavy marketing and advertising campaigns, especially the pure-players who do not have physical stores.

Agrawal (2001) argued that the existing delivery model works well for letters and flat packages but not for e-tailing's high volumes and wide variety of packages of different shapes and sizes. Therefore, quality of delivery is also a challenge. According to a survey conducted by a delivery management company, MetaPack (Anonymous 2005(a)), only 12% of online retailers (such as [www.apple.com.au](http://www.apple.com.au)) allow customers to specify a day for delivery, and only 20% offer a weekend delivery option, and 95% of online retailers do not offer guaranteed deliveries. This level of service quality would not meet customers' expectations (Sedlak 2000).

Choice of product is another considerable issue for e-tailing. Many studies have found that not all products are suited to online sales. Some product categories suitable for online selling include computer hardware and software, consumer electronics, support goods, office supplies, books and toys (Turban et al. 2004). As cited by Smith (2000), Boston Consulting Group data for US transactions showed that cloth and shoes are far less popular online, because the customer always wants to see and touch those products rather than merely look at online pictures. This issue was also raised by the latest CNNIC report released in July 2006, which suggested that books, videos and computer accessories are the top three products sold online.

A related issue is the customer's need for the physical shopping experience. As noted above, customers want to feel and try products such as clothes and shoes. White (2001) stated that shopping is a life activity in the United States. People enjoy walking around shops and the service provided by sales people. Also, many retail products are not basic requirements for daily life, and customers are buying them for self-gratification rather than to satisfy a need. In this case, the customer desires a tangible retail experience, with physical contact with the product and communication with other people, such as friends and sales people (Smith 2000). Dhlakia and Uusitalo (2002) showed that the lack of an in-store shopping experience is turning many consumers away from online shopping. Barlow (2004) argued that a consumer needs a multiple-sensory experience to build a full picture of a product, and this type of shopping experience is difficult to create online at the present time.

Another important issue in e-tailing is integration, especially for click-and-mortar retailers. Turban et al. (2004) pointed out that when traditional retailers establish a new marketing channel to sell online, channel conflict may occur. Such conflict may occur between the online and off-line departments of the same company and include marketing conflict, price conflict and staff conflict. For example, if a business is to promote a new product both on and offline simultaneously, the two departments will design a different marketing campaign and focus on a different target market - a situation known as marketing conflict. Agrawal (2001) also noted that achievement of a cost-effective and well-managed integration of existing systems with new systems and new technologies is one of the major challenges that online retailers face. A low level of integration between existing systems and new channels can cause increased costs and reduced productivity, and even damage a firm's brands.

Also, customers increasingly want online catalogues, stores and customer services to be integrated. For example, when a customer joins an online membership, they also hope that they can access customer service activities from other channels such as by telephone and in-store, suggesting that the internal information system should be wholly integrated with the business's e-commerce system. With a fully integrated system, customers would be able to order products online and pick them up at a physical store. Furr's.com, a successfully integrated retailer, established complete integration between new systems and existing operations, which has provided the business with a strong competitive advantage (Anonymous 1999(a)). However, according to Fluss (2001), 72% of e-tailers have not integrated their phone and web servicing channels.

### 2.3 Retailing industry and retailing in China

This section presents the existing body of knowledge on retailing and the current retailing environment in China. A definition of retailing will be introduced, which is followed by a description of the types of retailing carried out in China. Following this discussion, the future trends of retailing in China are presented. This section concludes with an analysis of China's retailing industry.

#### 2.3.1 Definition of retailing

There are various definitions of retailing. Mason et al. (1994) provided a comprehensive classification of retailing and suggested that retailing can be described in several ways: (1) in terms of activities; (2) as part of a process; (3) as having structure; and (4) as an intermediary in a channel of distribution. Berman (2005) argued that retailing could be viewed from multiple perspectives, including tangible and intangible items, and a distribution channel. Table 2.6 presents various definitions based on categories of retailing from the classification provided by Mason et al. (1994). For example, Berman (2005) and Dunne (2005) describe retailing as an intermediary in a channel of distribution, and Ogden (2005) defines retailing as the process of purchasing and selling goods and services to the consumer.

**Table 2.6: Classification of retailing definitions**

Categories	Definitions
In terms of activities	Kotler (2003, p.535): 'retailing includes all the activities involved in selling goods or services directly to final consumers for personal non-business use.'
As part of a process	Ogden (2005, p.6): 'the sale of goods or commodities in small quantities directly to consumers.'
As an intermediary in a channel of distribution	Dunne (200, p.3): 'retailing consists of the final activities and steps needed to place merchandise made elsewhere into the hands of the consumer or to provide services to the consumer.' Berman (2005, p.4): 'retailing is the last stage in the distribution process.'

Source: Developed for this research based on Mason et al. (1994)

### **2.3.2 Types of retailing**

With the development of both technology and society, the retail model is changing rapidly. To help marketers understand competition and the changes that occur in retailing, the various types of retail stores have been discussed in the literature. However, even though no simple, acceptable method of classification has been proposed, some common classifications are discussed below.

Berman (2005) examined retailing from three perspectives: ownership, store-based strategy mix, and non-store-based and non-traditional retailing, with each perspective covering many retail formats. Six types of retailing can be included under the perspective of ownership: independents, chains, franchises, leased departments, vertical marketing systems and consumer cooperatives. Under the 'store-based retailing strategy mix', two sub-categories were developed, namely food-oriented retailers and general merchandise retailers. Food-oriented retailers include convenience stores, conventional supermarkets, food-based superstores, combination stores, box stores, and warehouses. General merchandise retailers can be grouped into eight retail formats: specialty stores, variety stores, traditional department stores, full-line discount stores, off-price chains, factory outlets, membership clubs, and flea markets. The third category, 'non-store-based and non-traditional retailing' covers the more modern retailing formats, such as direct marketing, direct selling, vending machines, e-tailing, and other emerging retail formats.

Dunne (2005) suggested the four most popular schemes used today. The first is based on the number of outlets each firm operates, for example, a Chinese retail store may have 11 or more outlets. One disadvantage of this method is that it addresses only those retailers operating in the traditional brick-and mortar mode, and ignores many non-traditional retailers such as e-tailers, because many e-tailers do not have any physical stores. Retailers can also be classified in terms of their gross margin percentages and rates of inventory turnover. All retailers are classified into four categories: low-margin/low-turnover, low-margin/high-turnover, high-margin/low-turnover, and high-margin/high-turnover. This method is also unsuitable to service retailers and some e-tailers, which have no inventory.

Location is also one of the most important factors for retailing, especially for traditional brick-and-mortar operations. Locations include central business districts, or a mall or

strip shopping centre. However, over the last decade, retailers have become aware of business opportunities in new, non-traditional retail areas, therefore this classification method also does not take account of new retailing models, such as e-tailing.

Retailers also can be classified by sales volume or number of employees. This is because the operating performance of retailers is related to their size. Similarly to the classification of location, with the development of technology this classification method may not be suitable in the future, especially when comparing a traditional retailer and an e-tailer. For example, Wal-Mart cannot compare to Amazon.com in terms of the number of employees.

Different countries also have different classification methods. The United States defines retailing types based on the Standard Industrial Classification (SIC), which was developed in the 1930s. The SIC system gives codes to various industries and different business types. For instance, codes in the 50s are for the retailing industry. In line with its internationalisation effort, the United States is adopting a new system of classification, called the North American Industrial Classification System (NAICS). The new system provides six-digit NAICS codes for newer industries and reorganises the categories on a production or process-oriented basis, and includes more details than the old four-digit SIC system.

China is the most attractive retailing market in the world in terms of population and GDP growth rate. According to Samiee et al. (2004), retail formats are officially categorised into eight groups by the Chinese government. As Table 2.7 shows, these classifications include convenience stores, department stores, general merchandise stores, professional stores, shopping centres, specialty stores, supermarkets, and warehouse-style supermarkets (Luk & Yip 2003). Generally, these classifications are mainly based on the ‘store-based retailing strategy mix’ presented by Berman (2005).

**Table 2.7: Classification of retail formats in China**

Type of business	Location	Mode of operation
Department stores	CBD and transportation hubs	Counter sales and self-service
Supermarkets	Residential areas, transportation hubs, commercial districts	Self-service

General merchandise stores	Suburbs, residential areas, transportation hubs	Self-service
Convenience stores	Residential areas; along major trunk lines; near railway stations, hospitals, entertainment facilities, government departments, public institutions, enterprises	Mainly self-service
Professional stores	CBD, shopping street, within department stores and shopping centres	Fixed price, open shelf
Speciality stores	CBD, shopping street, within department stores and shopping centres	Fixed price, open shelf
Shopping centers	CBD and transportation hubs in suburbs	Unified planning by project manager with shops operating independently
Warehouse-style supermarket	Transportation hubs, suburbs	Warehouse-style product display and self-service

Source: Samiie et al. (2004)

### 2.3.3 Trends in retailing

The retail marketplace is changing rapidly. It is therefore important to monitor the trends and make accurate predictions in order to take advantage of the changes and translate them into profitable investments, e.g. in making decisions on issues such as location, technology, and retail models. Previous studies discussed the trends of retailing from different perspectives (Anonymous 1997; ATKEARNEY 2006; Cetron & Davies 2003; GVA Grimley 2005; Ogden 2005). For example, the World Future Society (cited in Cetron & Davies 2003) reported that the future trends of retailing focus on economic, environmental and societal issues, indicating that with economic, environmental and social changes, the retail industry will also change to adapt to the new macro-environment. This section presents the major retailing trends predicted for the 21st century.

#### New retailing format

Generally, contemporary retailers work on improving their efficiency and effectiveness, to better serve their customers. The supercentre is a typical new retailing format designed to match customer demand. The supercentre mainly includes supermarkets and discount department stores. Customers can buy virtually all the products they want at one location, saving time and money. This is supported by the study of GVA Grimley (2005), which suggested that one size rarely fits all in today's world. Customers are more willing to go to one place that provides them with the retail format and the products they want. Non-store retailing is another new retailing format becoming popular (Samiee et al. 2004). With the fast development of technology coupled with changing lifestyles, retailers have



started to develop non-store retailing. Direct selling, catalogue sales and e-tailing are three examples of non-store retailing. Ogden (2005) argued that e-tailing will grow continually and become increasingly popular. Kurt Salmon Associates (1997) expected that by the year 2005, non-store retailing will account for 55% of total GAF (general merchandise, apparel and furniture) sales in the United States. As the president of the Shanghai Brilliance Group, Xue (2006) pointed out that e-commerce would be the future trend for the company and for the Chinese retail industry in the 21<sup>st</sup> century.

### **Global competition in the retail industry**

Global retailers are seeking new markets in which to operate their businesses. Since 2001, more than 49 retailers have entered about 90 new markets, and more than 30 companies have followed those primary entrants in 2005 alone (ATKEARNEY 2006). Due to market saturation, many retailers operate on foreign shores to seek higher profits and larger market shares. For example, in 2003 Wal-Mart currently has 11 units in Argentina, 22 in Brazil, 213 in Canada, 26 in China, 94 in Germany, 15 in South Korea, 592 in Mexico, 52 in Puerto Rico, and 258 in the United Kingdom (Wal-Mart 2003). From geographical and population perspectives, Asia seems to be the most promising market in the world, currently playing a very important role in the global retail market. According to ATKEARNEY (2006), Asia is the hottest potential market, and Asian countries hold eight of the top 20 market positions on the Global Retail Development Index (GRDI). The retail sales of this region represent 32% of global retail sales. And surprisingly, modern retailers have tapped into just 28% of the region compared with 42% of the markets in Eastern Europe. This shows that there are still a lot of potential markets for modern retailers in the Asian region, and the majority of retailers in this region are small sized companies. All these statistics shows that Asia is the most attractive marketplace for global retailers.

### **Demographic change**

Demographic change is another trend in retailing, and includes population, age and gender. The world's population is growing, and the lifespan of people in developed countries is increasing. According to Claritas Inc., the United States' population increased by 8.3%, nearly 21 million people, from 1990 to 1998 (Anonymous 1999(b)). So the healthcare section of the retailing industry is growing accordingly, especially for the newborn and the elderly. China has a similar problem, but with specific results. After

the Second World War, the Chinese population increased rapidly, and reached 1.3 billion. The baby-boomers are getting old now; and due to the one-child policy, aging people are become the majority of the population (Anonymous 1999(b)). Therefore, the retail market of healthcare for aging people has huge potential. Ogden (2005) stated that in addition to age, gender is another demographic issue for the retail industry. As more women enter the workforce and take up higher-level positions, there is an increasing demand for childcare or family care products and services.

### **Development of private labels**

Retailers need to build their own brands to survive in the next decade (Mills 2005). Developing a private label could help retailers distinguish themselves from competitors, and as private label products have a lower cost than others, they are useful to reach customers seeking lower prices, thereby boosting profit margins (Dunne 2005). However, the Shanghai Brilliance Group (2005) suggested that private labelling is a double-edged sword. Retailers face pressure from inventory while they enjoy the differentiation and high profit margins and implement a variety of strategies to develop their own brands and build a strong brand image. Also, private brands could potentially segment retail customers. For instance, Australian retailer Woolworths has developed its own brand, 'Home Brand', for price-sensitive customers. Its competitor, Coles, also established its own brand, 'Saving', to fight back. China's retailers are beginning to develop private labels, e.g. Lian Hua Supermarket has proposed its own label, Lian Hua.

### **Customer service**

Due to technology and competition in the contemporary retailing environment, customers have become more powerful than ever before. From an economic perspective, the retailing marketplace is changing from a seller's market to a buyer's market, as more retailers are competing for the same market. Therefore, as customers are gaining more power in the retail market, retailers need to increase their customer focus, and become more sensitive to the demands of their customers (Anonymous 1999(b)). With advances in digital search technologies, customers can easily search for information on products and compare prices. Accordingly, these developments have forced retailers to focus on customer service. Many retailers, such as Toys-R-Us and Best Buy, have made their stores more consumer-friendly by widening the aisles and regrouping the merchandise on shelves (Anonymous 1999(b)). Customer service is important for all retailers.

### 2.3.4 Retail industry in China

#### 2.3.4.1 History of the Chinese retail industry

As China continues to make great achievements in economic reform and enters the WTO, China's retail industry is becoming the largest emerging retail opportunity in the world, in terms of the population and the boom in the middle class. Figure 2.15 shows the development of GDP and retail sales in China from 2001 to 2010. It is estimated that retail sales will reach US\$754 billion in China in 2006, and will further increase to an enormous US\$2.4 trillion by 2020 (ATKEARNEY 2005; The Economist 2006).

**Figure 2.15: GDP and retail market growth in China**



Source: ATKEARNEY (2005)

According to Figure 2.15, China's GDP shows an impressive growth rate but the growth of the retail market is even faster. To 2010, retail sales will account for almost 50% of total GDP in China. Surprisingly, before China began its economic reform, the story was totally different.

Under the planned economy, China's retail industry grew slowly from 1949 to the 1970s. According to East Asian Executive Reports (Anonymous 1995), at that time distributors in China existed only as extensions of the manufactures. All goods had to be submitted to the government, who allocated them to the 'work unit' to distribute to the workers, which meant that most products were distributed to the consumers through the organisation they

were working for. Customers could not choose what they wanted. All goods were produced and could only be purchased with special coupons and/or ration cards issued by the government. Until the late 1970s, there were only three government approved kinds of retail: bai huo (multi-story department store), za huo (neighbourhood general store), and zao wan menshi bu (convenience store). Prices were also set by the government, and product lines were cobbled together based on availability, not on consumer demand. Also, there was no competition as a result of the lack of stand-alone distribution.

At the initiation of economic reforms in the late 1970s and early 1980s, retail sales in China changed dramatically and increased by approximately 13.9% per year. State-owned retailers had the right to purchase goods at their own discretion and more food items and consumer goods were available in those stores. In the same period, department stores were developed rapidly. By 1985, there were 10.7 million retailing stores (CIA World Factbook 1987) and most new retail stores were privately owned, whereas privately owned stores had been totally forbidden in China before the economic reforms. State-owned retailers started to either lease or turn their businesses over to privately owned retailers, and more and more private retailers rented counters inside state-owned retail outlets, such as department stores. The market share of state-owned retailers dropped from 90.3% in 1976 to 40.5% in 1985, due to the boom in private retailing (CIA World Factbook 1987), and those market shares were dispersed to many small retailers. This historical process produced a different retailing system to that in western countries, e.g. no national retailing brand such as Wal-Mart in the United States, was built in China. Most of China's retailing brands are localised, such as Wang Fujing in Beijing, and Shanghai No.1 Department Store in Shanghai (The Economist 2006). For example, Shanghai No.1 Department Store only focuses on their local market and would not open a subsidiary in another city, and the majority of Shanghai residents would not recognise retailers from other cities, such as Wang Fujing in Beijing.

From 1987, more and more retailing establishments were located in both downtown commercial districts and in residential areas, including state, collective, and private businesses or vendors (CIA World Factbook 1987). In residential areas, retailing stores are able to provide for almost all the daily needs of their customers, but department stores in the Central Business Districts (CBDs) offer a wider range of products as well as

numerous specialty shops that may not be available in retail stores in residential areas, for instance, sports products, cameras and musical instruments.

Since the mid-1990s, the revenue of department stores started to drop due to excessive supply. New retail formats appeared, such as supermarkets, franchises, convenience stores, and warehouses. According to the National Statistics Bureau (2003), by 2001, there were 399 thousand registered retailers in China; 16.5% of them were department stores, 2.1% supermarkets, and 33% speciality stores.

With the growth of the middle class, many more modern retail formats emerged in China. One of them is the shopping centre. In the 20th century, this retail model made the most successful use of land, real estate, and the retail business concept (Beyard & O'Mara 1999) and was launched in the United States and Canadian cities over a period of 40 years, from the 1950s to the late 1980s. The shopping centre does not only serve as a shopping destination, but also offers a wide range of dining, entertainment and recreational experiences (Wang et al. 2006). China did not have real shopping centres until the mid-1990s. Since then, more and more shopping centres were developed, especially in large cities such as Beijing, Shanghai, Guanzhou and Shenzhen (Li 2004). Most of the new shopping centres were invested in by foreign investors, particularly from south-east Asia.

However, due to the government protection policy, many international retailers have only limited businesses in China. Until 2001, 99.6% of retailers in China were locally owned and only 0.4% were foreign retailers. This balance has changed since China became a formal member of the WTO. According to the contract between the WTO and the People's Republic of China, all restrictions in China's retail distribution system (wholesaling, retailing, franchising, and commissions for agency services) had to be eliminated by the end of 2004. This means that since 2004, foreign retailers have been able to operate their businesses in China with more freedom (ONDA 2004). This change forced the stakeholders in China's distribution industry, including all local retailers, to improve their capability and competence, in order to compete with giant global retailers.

#### **2.3.4.2 Foreign retailers in China**

The National Retail Federation (cited in ONDA 2004) suggested that the Chinese market will be the next global retailing trend because of the country's huge growth and the

elimination of regulations (ONDA 2004). China is now the seventh-largest economy in the world, has the largest population in the world and a booming middle class (Ernst & Young 2005; The Economist 2006). Therefore more international retailers are entering China and Samiee (2004) outlined three motivational forces for the entry of international retailers into the Chinese market. Firstly, income rates are increasing rapidly in China, especially since the country has virtually recovered from the economic crisis of 1997. Therefore the discretionary spending of the Chinese has increased.

Secondly, retail market shares in China are largely fragmented. Fortune (cited by Samiee 2004) noted that the total sales of the top four retailers in China were just over US\$2057 million in 2000. According to Xinhua Net (2003), China's National Bureau also reports that the revenue of 76.1% of the retailers in China is less than RMB1 million and only 1.9% of retailers had over RMB10 million sales revenue in 2003. A recent study by Ernst & Young (2005) concluded that the top six retailers account for only one-fifth of national consumption. These figures demonstrate that the majority of the retailing market share is divided amongst many small retailers and that there are very few large retailers. Therefore international retailers face less competition from local Chinese retailers, and it is easier for them to achieve market expansion and penetration.

Another vital reason for the increased foreign retail presence in China is the rapid penetration and growth of the internet and the resulting development of e-commerce in China, as discussed previously. China has the second largest number of internet users in the world, with potential for further growth.

As indicated by the China National Statistics Bureau (Xinhua Net 2003), most foreign retailers entered the Chinese market after 1997. By 2001, 5234 stores had been established in China by foreign retailers. The format of the retail industry focused on the hypermarket, warehouse and membership store. Most of these retail stores were concentrated in big cities, such as Shanghai, Beijing, Guangzhou and Shenzheng.

While foreign retailers enjoyed the huge potential market in China, for a long period they suffered from Chinese industry policies. To protect local enterprises, especially state-owned enterprises, the Chinese government issued a series of regulations and tightened the rules to restrict the development of international retailers in China. Therefore, access

to the Chinese market is restricted for foreign investors (Buckman 2003). At the present time, international retailers rely heavily on one of seven models for entering the Chinese market (Samiee 2004). These seven models are: (1) manufacturer-run shops; (2) retail shops as part of hotels or foreign residential facilities; (3) retail stores in shopping complexes; (4) management companies; (5) joint construction projects; (6) joint operations and licensing agreements; (7) single licenses, as well as other miscellaneous methods. These models are depicted in Table 2.8.

**Table 2.8: Entry models for foreign retailers in China**

<b>Entry model</b>	<b>Explanation</b>
Manufacturer-run shops	Foreign manufacturers who establish joint ventures in China and sell in department stores or direct retail stores. Example: Baleno.
Retail shops as part of hotels or foreign residential facilities	Small shops in hotels or residential facilities for foreigners. Example: First Store of Isetan
Retail stores as tenants of a shopping complex	Leasing an area inside a shopping mall or department store. Example: second department store of Isetan
Management companies	Establishing joint venture management companies with Chinese partners by using their own name. Example: Carrefour
Joint construction projects	Access by international retailers to China's market through this model requires senior staff member from the local developer to join the management board of the retail establishment.
Joint operations and licensing agreements	YaoHan adopted this strategy to set its outlet with Shanghai No.1 Department Store in China.
Single licenses	Foreign retailers such as Wal-Mart obtained approval either from the state government or from local government which was in principle valid for the opening of only one retail outlet.
Miscellaneous	Some foreign retailers, particularly those from Hong Kong, took advantage of loopholes in the existing regulations on retail joint ventures to establish retail outlets in China through special arrangements. Strictly speaking, these approaches are considered to be illegal.

Source: Samiee et al. (2004)

As indicated above, those models were the only options for foreign retailers to enter the Chinese market prior to 2004. However, this situation has changed since China entered the WTO. According to the agreement between China and the WTO, China had to lift all restrictions by the end of 2004. Table 2.9 summarises the important milestones for the

Chinese retail industry after China's entry to the WTO. Many new regulations have been established, and allow international retailers to have more freedom to operate their businesses than ever before. For example, from December 2004, wholly foreign-owned enterprises are permitted in retail, wholesale and trade, and international retailers can select the location independently. The capital limit for both wholesale and retail has also been dropped, and the actual application procedure for set-up has been simplified (The Economist 2004). The following table provides a timetable of the WTO influences.

**Table 2.9: Major milestones in the retail industry after China's entry to the WTO**

		<b>Retail industry</b>
Dec 2001	Immediately after joining the WTO	<ul style="list-style-type: none"> <li>• Enabling provision of related services such as follow-up service after sale</li> </ul>
Dec 2003	Within two years of joining the WTO	<ul style="list-style-type: none"> <li>• Opening all provincial cities</li> <li>• Allowing majority investment by foreign-capital companies</li> <li>• Relaxing volume restrictions</li> </ul>
Dec 2004	Within three years of joining the WTO	<ul style="list-style-type: none"> <li>• Planning to abolish 'volume restrictions', 'regional restrictions' and 'investment restrictions'</li> <li>• Planning to abolish all restrictions within three years concerning wholesale and retail businesses that are not related to franchises and outlets</li> <li>• Planning to grant trading rights to companies meeting prescribed conditions</li> </ul>

Source: Adapted from ONDA (2004)

The year 2005 was the first year in which China fully opened its retail market to foreign businesses. China's Ministry of Commerce approved 1027 investments by foreign retailers and wholesalers to 2005, and these investments injected US\$1.9 billion direct foreign investment into China in 2005 (Xu 2006). This number, 1027, is equivalent to the total number of approved foreign retailers' and wholesalers' investments of the previous 12 years from 1993 to 2004; and 61% of new investments were for wholly foreign-owned enterprises. Besides opening new wholly foreign-owned stores, foreign retailers are trying to expand their retail network through a series of mergers and acquisitions. Such merger and acquisition activities allow foreign retailers to have a head-start over local competitors, or allow them to catch up after a late entry. By the end of 2005, 80% of the world biggest retailers had entered China; causing more intense competition in China's retail industry (Anonymous 2006 (b)).



### **2.3.4.3 China's local retailers**

After the opening of the Chinese retail market in 2004 and without protective government regulations, international retailers can easily defeat local Chinese retailers, due to their size and capability. There are only two choices left to retailers in China: grow or die (Brilliance Group 2005).

In order to face the huge competition from foreign retailers, major local retailers are trying to match their competitors in terms of size and capacity (Xu 2006). A shortcut to this end is through mergers and acquisitions, which could improve the position of local retailers in the following respects (Anonymous 2006(a); The Economist 2006):

- Building scale and market share outside their regional strongholds.  
Acquisition and consolidation will allow retailers to expand their businesses beyond the domestic markets.
- Snapping up prime locations.  
Excellent business locations are the basis of development and are critical to the survival of retailers. However primary locations are limited. Mergers and acquisitions are effective methods to obtain such locations, even though the merger price is sometimes much higher than the real value.
- Increasing income through leasing space to suppliers for in-store displays.  
In China, suppliers have to pay *Jing chang fei* (participation fees) to put their products on retailers' shelves. Retailers also lease space for in-store displays and help pay for promotions. This means that if the retailers can attract more suppliers, their monthly fixed income would increase, with very low risk.
- Boosting their bargaining power with suppliers.  
Merger and acquisition activities strengthen retailers and place them in better bargaining positions in their negotiations with suppliers.

The government also plays a very important role in merger and acquisition activities (ONDA 2004). Since the end of 2004, when the Chinese government has no longer been able to limit foreign retailers because of WTO contracts, the government has been

working to enhance the competence of local Chinese retailers. Government-planned mergers and acquisitions have been enacted among major domestic distribution companies, especially in the big cities such as Shanghai (Anonymous 2006(a)). According to the Ministry of Commerce (Xu 2006), 20 of China's retail companies were selected to form domestic giants to face the competition from foreign retailers and most of them are state-owned or ex-state-owned companies.

**Table 2.10: Top 10 retailers in China**

	Headquarters	Sales		Stores	
		yuan, bn	growth, %	number	growth, %
Brilliance Group	China	72.1	7	6,345	15
Gome	China	49.8	109	537	100
Suning	China	39.7	80	363	88
Vanguard	Hong Kong	23.0	26	2,133	20
Wumart	China	19.1	44	659	8
Carrefour China	France	17.4	25	73	26
Shanghai Yongle Electrical	China	15.2	40	255	81
Trust-Mart	Taiwan	13.2	10	96	9
Parkson China	Malaysia	11	49	36	20
Lotus	Thailand	10.1	36	61	49
Wal-Mart China	US	9.9	31	60	30
B&Q China	UK	5.2	156	48	129

Source: The Economist 2006

Table 2.10 presents the top 10 retailers in China in 2005. Recently, Hong Kong-listed Gome, the second largest retailer in China, offered US\$680 million to buy Shanghai Yongle, which is the seventh biggest retailer in China, making Gome's market share rise more than 10%. In May 2006, Gome also bought Jiangsu Five Star appliances, China's fourth biggest appliance chain (The Economist 2006). These merger and acquisition activities strengthened Gome's position and enlarged its market share, enhancing its capabilities to compete with foreign rivals, such as America's Best Buy, one of the most famous American appliance chains.

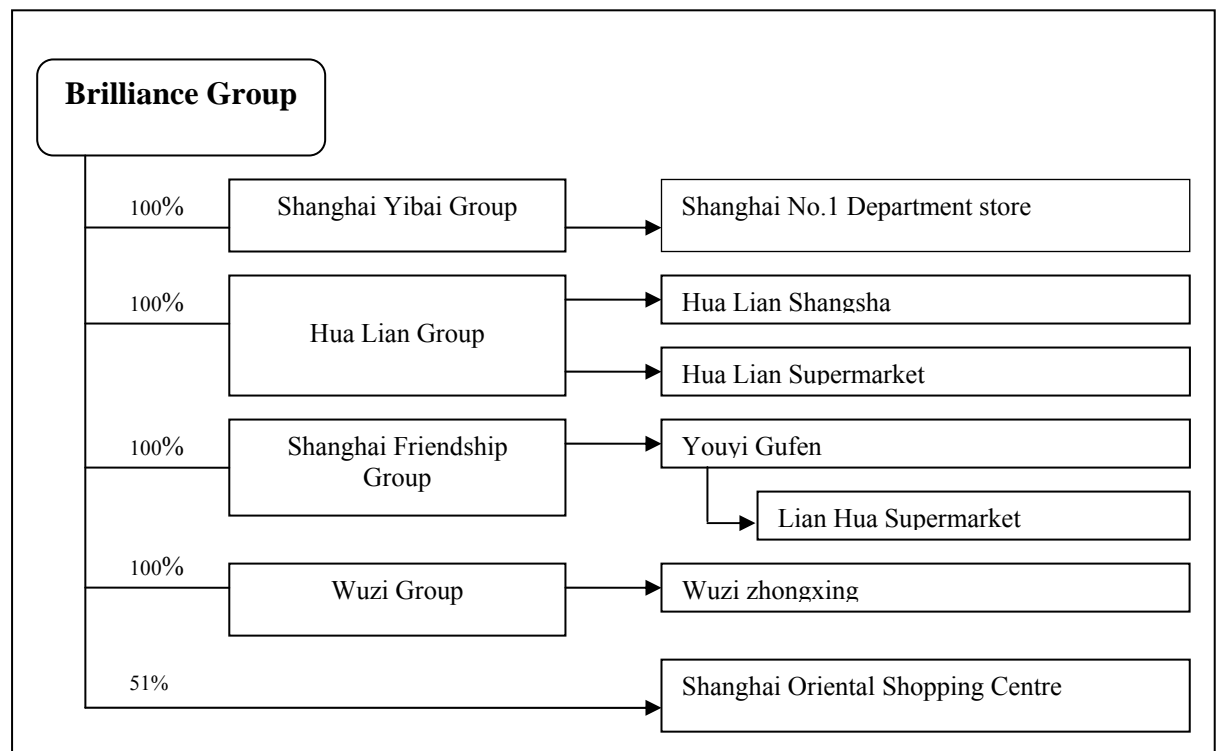
The Shanghai Brilliance Group is another typical example of merger and acquisition activities. The Brilliance Group was established in May 2003, and it is the first retail business created by a government-led consolidation. Shanghai No.1 Group Co, Hua Lian Group Co, Shanghai Friendship Group Co and Shanghai Materials Group Co were integrated into the Shanghai Brilliance Group, which became China's largest retailer. All

these mergers and acquisitions show that the Shanghai Brilliance Group is looking beyond the Shanghai market and is aiming at the national and international markets. As the president of the Group, Xue (2006) stated:

*‘The purpose of the Brilliance Group is to become the ‘air-carrier’ in China’s distribution industry to compete with foreign retailers; we should take responsibility, and this is the assignment from the Shanghai government’.*

Also supported by the Brilliance Group (2005), many authors suggested and confirmed the benefit from mergers and acquisitions. Figure 2.16 presents the formation of the Shanghai Brilliance Group. As shown, the Brilliance Group was formed by the merger by four groups and one shopping centre. After the integration, the four groups were totally controlled by the Brilliance Group, and it also took the majority of shares of the Shanghai Oriental Shopping Centre.

**Figure 2.16: Formation of the Shanghai Brilliance Group**



Source: Adapted from ONDA (2004)

Since its establishment, the Shanghai Brilliance Group has gained several advantages (Xue 2006):

- Well-developed base in terms of customers, brand reputation, location, industry experience and so forth. In 2005, the sales revenue reached RMB1.385 trillion and RMB0.85 billion total profit, and the Group operated 7185 stores with a total of 4.67 million square meters.
- Industries and businesses, including supermarkets, department stores, international trade, logistics, and real estate. They also plan to develop new businesses, such as e-commerce.
- Resources (location and brand). The Brilliance Group has various retail formats in the CBD and sub-CBDs of Shanghai. It also has many famous brands, including the Lian Hua Supermarket, Shanghai No.1 Department Store, and Oriental Shopping Centre (Xuhui headquarters), Hua Lian Supermarket, Wuliangcai, and so forth.
- Good management team and experienced employees. The Brilliance Group management team has extensive experience in the retail industry. Most of the managers and employees have been working in retail for years.

Merger and acquisition activities give Chinese retailers a quick way to put themselves into a position to compete with foreign retail giants. However, researchers and some internal studies (Brilliance Group 2005; Xu 2006) warn that without a well-integrated process, simply developing large retail operations could be very risky. China's retailers also face the same problem in the integration process. For example, the Shanghai Brilliance Group failed to merge with Dalian Dashang Group Co. Ltd due to a poor integration process. One important reason for the failure was that the subsidiaries of the Brilliance Group are a very diverse group of businesses, with different histories, business models, suppliers, cultures, management styles, information systems, and so forth. For successful mergers with another company, all the subsidiary companies or Groups should be fully integrated into one organisational structure.

In addition to mergers and acquisitions, information technology is a strategy taken into consideration by China's retailers. Some reports (Anonymous 2006(a); Xinhua Net 2003) have stated that the development of information technologies will change the business model and management style of China's retail industry. As an application of IT, e-commerce will develop quickly in the future. Fourteen out of 23 middle and senior level managers in the Brilliance Group indicated that IT and e-commerce should be the development trend in the Shanghai Brilliance Group (Brilliance Group 2005). As senior analyst, Ms Tong (IDC 2006) indicated that due to huge competition in the retail industry, more retailers are starting to focus on an IT solution. Limited sources (CCID 2002) stated that Chinese firms have realised the importance of the internet and are creating their own websites. However, few of these websites have been implemented properly.

Currently, most of the top retailers in China are state-owned enterprises or have a government background and since the 1990s these firms have been investing heavily in upgrading their computer systems. However, information systems only began a few years ago, and most firms have not started to build their e-commerce platform (Tan & Ouyang 2004). This indicates that IT is still developing slowly in China's retail industry. Statistics (Anonymous 2005(b)) show that in 2003 the total IT investment in China's retail industry was US\$0.8 billion, while Japanese retailers invested US\$5.187 billion in IT, which is six times more than China. The IT investment in China's retail industry is less than 0.2% of total sales revenue, while the ratio in most international giant retailers is over 2% of total sales revenue. Some reasons for this have been mentioned by researchers (Frank 2004; Gunasekaran et al. 2005), and include the senior management's short-term focus on return on investment, and insufficient capital.

Accordingly, retailers in China are implementing merger and acquisition activities to obtain the capability to compete with giant foreign retailers, especially the state-owned retailers. On the other hand, some retailers have started to realise the benefits of information technology and are reconsidering its role in the firm.

## **2.4 Success factors for E-tailing**

This section reviews the relevant literature on the factors leading to success in e-commerce.

### **2.4.1 Overview of success factors**

The success factors of IS are extremely important to the IS management and IS investment (Delone and Mclean 2003). Many studies have investigated the success of IS, but there is a lack of a widely-accepted model to date. In 1992 Delone and Mclean (1992; 2003) proposed a classic IS success model based on 300 articles in top journals, and they updated their model in 2003 through reviewing more than 100 articles written since 1993. They added 'service quality' to the original model, which includes system quality, information quality, use, user satisfaction, individual impact, and organisational impact. This model is based on the review of over 400 articles in the major journals, such as Information Systems Research, Journal of Management Information Systems, and MIS Quarterly, and the wide use of the model shows that it is a comprehensive framework for IS research. Many other researchers (Rai et al. 2002; Seddon & Kiew 1994) have tested the model or conducted further research based on it. Molla and Licker (2001) provided an integrated e-commerce success model which specifically focuses on e-commerce systems. Their model is mainly based on Delone & Mclean's (1992) information system success model, in conjunction with other studies (Ba & Pavlou 2002; Chen et al. 2004; Davis 1989; Pavlou 2003; Shankar et al. 2002). The Molla and Licker e-commerce success model includes e-commerce system quality, content quality, trust, support and service, use, and e-commerce customer satisfaction.

Other studies (Barnes et al. 2004; Gibbs 2002; Leonard et al. 2003; Sabherwal et al. 2004; Lu et al. 2001) have investigated the factors affecting the adoption of e-commerce from different perspectives, e.g. the external environment, including government policy and economic issues, organisational factors such as investment, condition of information systems, and so forth, or age and gender. Yet other researchers (Gibbs et al. 2002; Molla 2004) have discussed the influence of the external environment and discovered some external factors, such as government policy, market pressure, culture and IT infrastructure. Organisational factors are another important aspect which have been examined in relation to the success of e-commerce (Molla 2004; Teo & Ang 1999; Wade and Nevo 2005), e.g. Bai (2003) found that organisational factors such as group and task

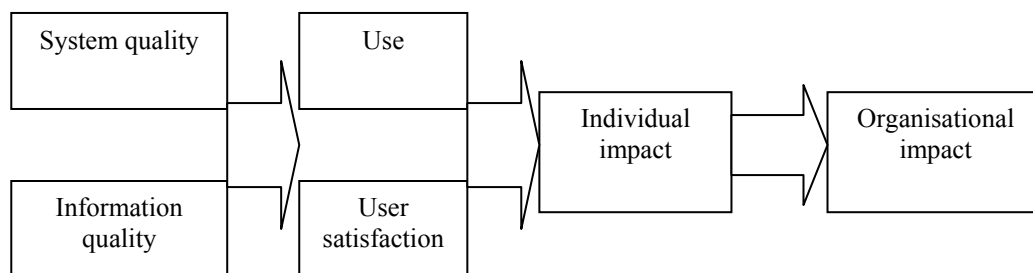
coordination and IS maturity influence the quality of the IS/IT strategic planning process. Other researchers (Dillon et al. 2005; Gibbs et al. 2002; Ratchford, Talukdar & Lee 2001; Teo 2001) found that consumer characteristics such as age, gender, innovativeness, education, income and so forth, also affect e-commerce success.

In summary, all the factors bearing an e-commerce system, i.e. organisation, senior management, e-commerce strategies, the external environment, and consumer characteristics have an impact on the success of e-commerce.

### 2.4.2 E-commerce system success models

Delone and McLean (1992) defined three levels of success: technical success (system quality), semantic success (information quality), and effectiveness success (use, user satisfaction, individual impact and organisational impact), as shown in Figure 2.17.

**Figure 2.17: D& M IS success model**

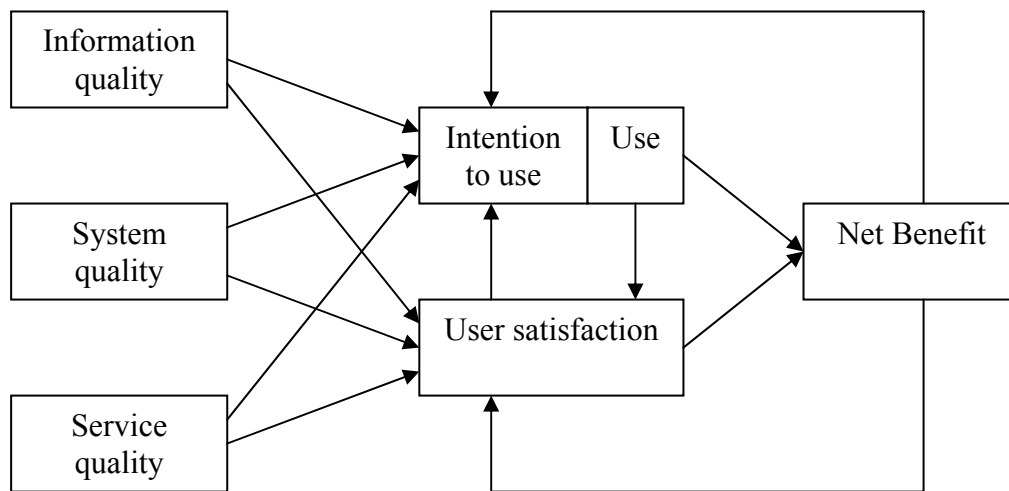


Source: Delone and McLean (1992)

Many previous studies (Etezadi-Amoli et al. 1996; Goodhue 1995; Seddon & Kiew 1994; Seddon 1997; Teo & Wong 1998; Wixom & Watson 2001) have tested this model, and some links between have been found. Having been validated by subsequent research, this model has been comprehensively used in the IS research field. In 2003, Delone and McLean (2003) updated their model. Figure 2.18 shows the updated information system success model. Based on other researchers' findings (Kettinger & Lee 1995; Li 1997; Wilkin 1999), 'service quality' was added to the model, due to the fact that "IS effectiveness can be mismeasured if a measure of IS service quality is not included in the assessment package" (Pitt et al. 1995 p173). This is because IS organisations are not only information providers, but also play a role as service providers. Instead of the

dependent variables, ‘individual impact and organisational impact’, ‘net benefit’ has been used as a dependent variable due to too many ‘impacts’ in a variety of contexts, such as the impact of work group impact, the impact of society, and consumer impact (Delone and McLean 2003).

**Figure 2.18: Updated D&M IS Success Model**

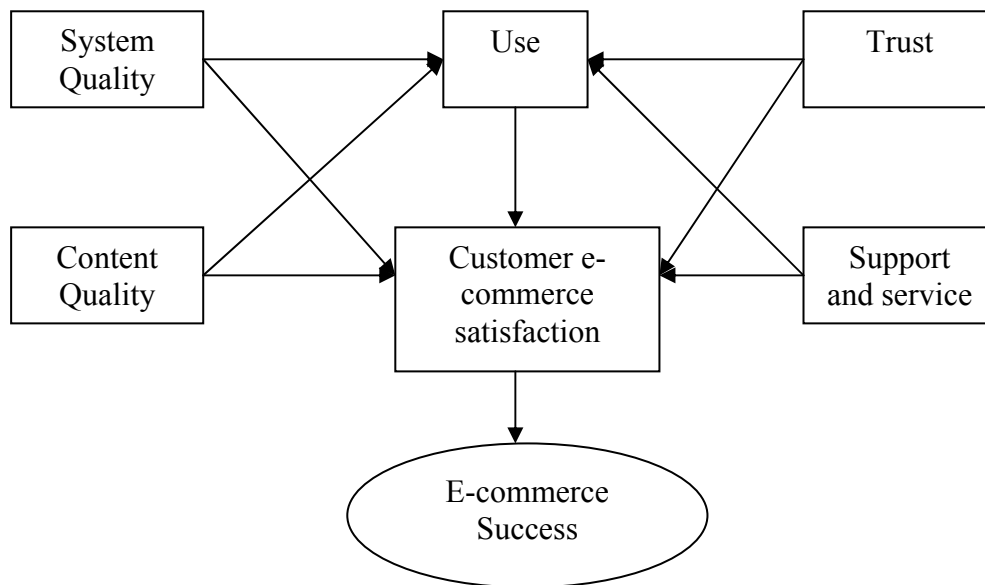


Source: Delone and McLean (2003)

The Delone and McLean model can also be used to measure the effectiveness and value of an e-commerce system, as e-commerce is a form of information systems. Many studies (Madeja & Schoder 2003; Roth 2000) have discussed the measurement of effective e-commerce based on system quality, content/information quality, and service quality. Due to the nature of the virtual environment and the characteristics of E-commerce, Molla & Licker (2001) refined the Delone and McLean model (Figure 2.19), and re-categorised the measurements into four independent components include: system quality, content quality, support and service, and trust. The importance of Trust is supported by other researchers (i.e., Ba & Pavlou 2002; Gefen et al. 2003; Pavlou 2003; Wong et al. 2005).



**Figure 2.19: E-commerce success model**



Source: Molla and Licker 2001

As noted by Molla and Licker (2001), an e-commerce system has additional constructs which are not captured by traditional measurements of the quality of information and information systems, such as 24-hour availability, stability of software and hardware, page loading speed, accessibility, up-to-date accuracy, comprehensiveness, understandability and so forth. Trust and service are also important components of e-commerce systems, as suggested by Molla and Licker (2001). The following section discusses the factors of e-commerce system measurements, based on the components of Molla and Licker's (2001) e-commerce success model.

### **2.4.3 E-commerce system measurement**

#### **2.4.3.1 System quality**

System quality measures “the desired characteristics of an e-commerce system” (Delone & Mclean 2003, p. 24), and has been discussed by many researchers (Chen et al. 2004; Delone & McLean 2004; Molla & Licker 2001; Sabherwal et al. 2004). Findings from researchers such as Chiger (1997), Nielsen (1998) and Lohse and Spiller (1998(a)) pointed out that poor quality website systems will have a negative influence on the customers’ online shopping experience and customer satisfaction with the site. Many factors in this component of e-commerce success have been identified in earlier research. This section discusses those factors in detail, according to the relevant research.

Numerous variables in the category of ‘system quality’ have emerged from past studies (Delone & McLean 1992; Han & Noh 1999; Limayem et al. 2000; Molla & Licker 2001; Turban & Gherke 2000). Those variables include response time, ease-of-use, uninterrupted availability, accessibility, web page loading speed, and website navigation system. For example, Horsti (2005) noted that ease-of-use is one of the most important factors for an e-commerce system. This factor was also seen as one of the success measurements in Delone and McLean’s IS success model (Delone & McLean 2003). Madeja & Schoder (2003, p. 2) defined ease-of-use as ‘users’ ability to browse multimedia content and transparency of information without being involved in technical or organisational aspects of accessing distributed information, using dedicated communication and navigation services’. Cognitative (1999) found ease of site navigation to be consumers’ number one reason for liking and being loyal to a dot.com. This is consistent with the findings of Muyllé et al. (2004). Wolfinbarger (2000) pointed out that a quality website should be available 24 hours a day, seven days a week, and at fast speed. That speed of download is positively related to the number of pages accessed, time spent at a web site. The importance of the customer’s image of an online company is supported by other researchers (Dellaert & Kahn 1999; Dreze & Zufryden 1997). This shows that customers would like to spend more time on a website which can provide fast download speeds.

#### **2.4.3.2 Content quality**

Due to the nature of the virtual environment, customers cannot physically touch the products before purchasing from websites, therefore, as the website information content is the only way to understand a product, the content should be functional and attractive. Some researchers (Von Dran et al. 1999; Zhang et al. 2000) argued that content quality may be more important than system quality, and they define content quality as the characteristics and presentation of information in the e-commerce system. According to Alba et al. (1997), quality of information is the degree to which consumers can use the information prior to purchase, to predict their satisfaction from subsequent consumption. Past studies (Calkins et al. 2000; Lee et al. 2005; Limayem 2000; Muylle et al. 2004; Proctor 2003; Zhao et al. 2002) have confirmed that content quality and its sub-attributes enhance customer satisfaction and maintain a site's attractiveness to customers.

Many attributes of content have been explored in previous studies (Cognitave 1999; Dholakia & Rego 1998; Muylle et al. 2004; Roger 2001), such as accuracy, up-to-dateness, comprehensiveness, understandability, completeness, and so forth. For example, Muylle et al. (2004) defined four measures of information (relevancy, accuracy, comprehensibility and comprehensiveness) and found them to be useful in improving user satisfaction. Epstein (2005) also suggested that accurate information on the associated physical stores, customer service and delivery and return policies should be easily accessible from the homepage. Lohse and Spiller (1998(b)) found that additional information on products in the virtual store attracts more traffic.

Dholakia and Rego (1998) found that frequent updates drive up website visit rates. This is supported by Cognitave (1999), who found outdated information to be a primary factor of site defection and loss of business.

Lee et al. (2003) and Freedman (2005) also noted that website information should include new products or special offers, and the company's contact information. This is because special offers and new products could help customers reach the latest/special products in a few clicks and the company's contact information would effectively enhance the customer's trust of the website.

### **2.4.3.3 Trust**

As well as content quality and system quality, research findings have suggested that trust has an important effect on the use of e-commerce and user satisfaction, due to the high uncertainty of the online environment (Gefen et al. 2003; Urban et al. 2000). Many studies (Chen et al. 2004; Jarvenpaa & Tractinsky 2000; Liyayem 2000; Reichheld & Schefter 2000) have found that trust is one of the most important factors for e-commerce. For example, according to Liyayem (2000), trust was found to have the most effect, which demonstrates that trust has an important impact on attitude towards online shopping, as also suggested by Jarvenpaa et al. (2000). Researchers have also found that online customers generally stay away from e-vendors whom they do not trust (Jarvenpaa & Tractinsky 2000; Reichheld & Schefter 2000). Pavlou (2003) suggested that trust could be influenced by three sources of uncertainty, namely, information asymmetry, seller opportunism and information privacy concerns. Finally, Ba and Pavlou (2002) found that high level trust leads to higher prices, as the customer would be prepared to pay higher prices on a trusted website. All of the above-mentioned studies show that trust has an effect on the success of e-commerce.

According to previous researchers, trust-related factors include security, privacy, and product quality. Some researchers have defined security and privacy as two important trust-related issues (Molla & Licker 2001; Vijayasathya 2004). Privacy refers to ‘the ability of an individual to keep his/her identity confidential during the course of a transaction and the protection of various types of data that are collected’ (Molla & Licker 2003, p. 138). Carroll (1999, p. 46) stated, ‘privacy is the number one consumer issue facing the internet, and the main reason is that the consumers do not know how their information is being used’. Further, studies such as Caudill and Murphy (2000), Branscum and Tanaka (2000) and Milne and Boza (1999) found that privacy protection is a primary factor influencing customers’ online purchase decisions, and their satisfaction and loyalty to an online business. However, as Pavlou (2002) stated, there are not many effective ways to handle the privacy issue, self-regulation is the most common tool so far. Other studies (Culnan 2000; Page & Lepkowsha-White 2002; Turban et al. 2004) have suggested that law and government regulations are the most effective ways to protect customers’ privacy in the virtual environment. Turban et al. (2004) also suggested that customers should be given notice of the collection of personal information, and that their consent be necessary to prevent or allow the collection of information. Therefore,

research has shown that e-tailers who give a high priority to customer privacy will benefit by increasing the customer's opinion of their site.

Security is another important issue related to trust. Information technology can lead to security threats, crime, loss of sensitive business information and harm to corporate or brand-name reputations (Erwin 2000). According to Chesnut (2005), AC Nielsen found five security concerns of American online shoppers, including not receiving the items, or receiving items that are different from their descriptions on the website, email addresses sold to other parties, fears about personal or financial information being stolen, emails from disreputable sources that are disguised as messages from trusted retailers or financial institutions. Lee et al. (2005) found that customers would like to conduct more online shopping activities through a secured website and that organisations would have a better brand image if they offered a safe online environment. Therefore, security issues should be addressed by e-tailers, to increase sales and build a positive brand image.

Lee and Yoo (1999) suggested that the problem of product quality also affects the trust of consumers in e-vendors, especially when products are hard to describe, due to the mismatch between the description of a product and customer understanding. This is supported by Ba and Pavlou (2002), who suggested that misrepresentation of product quality is one of information asymmetry, which could lead to mistrust and market failure (Akerlof 1970). Due to the nature of the virtual environment, consumers have difficulty identifying the online trading parties and the product quality, because of the lack of physical contact.

While many studies focus on the issue of trust, some other studies (Gefen et al. 2003; IDA 2001; Pavlou & Gefen 2004; Shankar et al. 2002) have provided methods to address the uncertainties, such as privacy, security, and product quality. For instance, IDA (2001) identified four approaches to building trust and confidence: (1) establishing a secure environment; (2) establishing confidence in e-business; (3) building users confidence; and (4) raising user awareness. Gann (2000) noted that encryption technology is a common method for safeguarding consumer transaction information. Encryption is 'the process of transforming or scrambling data in such a way that it is difficult, expensive, or time-consuming for an unauthorised person to unscramble it' (Turban et al. 2006, p. 475). Pavlou and Gefen (2004) suggested that Escrow services and credit cards are useful in

solving the security problem. Escrow services act as a trusted third party in a transaction, and provide secure methods to transfer items and payments between two trading partners (Ba et al. 2002), and can serve to bridge the gap of trust between buyers and sellers (IDA 2001). Credit card guarantees and e-commerce insurance will provide resources by reducing the buyer's monetary liability in case of illegal seller behaviour (IDA 2001). Miyazaki and Fernandez (2000) found that providing consumers with offline alternatives for placing orders and/or making payments may mitigate their concerns, such as concerns about online payments and loss of private information. Ba et al. (2002) also noted that reputation systems and feedback systems will encourage participants to be trustworthy. Rutter (2001) indicated four areas which have direct relevance to e-commerce and consumer trust: community, flow, brand identity, and personal experience. For example, the relationship between trust and community is a cyclic process: the longer people remain a member of the community the more they are likely to offer a greater amount of trust to the community. Gefen et al. (2003) suggested that online trust can be built through: (1) a belief that the vendor has nothing to gain by cheating; (2) a belief that there are safety mechanisms built into the website; (3) having a typical interface; and (4) ease-of-use.

Based on the above discussion, firms could build trust not only by addressing security, privacy, and product issues, but also by providing high quality support and services. The issue of support and services is discussed in detail in the following section.

#### **2.4.3.4 Support and services**

Service quality is increasingly recognised as an important aspect of e-commerce (Santos 2003). Research findings (Aberg & Shahmehri 2000; Chen et al. 2004; Genfen & Devin 2001; Madeja & Schoder 2003; Page & Lepkowska-White 2002; Parasuraman et al. 1988; Santos 2003) have suggested that service quality is positively related to the success of e-commerce. For example, as cited in Chen et al. (2004), Genfen and Devin (2001) found that service quality is an important factor of consumer attitudes towards using virtual stores, because it is effectively useful in reducing the perceived risk and creates loyalty in the customer towards the virtual store. High quality service would encourage customers to pay a higher price for a product (Schneider 2006). Owens (2005) suggesting that e-tailers should offer better services as a differentiator, but compete on price. Fram and Grady (1995) found that if the actual quality of service meets consumer expectations,

then consumers will be likely to revisit and repurchase from the site. This is shared by Santos (2003), who suggested that high service quality can potentially increase the attractiveness, hit rate, customer retention, stickiness, and positive word-of-mouth reputation, and can maximize the online competitive advantages of e-commerce. Accordingly, there are a lot of benefits provided by a high quality service, and those benefits could enhance the competitive advantage of e-tailers.

Different dimensions of online service quality have been mentioned by various researchers (Sousa & Voss 2006; Wang 2003). Wang (2003) stated that core e-service quality consists of four dimensions: efficiency, reliability, fulfillment and privacy. Parasuraman et al. (1988) suggested that high quality service should include tangibility, reliability, responsiveness, assurance and empathy. Sousa and Voss (2006) argued that service quality comprises three components: virtual (website), physical (people-delivered including logistics) and integration quality (a seamless service experience across channels). Many services and support activities have been surfaced by researchers which are associated with those dimensions and components of service (Aberg & Shahmehri 2000; Gray 2000; Koch & Worndl 2001; Ray 2001; Roth 2000) such as human assistance, Frequently Asked Questions (FAQs) search engines, delivery, personalisation, feedback and online communities.

Effective customer support along the whole transaction line from pre-sale to post-sale would reduce the uncertainty and risk. Aberg and Shahmehri (2000) argued that both computer-based and human-based assistance should be available to serve customers, such as FAQs and call centres. Typical computer-based assistance includes FAQs, search engines, and website instructions. Cole (2004) suggested that a search engine is a function very similar to the human sales person. An effective search engine can quickly provide the customer with the right answer to their question. However, most people are not willing to make serious decisions based on information or recommendations provided by a computer program, and ineffective website design or low standard automated services also force customers to seek human-based assistance (Roth 2000). Pavlou et al. (2005) found that a social presence will enhance trust. Human-based assistance is flexible and more responsible (Aberg & Shahmehri 2000). If anything goes wrong, customers at least have the name of someone to contact by using the website browser, chat window, phone or any combination of these customer service channels. Many large firms have call

centres to support their customers. However, that cost could be expensive, especially for small businesses.

Delivery is another online customer service issue. Researchers such as Agrawal et al. (2002), Hollis (2000), Marshak (2000), Ray (2001), Turban et al. (2004) and Wang (2003) have studied the delivery issue of online transactions. Customers want reliable delivery from reputable delivery companies with reasonable charges and delivery options (Roth 2000). For example, Amazon allows its customers to track the shipping/delivery process online. Turban et al. (2004) argued that customers now always desire faster delivery services. Due the nature of the virtual environment and lack of physical contact, after-sales service, especially the return of goods, is unavoidable, because customers may not be satisfied with the product. Researchers have suggested that e-tailers should provide clear product return policies (Gray 2000; Ray 2001) and provide customers with a number of product return methods (Roth 2000; Turban et al. 2004). This is supported by Agrawal et al. (2002), who suggested that e-tailers have to allow customers to return defective or unwanted merchandise. Turban et al. (2004) presented several options for handling returns: (1) returning the item to the place of purchase; (2) separating the logistics of returns from the logistics of delivery; (3) completely outsourcing returns; or (4) allowing customers to physically drop the returned items at a collection station.

Customisation is another important service activity in a website, as suggested by Singh (2002). Customised sites can align products or service offerings with consumers' specific profiles, thereby enhancing the relationship-building quality of the website, further distinguishing themselves from competitors (Roman 2000). Customised services should always be available, as they allow e-tailers to provide customers with tailored information, products, and prices (Morelli, Clark & Tesler 2001). Such information, based on the tracking of customers' interactions with the website (Epstein 2005), encourages them to return to the website for their next shopping activities.

Feedback and online communities are other useful customer service avenues. As mentioned in the previous discussion on the issue of trust (Section 2.4.3.3), feedback and online communities can build an e-tailer's reputation and enhance trust in the virtual environment. An online community improves communication and the personalisation of services (Koch & Worndl 2001). Communication is the primary activity in communities,



and knowing the details of whom you are communicating with is essential for understanding and evaluating an interaction (Donath 1998). Also, the information from the user can be used by the e-tailer for personalisation of their website. Calkins et al. (2000) stated that through site-to-user and user-to-user forms of interactivity, websites can generate a core of dedicated customers who become avid marketers of the site. Online communities also have an advantage that the traditional media does not have, in that it allows many-to-many interactive communications at a distance, or where the participants are not present simultaneously (Mowbray 2004). Online communities are also useful for distributing and sharing information with a greater number of people (Granovetter 1973). Today, many forms of online communities have been developed, such as discussion groups, chat rooms, wikis, file sharing spaces and shared archives, email lists, blogs, and integrated combinations of these (Mowbray 2004).

#### **2.4.4 Senior management factor**

Some factors relating to senior management are also mentioned by researchers (Bai & Lee 2003; Barnes et al. 2004; Epstein 2005; Gibbs et al. 2002; Gunasekaran et al. 2005; Molla 2004), including senior management commitment, investment, knowledge of e-commerce, and relationships between senior managers.

#### **Senior management commitment**

Many researchers have found that commitment at the senior management level is an important factor in the implementation of e-commerce (Epstein 2005; Gunasekaran 2005; Horsti et al. 2005; Molla 2004; Sabherwal et al. 2004; Stylianou et al. 2003; Teo & Ang 1999). In Horsti et al.'s (2005) study, 'management's commitment' achieved the second highest mean value after 'secured online transactions', demonstrating that traditional leadership issues are still important in e-commerce. This is supported by Teo and Ang (1999), who found that 'senior management commitment to the strategic use of IT' was the number one factor among their respondents. Harvey (2000) also noted that senior management commitment is necessary for creating an environment for specific strategies; in the case of e-commerce, a separate Internet Division is needed to make online strategies successful. Researchers have also investigated the reasons for the lack of senior management commitment. For instance, Epstein (2005) argued that in order to be committed to e-commerce, Chief Executive Officers (CEOs) and other senior managers need a basic knowledge and understanding of e-commerce and information technologies as this knowledge would help them make sound business decisions, and provide clear and detailed delegations to employees. This is supported by Harvey (2000) and Frank (2004). Frank (2004) mentioned that if program leaders do not understand the importance of the architecture, e-commerce would not be successful. Findings from Stylianou et al. (2003) have also suggested that a higher level of knowledge is correlated with senior management commitment. The conflict between CEOs and Chief Information Technology Officers (CIOs) is another reason for a lack of senior management commitment. Based on their research, Bai and Lee (2003) found that poor CEO/CIO relationships render e-commerce ventures unsuccessful. Researchers have also investigated the results of poor senior management commitment, such as low level investments, poor quality IS facilitation and poor quality IS work teams. For example, Stylianou et al. (2003) pointed out that management non-commitment always leads to low e-commerce investments and a non-existent e-commerce research and development

budget. This view is supported by Gibbs et al. (2002), who, in their cross-country comparison study, found that a lack of entrepreneurial support reduces e-commerce funding in Japan, Singapore and Germany. Sabherwal et al.'s (2004) findings also confirmed a significant relationship between senior management commitment, conditions facilitating IS and the quality of the IS work team.

### **Investment**

Investment is another important factor for e-commerce (Epstein 2005; Gunasekaran et al. 2005; Molla 2004). Three resources are included in investment: financial resources, human resources, and technological resources. The findings of Stylianou et al. (2003) pointed out that increased funding of research and development initiatives (financial resources) will allow organisations to implement e-commerce strategies. Human resources is the investment type that refers to the availability of employees with adequate experience and exposure to information and communications technologies and other skills that are needed to adequately staff e-commerce initiatives and projects (Molla 2004). Udo (2001) argued that many companies do not have internet experts or IT-skilled workers to perform the required tasks. Without adequate investment in human resources, companies lack the necessary skilled employees to operate an e-commerce business. And studies from Molla (2004) and Barnes et al. (2004) found that e-commerce projects are likely to succeed if a company maintains good human resources. As mentioned previously, technological resources, such as internal IS infrastructures, are closely related to the level of investment and senior management commitment. Sabherwal et al. (2004) argued that without sufficient investment, a business's information systems could be of poor quality. Accordingly, large firms find it easier to survive in the competitive online environment, due to the fact that they have sufficient investments (technological, financial, and human) for the implementation of e-commerce (Gibbs et al. 2002). On the other hand, companies may not want to invest resources in e-commerce if they are not confident of the profitability of the venture (Frank 2004; Wang et al. 2002).

#### **2.4.5 Organisational factor**

In addition to system and senior management factors, research findings also suggest that organisational factors have an important effect on the success of e-commerce (Gibbs et al. 2002; Gunasekaran 2005; Molla 2004; Teo & Ang 1999; Lu 2003). Organisational factors include organisational structure, IS infrastructure, brand image/reputation,

strategic direction, and so forth. Two of the aspects of organisational factors, brand name and reputation and organisational culture, are discussed below.

### **Brand name and reputation**

It is always essential that an organisation be proficient in creating a quality brand name and maintains a high quality reputation. Organisational competence in these respects has also been found to be positively correlated to e-commerce success (Epstein 2005; Kelly et al. 2002). For example, findings from Epstein (2003) suggested that a well-positioned brand name will effectively attract high hit rates to a website. This is extremely important for online businesses, especially in the start-up stage, because of the profit issue, as discussed in Section 2.2.5.2. Teerling and Huizingh (2003) found that customer loyalty to the physical brand is positively related to site loyalty. However, it is also suggested that this is not a one-way effect, but that poor website design and careless online customer management may also damage and reduce the value of the company's traditional, physical brand.

### **Organisational culture**

Organisational culture also plays an important role in the success of e-commerce, as suggested by Gibbs et al. (2002) and Newton (2000) who stated that entrepreneurial and innovative business cultures are essential to e-commerce, as traditional retailers taking their first steps into the internet often suffer from cultural stress (Calkins et al. 2000). An innovative culture could also encourage employees to offer input on policies and issues, even anonymously (Anonymous 1997).

Other organisational factors have been suggested that might impact on the success of e-commerce: (1) information system infrastructure (Bai et al. 2003); (2) task coordination (Bai et al. 2003; Sivadas & Dwyer 2000); (3) business processes (Epstein 2005); (4) strategic direction (Roger 2001). For example, Bai et al. (2003) note 'IS maturity' is a factor closely related to e-commerce success - as the IS function grows to maturity, senior management may be more willing to consider the importance of IS and 'task coordination' which is defined as the specification and execution of roles with minimal redundancy and verification (Sivadas & Dwyer 2000) is believed to be one of the keys to e-commerce success, as suggested by Bai et al. (2003). Business processes are another organisational factor important to e-commerce. Epstein (2005) pointed out that

companies must examine the internet and modify pre-existing channels in a way that complements the e-commerce initiative, as it is useful to reduce channel conflict and improve productivity. Lastly, e-commerce must match the company's goals and expectations, otherwise there is no reason to implement e-commerce (Roger 2001).

#### **2.4.6 E-commerce strategy**

As well as the factors discussed, i.e. senior management and organisational factors, other e-commerce strategies which are factors of the success of e-commerce have been the concern of researchers (Epstein 2004; Gunasekaran 2005; Hart 2003; Harvey 2000; Rogers 2001; Steinfield 2004). These are: (1) e-commerce return considerations; (2) integration; (3) strategic alliances; (4) e-commerce cost considerations; (5) product considerations. Some of these strategies have been discussed in the previous section 2.2.5.5. The e-commerce strategies of integration and strategic alliances are discussed below.

##### **Integration**

As mentioned in Section 2.2.5.2, click-and-mortar businesses seem to have a brighter future than pure online players, in terms of reputation and cost (Barsh 2000; Calkins et al. 2000; Steinfield 2004). However, they also have to face a major challenge: integration (Agrawal et al. 2002). An integrated-channel approach could offer organisations many benefits: lower costs, differentiation through value-added services, improved trust, and market expansion (Steinfield 2004). Epstein (2004) suggested that organisations should be cognizant of the integration between different traditional channels and e-commerce, to reduce channel conflict. This is supported by Rogers (2001), that e-commerce must be integrated with back-end legacy systems, agency systems, call centres, marketing initiatives and pricing and underwriting systems, to enhance efficiency and service.

Some researchers have focused more on supply chain integration. Agrawal et al. (2002) pointed out that poor integration of e-tailing websites with their supply chains is one of the main reasons for e-commerce businesses remaining unprofitable and the study also suggested that in a totally integrated system, up to 30% of the cost could be saved, e.g. on long distance telephone calls, data entry, teleserve operations, and error correction which can reduce or eliminate the cycle time between order and delivery. Lee and Whang (2001) proposed four dimensions and benefits from integrated supply chains, including reduced

costs, increased flexibility, and faster response times. For example, KB Toys is the second biggest toy retailer in US, and has the power to negotiate with suppliers for cheaper prices and other advantages, but if their business was conducted without an integrated supply chain, they may not be able to negotiate cheaper prices with their suppliers. Also, KB Toys' e-commerce division, KBkids, can take advantage of the relationship between KB Toys and its suppliers. Moreover, due to their well-integrated supply chain, customers can return products to one of their 1300 physical stores (Hart 2003). Such integration offers great convenience to customers, an advantage which cannot be obtained by a pure-player.

To guide the integration process, Adelaar et al. (2004) proposed four levels of integration (Table 2.11). At the first level, e-commerce websites do not offer a local in-store pick-up and return service; the second level only allows simple cross-channel activities, such as cross promotion; at the third level, in store pickup and return is offered, but it also requires the rethinking of traditional business processes and a complete integration of existing IT systems; the highest level needs to redesign the whole process (i.e. data, IT, organisational structure) to support the e-commerce activities. The findings from Adelaar et al. (2004) also suggested that a centralised structure and approach enhances integration processes generally, even though individual retail outlets may have less control and lack the capacity to adapt to changing local market conditions. Accordingly, a suitable integration strategy is essential to e-commerce, however, both technological and business barriers were found to inhibit the integration of e-commerce, such as inadequacy of a long-established and expensive legacy system, inadequacies in the information system of supply network partners and lack of common standards integration (Barnes et al. 2004).

**Table 2.11: Four levels of integration**

Stages	Description
Level 1	A loose connection between online and offline can yield positive as well as negative effects
Level 2	Simple click-and-mortar e-commerce approach, such as cross-promotion among channels, presents a way to establish closer interactions with infrequent customers.
Level 3	Sophisticated click-and-mortar e-commerce hands-off services, such as in-store pickup services and completing online-initiated transactions within a

	retail outlet.
Level 4	Redesign the processes that support the e-commerce activities, in combination with a partial or total redesigning of data, IT, and organisational structure.

Source: Adapted from Adelaar et al. (2004, p. 179)

### **Strategic alliances**

In selecting and implementing e-commerce systems, strategic business alliances are essential to success (Gunasekaran 2005; Strauss 2001). All companies can benefit from alliances. For example, traditional retailers simply do not have enough technological experts, therefore they need to have partnerships with IT companies to achieve their online goals (Harvey 2000). Further, they can access large online customer bases by forming strategic alliances with portals and internet service providers (Epstein 2005), such as RadioShack and Microsoft (Hart 2003). Also, Gish (2005) argued that an IT specialist partner is useful in helping retailers handle an e-commerce project, as IS and e-commerce operations are not core competencies for retailers. On the other hand, pure online players may need to partner with respected retailers to attract more customers in a short period (Harvey 2000). Therefore, partnerships are useful for organisations which want to launch e-commerce arms, especially in the start-up stage.

Other variables include return considerations (Frank 2004; Gunasekaran et al. 2005), cost considerations (Barsh 2001; Lee & Brandyberry 2003; Smith 2000), and product considerations (CNNIC 2006; Smith 2000; Turban & King 2004). For example, Barsh (2001) suggested that the cost of e-commerce could be huge, mainly because of low profit margins from each order, fulfillment costs, system maintenance costs, and customer acquisition costs. Product considerations are also mentioned by Barsh (2001) and other researchers. Turban and King (2004) noted that some products are easy to sell online, such as CDs, movies, electronic appliances, and so forth. This is supported by Barsh (2001) and the latest CNNIC report (2006). Smith (2000) also pointed out that most products sold online are 'low touch', and that 'high touch' products such as clothes and shoes, are far less popular online. Moreover, Gunasekaran et al. (2005) pointed out that many companies do not have a systematic framework for justifying their investment in e-commerce, but only focus on the tangible financial benefits.

#### **2.4.7 External factor**

Stylianou et al. (2003) suggested that environmental factors play an important role in the success of e-commerce. External factors are defined by Stylianou et al. (2003, p.35) as, ‘within the context of structural conditions that exhibit a strong influence on e-commerce development’. This means that external factors are usually not under the control of the organisation, and include government policy, legal issues, economic issues, competitive pressure, and cultural differences.

Government policy was found to be significantly related to the diffusion of e-commerce (Gibbs et al. 2002; Gunasekaran 2005; Stylianou et al 2003; Tan & Ouyang 2004). A study conducted by Gunasekaran (2005) showed ‘no appropriate legal framework exists for conducting e-commerce on the net’ as being the biggest issue of concern by respondents. His research suggested that due to the lack of a legal framework for conducting e-commerce on the internet, companies do not have much confidence in doing business online in terms of security, privacy, taxation and other issues. Gibbs et al. (2002) argued that national policy includes liberalisation of telecommunication, government promotion of e-commerce and IT, and specific legislation passed on e-commerce and IT. Such policies are useful to reduce the costs of access and increase infrastructure availability. Many countries and international organisations have been working together to find ways to encourage uniform legal standards, for example the United Nations proposed a law (UNCITRAL) to offer national legislators a set of internationally acceptable rules which detail how a number of legal obstacles to the development of e-commerce may be removed, and how a more secure legal environment may be created (E-Business world 2000). Further, Molla (2004) did not find any widely-accepted policies worldwide, due to the fact that the IT industry is at different stages of development in different countries.

Competitive pressure is another factor influencing the diffusion of e-commerce, suggesting that ‘globalization of production and markets, multinational corporation strategies, open trade regimes and global competition more broadly are driving all countries and industry sectors towards the adoption of e-commerce.’ (Gibbs et al. 2002, p. 4)



Other external variables have been mentioned in Section 2.2.4.3 as being barriers to the development of e-commerce in China. These variables include the cost of computers and internet access (Dedrik et al. 2001; Ernst & He 2000; Gibbs et al, 2002; UNCTAD 2003); advanced retail networks (Dedrik et al. 2001; Wong et al. 2004); lack of payment facilities and effective banking services (Dedrik et al. 2001; Efendioglu et al 2004; Tan & Ouyang 2004), and national cultures (Efendioglu et al. 2004; McKnight 2000; Stylianou et al. 2003; UNCTAD 2003). However, most of these external variables can be changed over time as a country's policies and economics develops (Gibbs et al. 2004).

#### **2.4.8 Consumer factor**

Researchers (Dillon & Reif 2004; Dillon et al. 2005; Dholakia & Uusitalo 2002; Gibbs et al. 2002; Shneiderman 2003) have suggested that consumer factors (age, gender, income, education, experience and innovativeness) also influence e-commerce success.

Younger users were reported more likely to conduct online shopping (Dholakia & Uusitalo 2002; Ratchford, Talukdar & Lee 2001; Teo 2001). According to Limayem et al. (2000), 55% of young adults aged 25-34 in the United States, but only 10% of consumers aged 65 and above, purchased online. CNNIC (2006) also reported that over 50% of internet users were under 25 years old and a total of 90% are under 40 in China. Zhao et al. (2002) argued that this is probably because younger customers (18-24 years old) are less concerned about online security and trust issues than older customers. Their findings are consistent with the study by Fogg et al. (2001), which found that younger users do not really care about lower quality such as a single broken link, but older users are more concerned about quality and trustworthiness. Teo (2001) also found that a wide range of ages engage in browsing and purchasing, while younger respondents are more likely to use the internet for messaging and downloading activities than older respondents.

Gender was also found to have a significant impact on online shopping behaviour (Goldsmith & Goldsmith 2002; Hu & Wan 2006; Kwak et al. 2002; Teo 2001). For example, Teo (2001) found that male users are more skilled in downloading and purchasing activities on the internet, and females are more likely to use the internet for messaging activities than males, demonstrating that males and females have different interests in regard to e-commerce activities generally. Hui and Wan (2006) recently found that female customers have a dislike for not being able to savor a physically

fulfilling shopping experience online. This is supported by Ono and Zavodny (2003), who also found that women remain less frequent and less intense users of the internet. CNNIC (1998-2006) also found a similar result in their recent report in which 58% of internet users are male. However, they also believed that even though some countries have a gender gap between male and female users in terms of frequency and intensity of internet use, the gender gap will be diminished over time.

Education of users has also been found by many researchers (Gibbs et al. 2001; Limayem 2000; National Telecommunications and Information Administration 2000; Teo 2001; Zhao et al. 2002) to have an effect on e-commerce activities. For example, Gibbs et al. (2002) suggested that IT literacy is higher among the highly educated, across countries. This is in line with the finding of Dillon and Reif (2004) that shoppers are more likely to continue to make e-commerce purchases as they achieve higher levels of comfort with their general computer skills.

Income is another issue among the individual factors. Some researchers have found that level of income is positively related to the adoption of e-commerce. (Dholakia & Uusitalo 2002; Doolin et al. 2005; Fogg et al. 2001; Gibbs et al. 2002; Limayem 2000). Gibbs et al. (2002) suggested that countries with a more equal distribution of wealth such as Japan, Germany and France have a higher proportion of population able to participate in e-commerce than those countries with unevenly distributed wealth, such as India and North Korea. Fogg et al. (2001) suggested that when people have more money, they are more likely to conduct online shopping.

User experience is also discussed by researchers (Dholakia & Uusitalo 2002; Fogg et al. 2001; Hui & Wan 2006; Limayem et al. 2000; Sabherwal et al. 2004; Zhao et al. 2002). These studies found that online experience has a significant effect on user attitudes, and encourages users to continue e-commerce activities. For example, Dillon and Reif (2004) found that customers are more likely to continue shopping online when they have a greater experience of online shopping, and young adults with a history of e-commerce purchasing experience have a more positive attitude towards online buying than do young adults without e-commerce purchasing experience.

The last of the consumer variable is innovativeness. Of among the consumer variables, innovativeness was found by Limayem (2000) to be one of the most important factors influencing online shopping behaviour.

Other consumer variables have been found by researchers (Barlow et al. 2004; Freedman 2005; Greiner 2005; McIntosh 2003; Smith 2000; Strauss 2001; Wolfenbarger 2000) such as a busy working lifestyle, and physical shopping experiences. For example, Barlow et al. (2004) pointed out that in-store shopping is not being provided by online shopping technologies, discouraging many consumers from shopping online. One important reason for this is the lack of range of sensory experiences available online (Philips et al. 1997). It is suggested that some people are more like to enjoy the physical shopping experience.

## 2.4.9 Summary

Table 2.12 summarises the factors that potentially affect the success of e-commerce.

**Table 2.12: Factors affecting the success of e-commerce**

<b>Factors</b>	<b>Variables</b>	<b>Literature Sources</b>
<b>E-commerce system</b>	<b>Systems quality</b>	
	<ul style="list-style-type: none"> <li>Website speed</li> </ul>	Delone and Mclean 2003; Molla & Licker 2001; Mulle et al. 2003; Pather & Peninsula 2006; Lee et al. 2005; Limayem 2000; Kelly et al. 2002; Wolfinbarger 2000; Roger 2001; Sabherwal et al. 2004; Fogg et al. 2001
	<ul style="list-style-type: none"> <li>Navigation</li> </ul>	Molla & Licker 2001; Mulle et al. 2003; Lee et al. 2005; Limayem 2000; Kelly et al. 2002; Zhao et al. 2003; Fogg et al. 2001
	<ul style="list-style-type: none"> <li>Availability 24 hrs/day, 7 days/wk</li> </ul>	Molla & Licker 2001; Madeja & Schoder 2003; Wolfinbarger 2000
	<ul style="list-style-type: none"> <li>Ease of use</li> </ul>	Delone & Mclean 2003; Molla & Licker 2001; Madeja & Schoder; Sabherwal et al. 2004; 2003; Mulle et al. 2003; Lee et al. 2005; Horsti et al. 2005; Liyayem 2000; Fogg et al. 2001
	<ul style="list-style-type: none"> <li>Accessibility</li> </ul>	Molla & Licker 2001; Limayem 2000
	<b>Content quality</b>	
	<ul style="list-style-type: none"> <li>Accuracy</li> </ul>	Muyllle et al. 2004; Epstein 2005; Molla & Licker 2001; Limayem et al. 2000
	<ul style="list-style-type: none"> <li>Up-to-dateness</li> </ul>	Dholakia & Rego 1998; Molla & Licker 2001
	<ul style="list-style-type: none"> <li>Comprehensive</li> </ul>	Muyllle et al. 2004; Lohse & Spiller 1998; Molla & Licker 2001; Limayem et al. 2000;
	<ul style="list-style-type: none"> <li>Understandability</li> </ul>	Molla & Licker 2001
	<ul style="list-style-type: none"> <li>Completeness</li> </ul>	Molla & Licker 2001
	<ul style="list-style-type: none"> <li>New and special offers</li> </ul>	Lee et al. 2005; Molla & Licker 2001; Lee et al. 2005
	<ul style="list-style-type: none"> <li>Contact information</li> </ul>	Teo & Pian 2004; Sonya 2000; Fogg et al. 2001
	<ul style="list-style-type: none"> <li>Multimedia presentations</li> </ul>	Huges et al. 2001; Ho & Wu 1999; Molla & Licker 2001; Wolfinbarger 2000
	<ul style="list-style-type: none"> <li>Language options</li> </ul>	Muyllle et al. 2004; Molla & Licker 2001
	<b>Trust</b>	
	<ul style="list-style-type: none"> <li>Security</li> </ul>	Lee et al. 2005; Erwin 2000; Miyazaki & Fernandez 2000; Kunz 1998
	<ul style="list-style-type: none"> <li>Privacy</li> </ul>	Limayem et al. 2000; Carroll 1999; Turban & King 2004; Pavlou et al. 2002; Benassi 1999; Molla & Licker 2001; Turban & King 2004; Page & Lepkowsha-White 2002; Culnan 2000

	• Product quality	Lee & Yoo 1999; Ba & Pavlou 2002; Akerlof 1970
	• Escrow service	Lee et al. 2005; Pavlou & Gefen 2004; Ba et al. 2003
	• Insurance	Lee et al. 2005; IDA 2001
	<b>Support and Service</b>	
	• FAQs	Aberg & Shahmehri 2000; Molla & Licker 2001
	• Search engines	Aberg & Shahmehri 2000; Molla & Licker 2001
	• Human assistants	Aberg & Shahmehri 2000; Roth 2000; Wolfenbarger 2000
	• Uninterrupted availability	Molla & Licker 2001
	• Delivery	Roth 2000; Turban & King 2004
	• Return service	Ray 2001; Molla & Licker 2001; efuture centre 2003
	• Customisation	Singh 2002; Morelli, Clark & Tesler 2001; Epstein 2005; Wolfenbarger 2000
	• Feedback	Ba et al. 2003; Molla & Licker 2001
• Communities	Koch & Worndl 2001; Granovetter 1973; Mowbray 2004; Rutter 2001	
<b>Senior management factor</b>	• TMC	Epstein 2005; Horsti et al. 2005; Stylianou et al. 2003; Sabherwal et al. 2004; Gunasekaran 2005; Teo & Ang 1999; Molla 2004; Harvey 2000; Bai & Lee 2003; Gibbs et al. 2002; Barnes et al. 2004
	• Investment	Epstein 2005; Molla 2004; Gunasekaran et al. 2005; Stylianou et al. 2003; Sabherwal et al. 2004
	• Knowledge	Epstein 2005; Stylianou et al. 2003; Harvey 2000; Frank 2004
	• Relationships between senior managers	Bai & Lee 2003
<b>Organisational Factor</b>	• IS facilities	Gibbs et al. 2002; Molla 2004; Tan & Ouyang 2004
	• IT/IS expertise	Gibbs et al. 2002; Molla 2004; Barnes et al. 2004; Udo 2001
	• Centralisation	Adelaar et al. 2004
	• Brand name and reputation	Epstein 2005; Mitchell 2000; Kelly et al. 2002
	• Organisational culture	Gibbs et al. 2002
	• Strategic direction	Roger 2001
	• Modern business processes	Epstein 2005
	• Task coordination	Sivadas & Dwyer 2000
<b>E-commerce strategy</b>	• Expectation of ROI from EC	Frank 2004; Gunasekaran et al. 2005
	• Integration	Steinfeld 2004; Epstein 2004; Rogers 2001; Hart 2003; Lee & Whang 2001; Adelaar et al. 2004; Barnes et al. 2004
	• Strategic alliances	Gunasekaran 2005; Harvey 2000; Epstein 2005; Hart 2003
	• Cost considerations	Barsh 2001; Lee & Brandyberry 2003; Smith 2000; Sedlak 2000

	• Production considerations	Smith 2000; Turban & King 2004; CNNIC 2006; Wolfinbarger 2000; Leonard & Cronan 2003
<b>External factor</b>	• Government policy	Gunasekaran 2005; Gibbs et al. 2002; Stylianou et al. 2003; E-Business world 2000; Molla 2004
	• Competitive pressure	Gibbs et al. 2002; Shih et al. 2002; Gunasekaran 2005; Gibbs et al. 2002; Stylianou et al. 2003; E-Business world 2000; Molla 2004
	• Cost of PC and the internet	Dedrik et al. 2001; Ernst & He 2000; UNCTAD 2003; Gibbs et al. 2002; Gibbs et al. 2002; Shih et al. 2002
	• Payment facilities	Dedrik et al 2001; Efendioglu et al 2004; Dedrik et al 2001; Ernst and He 2000; UNCTAD 2003; Gibbs et 2002
	• Advanced retail networks	Dedrik et a.l 2001; Wong et al. 2004; Dedrik et al. 2001; Efendioglu et al. 2004
	• National cultures	Stylianou et al. 2003; UNCTAD 2003; Efendioglu et al. 2004; Dedrik et al. 2001; Wong et al. 2004
	<b>consumers factor</b>	• Age
• Gender		Gibbs et al. 2001; National Telecommunications and Information Administration 2000; Zhao et al. 2003; Teo 2001; Limayem 2000; Hui & Wan 2006; Goldsmith & Goldsmith 2002; Kwak et al. 2002; and Teo 2001; Hui & Wan 2006; Zavodny 2003
• Edutation		Gibbs et al. 2002; Doolin et al. 2005; Fogg et al. 2001; Limayem 2000; Gibbs et al. 2001; National Telecommunications and Information Administration 2000; Zhao et al. 2003; Teo 2001; Limayem 2000; Hui & Wan 2006
• Income		Sabherwal et al. 2004; Limayem et al. 2000; Zhao et al. 2003; Fogg et al. 2001; Hui & Wan 2006. Cheskin 1999; Reif 2004; Rutter 2001; Gibbs et al. 2002; Doolin et al. 2005; Fogg et al. 2001; Limayem 2000
• Online experience		Limayem 2000; Sabherwal et al. 2004; Limayem et al. 2000; Zhao et al. 2003; Fogg et al. 2001; Hui & Wan 2006; Cheskin 1999; Reif 2004; Rutter 2001
• Innovativeness		Smith 2000; Strauss 2001; Wolfinbarger 2000; Limayem 2000
• Busy working lifestyle		Smith 2000; Wolfinbarger 2000; Smith 2000; Strauss 2001; Wolfinbarger 2000
• Physical shopping experience		Smith 2000; Wolfinbarger 2000

Source: Developed for this research

## **2.5 The success factors of e-tailing in China's retail industry**

The previous section showed that many studies have been undertaken to examine the success factors of e-commerce. Generally, e-commerce is defined as 'the process of buying, selling, or exchanging products, services, or information via computer networks' (Turban et al. 2006, p. 4). E-tailing can be defined as 'retailing conducted online, over the internet' (Turban et al. 2006, p. 83). The literature shows that retailers could obtain substantial benefits from conducting an e-commerce business, such as cost reduction (Dabholkar 1996; La 2002); new communication media (Wang et al. 2002); new customer base (Agrawal 2001); greater convenience for customers, (Doolin 2005), etc.

However, the success of e-tailing in China's retail industry has not been explored, even though the development of the internet and telecommunications in China is impressive. Most studies which have investigated the success factors of e-commerce have focused more on developed countries or regions (Chen et al. 2001; Doolin et al. 2005; Hui & Wan 2006; Zhao & Gutierrez 2002), therefore their findings may not be applicable to developing countries or regions because of the differences in environment and history (Gunasekaran 2005; Stylianou et al. 2003).

Moreover, China is the biggest potential retail market in the world, as indicated in Section 2.3.4.2, increasing the competition between local and global retailers. Up to the present time, Chinese retailers have focused on mergers and acquisitions as a way of enhancing their competitive capabilities (Anonymous 2006(a); IDC 2006; ONDA 2004; The Economist 2006; Xinhua Net 2003; Xu 2006). Retailers in China are also adopting information technology and e-commerce to improve their competitive advantage. However, most researchers have found that the development of e-commerce is still slow in China's retail industry, even though some e-commerce studies (Agrawal 2001; Dabholkar 1996; La 2002; Turban et al. 2006) have suggested that e-tailing offers opportunities and benefits to retailers. These findings have suggested that there is a gap between e-tailing demand and supply, especially for

traditional brick-and-mortar enterprises. This indicates that e-tailing has the potential for improvement in the future of China.

It can be argued that the B2C e-commerce strategy of Chinese retailers is different from that of their international competitors, who have greater human, technological and financial resources. Therefore, it is vital to explore and understand the factors that affect the success of B2C e-commerce in China, and identify those variables affecting B2C retail e-commerce in China.

## **2.6 Research gaps and research issues**

Within the confines of this literature review, the prior studies on e-commerce, the Chinese retail industry and the success factors of e-commerce have been reviewed in Sections 2.2 to 2.4. In contrast to the increasing volume of internet usage, e-tailing is still in the preliminary stages in China, and there are no successful e-tailing marketers in China's retail industry. Additionally, there are few studies related to B2C e-commerce in China's retail industry. Therefore, the current research is designed to fill this research gap by investigating the situation of e-commerce in the Shanghai Brilliance Group, the biggest retailer in China's retail industry, in order to explore e-tailing's barriers and success factors. Therefore, the research problem addressed in this research is: *'How can successful e-tailing in China's retail industry be achieved?'* To address this research problem, three research issues have been developed:

**Research issue 1:** How is e-tailing being used in the Shanghai Brilliance Group?

**Research issue 2:** What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?

**Research issue 3:** What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?



## **2.7 Chapter summary**

This chapter has reviewed and synthesised the three parent disciplines of this research: e-commerce (Section 2.2), the retail industry and retailing in China (Section 2.3), and e-tailing success factors (Section 2.4). Table 2.10 summarised the important e-commerce factors which emerged from a review of the existing literature. The research gap was discussed in Section 2.6. The research problem and three research issues which were developed to fill the research gap have been presented. The following chapter, Chapter 3, presents the methodology of this research.

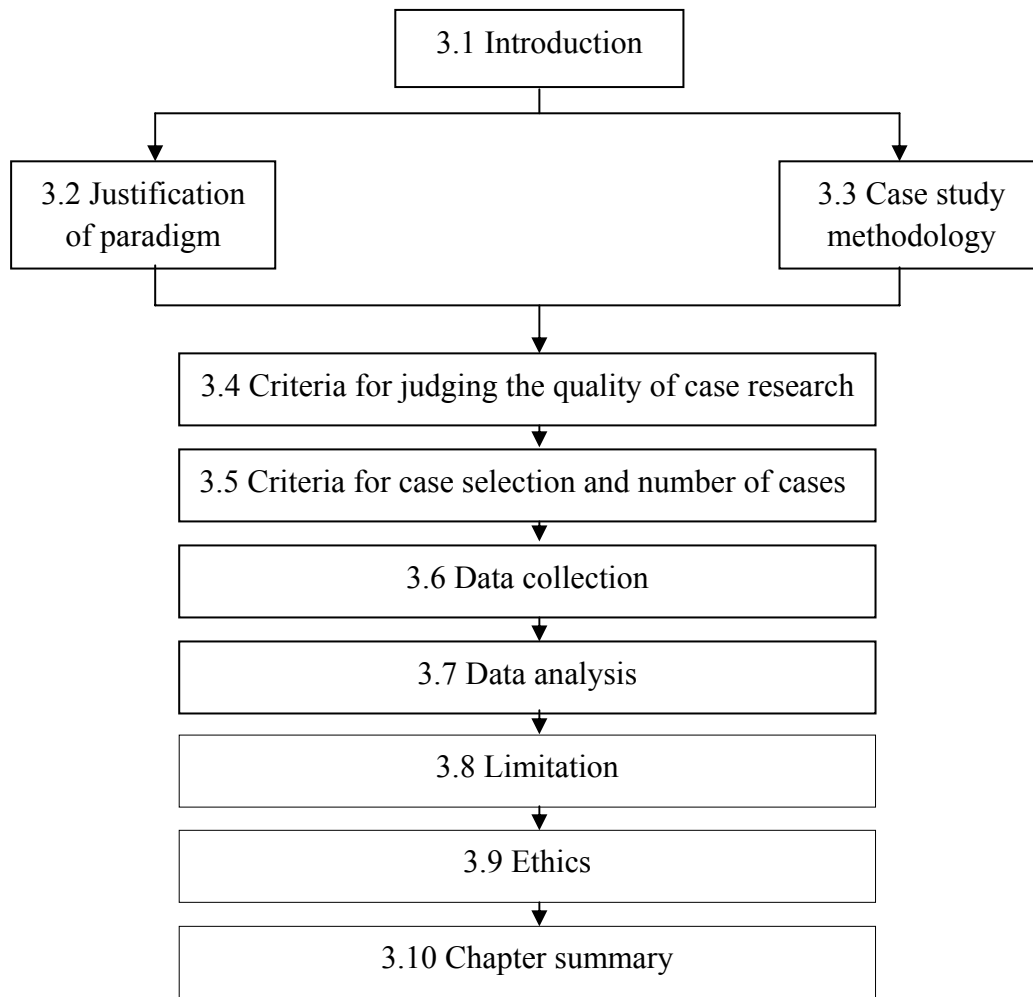
## **Chapter 3: Research Methodology**

### **3.1 Introduction**

The previous chapter reviewed the relevant literature on e-commerce and the retail industry in China and the six categories of success factors of e-commerce. This chapter discusses the methodology of this research and determines and justifies the most suitable research method.

Beginning with a justification of the research paradigm chosen for this research (Section 3.2), this chapter describes and justifies the case study research methodology which is employed under the specific paradigm, (Section 3.3), followed by a discussion of the the issues of reliability and validity (Section 3.4). The criteria for case selection and number of cases are addressed in Section 3.5. Section 3.6 details the data collection procedures and Section 3.7 introduces the case study data analysis and several steps will be listed which are used to guide the data analysis, which is presented in Chapter 4. Lastly, the limitations and ethical issues of the research will be presented (Sections 3.8 and 3.9).

**Figure 3.1: Structure of Chapter 3**



Source: Developed for this research

### **3.2 Justification of paradigm**

Choosing the most suitable research paradigm is the most important initial research design step. This section will review and evaluate research paradigms to identify the most suitable paradigm for this research.

Researchers have defined the concept of the research paradigm in different ways. Deshpande (1983 p101) defined “a paradigm as a set of assumptions linked together in an investigation of the world, and he also suggested the aim of a paradigm is to address what problems are worthy of study and what methods are available to investigate them”. Guba (1990, p.17) argued that the paradigm is a ‘basic set of beliefs that guides action.’

Many paradigms are available to guide research. Easterby-Smith, Thorpe and Lowe (1991) divided inquiries into two paradigms, namely, positivist and phenomenological. Denzin & Lincoln (2003) suggested qualitative and quantitative paradigms. Some other classifications have also been suggested, such as Parkhe's (1993) inductive and deductive classifications. Moreover, Guba and Lincoln (1994) identified four major paradigms: positivism, constructivism, critical theory and realism. Further, each of these paradigms has three elements relating to reality (ontology); the relationship between reality and the researcher (epistemology); and the techniques (methodology).

### **Positivism**

Positivism assumes resistance to qualitative research, and assumes that "science quantitatively measures independent facts about a single apprehensible reality" (Healy & Perry 2000 p 119). Positivist researchers view the world with a 'one-way mirror', and the researcher is an undeniable character (Anderson 1986, Healy & Perry 2000). Accordingly, positivists separate themselves from the world they study, when researchers in other three paradigms believe they have to participate in the real world to better understand the investigations (Healy & Perry 2000). The principal data collection techniques in positivism include experiments and sample surveys that are outcome-oriented (Christie et al. 2000). Healy & Perry (2000) suggested that positivism is not suitable when the research involve humans and their real-life experiences. In contrast, Christie et al. (2000) stated that "the three other paradigms are more suitable for exploring complex social phenomena that require working with people and real-life experiences." This is one of the reasons that positivism is not suitable for this research. Moreover, as there is a current lack of a theoretical model to measure e-tailing success in China's retail industry, there is no hypothesis to test. Lastly, in this research, the research environment is not under the control of the researcher. Thus, positivism is not suitable for this research.

## **Constructivism**

The constructivist paradigm assumes relativist ontology, a subjectivist epistemology, and a naturalistic set of methodological procedures, as stated by Denzin & Lincoln (2003). Constructivism suggests that “truth is a particular belief system held in a particular context, and it is interested in the values which underpin the findings” (Healy & Perry 2000 p120). Therefore, it is an inductive process. Data collection under the constructivist paradigm is “depends chiefly on the interaction between the researcher and interviewee, so that the researcher has to be a ‘passionate participant’ during their field work” (Guba & Lincoln 1994, p. 112). However, constructivism may not be suitable for some types of social research such as e-commerce, because the approach excludes concerns about the external reality, such as the economic, policy, and technology (Hunt 1991). As this research explores the success factors of e-tailing in China retail industry, it is impossible to only rely on interviewees’ emotions and impressions, and ignore external reality. Therefore, this paradigm is not a suitable one for this research.

## **Critical theory**

Critical theory is extremely useful to investigate researches about social, political, cultural economic, ethnic and gender values, therefore, researchers usually need to take long time to investigate by ethnographic and historical studies (Perry 2000). As suggested by Christie et al. (2000 p6), “critical theory may be the most appropriate paradigm when the study is attempting to intervene in the transformation of the respondents from their mental, emotional and social structure.” However, as stated by Guba and Lincoln (1994, p. 112), critical theory is only suitable for research when the researcher aims to be a ‘transformative intellectual’ who liberates people from their historical mental, emotional and social structures. Therefore, as this research does not aim to change the current views of the company’s e-tailing operations, this paradigm is not a suitable one for this research.

## **Realism**

Realism is the last paradigm of the four research paradigms and it has elements from both positivism and constructivism (Heal and Perry 2000). Realism believes an actual social phenomenon can be ascertained even though it is imperfect. (Guba & Lincoln 1994; Merriam 1988; Godfrey & Hill 1995). It is also known as postpositivism (Denzin & Lincoln 1994) or neopostpositivism (Miles & Huberman 1994). In contrast to other two qualitative paradigms (constructivism and critical theory), realism believes that perception is not a reality, but ‘a perception for realists is a window on to reality from which a picture of reality can be triangulated with other perceptions’ (Perry et al. 1997 p554).

Overall, from the above discussion, it can be seen that the realism paradigm is the most suitable one for this research. As with positivism, the realism paradigm investigates a ‘real world’. However, realism argues that reality can only be imperfectly and probabilistically apprehensible, because of a researcher’s limited capacity and resources. This research investigates real-life phenomena, and the researcher will not have full control of the research environment, furthermore, this research builds a new theoretical model, rather than tests an existing hypothesis. Therefore, this paradigm is reasonable for this research. The methodology will be discussed in the next section.

### **3.3 Justification of case study research**

In the above section, the realism paradigm was evaluated as being the most suitable paradigm for this research. There are various methodologies within this paradigm, and one of these methodologies, the case study, has been selected as the methodology most appropriate to this study. This section discusses the nature of the case study and why case study methodology was used in this research.

Case studies have been defined as: “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin 1994, p. 13).

The case study is one of several ways of doing social science research. Other methods include experiments, surveys, histories, and the analysis of archival information. Each of these strategies has advantages and disadvantages. Researchers (Broadbent & Weill 1993; Cavaye 1996; Dube & Pare 2003) have listed the advantages and disadvantages of the case study. For example, Cavaye (1996) indicated that case study research enables the capturing of ‘reality’ and details by studying a phenomenon in its natural context, and extremely useful for developing and refining concepts for further study. However, he also points out the weaknesses of case research; in that the findings from case study research are difficult to generalise to a population statistically; the internal validity may be limited due to lack of control of independent variables in case study research; and case study research may not always the direction of causation. Benbasat et al. (1987 p3) summarised the key characteristics of case studies:

1. Phenomenon is examined in a natural setting.
2. Data are collected by multiple means.
3. One or few entities are examined.
4. The complexity of the unit is studied intensively.
5. Case studies are more suitable for the exploration, classification and hypothesis development stages of the knowledge building process.
6. No experimental controls or manipulation are involved.

7. The investigator may not specify the set of independent and dependent variables in advance.
8. The results derived depend heavily on the integrative powers of the investigator.
9. Changes in site selection and data collection methods could take place as the investigator develops new hypotheses.
10. Case research is useful in the study of 'why' and 'how' questions because these deal with operational links to be traced over time rather than with frequency or incidence.
11. The focus is on contemporary events.

Source: Benbasat (1987)

Yin (2002) provided three criteria to select appropriate research strategies, and suggests the application of approach depends on three conditions:

- a) The type of research question;
- b) The control an investigator has over actual behavioural events;
- c) The focus on contemporary as opposed to historical phenomena.

**Table 3.1: Relevant situations for different research strategies**

<b>Strategy</b>	<b>Form of research question</b>	<b>Requires control of behavioural events?</b>	<b>Focus on contemporary events?</b>
<b>Experiment</b>	How, why?	Yes	Yes
<b>Survey</b>	Who, what, where, How many, How much?	No	Yes
<b>Archival analysis</b>	Who, what, where, How many, How much?	No	Yes/No
<b>History</b>	How, why?	No	No
<b>Case study</b>	How, why?	No	Yes

Source: Yin (2002, p. 5)

In the last decade, the case study method was widely used in the IS field (Markus 1983; Orlikowska 1991; Walsham 1993, 1995), and it is the most popular qualitative



research method for research on information systems (Darke et al. 1998). Tellis (1997) argued that this is because information technologies involve all the criteria given by Yin (2002), as shown in Table 3.1 above. Dube and Pare (2003 p598) have explained in more detail why the case study is the appropriate research method for the IS field:

1. The object of IS research is information systems organisations, in relation to organisational rather than pure technical issues.
2. Having access to and reporting on real-life IT experience, researchers allow the rapid changes occurring in the IT world as well as in organisations.
3. It is suitable for understanding the complex and ubiquitous interaction among organisations, technologies and people.
4. Case studies allow in-depth investigation and open the way to new ideas and new lines of reasoning and pinpoint the opportunities, challenges and issues facing IT specialists and managers.
5. Case study research can be used for exploration, hypothesis generation, explanation, and for hypothesis testing.

However, Darke et al. (1998 p 280) suggested that the case study may not be appropriate in some situations:

1. Where a phenomenon is well understood and mature;
2. Where constructs already exist and are well developed;
3. Where understanding of how and why the particular phenomenon occurs is not of interest;
4. Where understanding of the contexts of action and the experiences of individuals in a single setting is not relevant.

Therefore, as this research is in the IS field, the case study is the most suitable research methodology for this study for several reasons. Firstly, the case study method can be used to answer the questions ‘how’ and ‘why’. This research intends to explore and build a new model of e-commerce success through answering the research question, ‘How can successful e-tailing in China’s retail industry be achieved?’ and

thus a history or case study is more suitable for this research to produce an answer to the question than a survey or an examination of archival records.

Secondly, the researcher has no control over the contemporary set of events. The case study is preferred in examining contemporary events, but only when the research environment cannot be controlled. According to Bonoma (1985), the case study is best suited for research when the researcher is interested in understanding dynamic contemporary events in an environment over which the researcher has no control. Therefore, the case study method should be used when a 'how' or 'why' question is being asked about a contemporary set of events, and the investigator has little or no control. This research intends to investigate the contemporary issues of e-tailing operations in China's retail industry, and this context is definitely not under the control of the researcher.

The final reason for using the case study as a research method in this research is that this method focuses on contemporary, as opposed to historical, events (Yin 1989). E-commerce is a new area of commerce in China, especially e-tailing (click-and-mortar), and there are no widely-accepted theories or models to measure the success of e-tailing in the Chinese context. The purpose of this study is to investigate the contemporary events and explore specific factors and models to measure the success of e-commerce in China's retail industry. Therefore, this is a contemporary, not an historical, event.

Based on these three reasons, this study is an exploratory study of e-tailing in China. As there is a limited amount of information on the research problem, exploratory research is the most suitable method, and this research will not be conducted in a controlled environment. By nature, it is classified as qualitative research. The case study will be used as the principal research technique. The following sections will consider some important criteria for a good case study, and how to achieve these tests in this research.

### 3.4 Criteria for judging the quality of case research

This section will discuss the criteria that were applied in the case study research to establish reliability and validity. Each of these criteria will be described and applied within this research.

Some concepts have been developed to test the quality of research, include: trustworthiness, credibility, confirmability, and data dependability (Yin 2002). These four tests have been widely used to build the quality of social research. As one of the social researches, case study research is also can be tested by them. Yin (2002) developed case study tactics to address those four tests (Table 3.2).

**Table 3.2: Case study tactics of four design tests**

<b>Tests</b>	<b>Case study tactic</b>	<b>Phase of research in which tactic occurs</b>
Construct validity	<ul style="list-style-type: none"> <li>• Use multiple sources of evidence</li> <li>• Establish chain of evidence</li> <li>• Have key respondents review draft case study report</li> </ul>	Data collection  Data collection  Composition
Internal validity	<ul style="list-style-type: none"> <li>• Do pattern-matching</li> </ul>	Data analysis
External validity	<ul style="list-style-type: none"> <li>• Use theory in single-case studies</li> <li>• Use replication logic in multiple-case studies</li> </ul>	Research design  Research design
Reliability	<ul style="list-style-type: none"> <li>• Use case study protocol</li> <li>• Develop case study database</li> </ul>	Data collection  Data collection

Source: Adapted from Yin (2002)

### **3.4.1 Construct validity**

Construct validity is ‘the ability of a measurement instrument to measure a construct or concept’ (Aaker & Day 1990, p. G3). Emory and Cooper (1991) stated construct validity can be achieved by developing correct operational measures for the concepts. However, most qualitative methods have the problems with construct validity, including case study research. Case study researchers are often doubted that the judgements from collected data are too “subjective”. As Table 3.2 above shows, three tactics could be implemented to achieve construct validity when doing case studies.

The first tactic is the use of multiple sources of evidence. As Yin (1989) stated, six sources are available including documentation, archival records, interview, direct observations, participant observations, and physical artifacts. Accordingly, this research will use different sources of data collection, including interviews (in-depth and focus group), survey questionnaires and existing literature. Multiple sources of evidence are also the strength of case study findings; without such multiple sources, an invaluable advantage of the case study strategy will have been lost (Yin 2002).

The second tactic is to establish a chain of evidence, also relevant during data collection. This tactic allows the reader of the case study to follow the derivation of any evidence, ranging from the initial research questions to the ultimate case study conclusions. Furthermore, the reader should be able to trace the steps in either direction (Yin 2002).

The final tactic is a review of the draft case study report by key respondents (Yin 2002). This could be made by allowing a supervisor and other coordinators to review the draft of the case research analysis, and also assists in the achievement of construct validity.

### **3.4.2 Internal validity**

The second test is internal validity. According to Yin (2002), internal validity is only a concern for the causal case study. The aim of this study is to explore the success factors of e-tailing in the Chinese context, rather than the causation. Moreover, this research is investigating real-life events, and does not undertake experiments under a controlled environment. Thus, the criterion of internal validity is inappropriate for this research. As an alternative criterion, credibility would be appropriate for this research, as suggested by Gummesson (1991). Credibility refers whether the findings reflect the reality of the phenomenon under investigation (Yin 1994). This can be achieved using strategies such as triangulation (Merriam 1988), pattern matching (Yin 2002) and checking the findings with all interviewees (Gabriel 1990).

As for construct validity, triangulation can be achieved by using multiple sources of evidence. Another tactic, pattern matching, is also used in this research to achieve credibility during the data analysis process. Pattern matching comprises the comparison of an empirically-based pattern, addressed in Chapter 2, with a predicted one. If the patterns coincide, the case study attains internal validity (Yin 2002). After generating the findings from the data, such results are sent back to the interviewees. Interviews then allow feedback to see if the results reflect the interviewees' ideas. If there is no feedback, the findings were valid.

### **3.4.3 External validity**

External validity is used to determine “whether a study’s findings are generalisable beyond the immediate case study” (Yin 2002 p37). In quantitative research, this could be achieved by drawing a representative sample by using simple random sampling or by controlling the sample size. However, in realism research, external validity has been a major barrier in conducting case studies, especially for the single case study. As Yin (2002) stated, single cases offer a poor basis for generalisation. The findings of this research can be used to test future (deductive) research for generalisability. However, in this research, the test of external validity is non-applicable.

### **3.4.4 Reliability**

Reliability tests are conducted to ensure that “the findings and conclusions of a research study would be replicated by a subsequent study following the same procedures” (Yin 2002 p37). In other words, whether it is possible that the same study is replicatable, using the same methods, and generating the same results (Gabriel 1990; Gummesson 1991).

In this case, reliability can be achieved during the data collection phase by providing a case research protocol, and developing a case research database (Yin 2002). A case research protocol allows the reader to link the research question to the research issues. In this research, a case research database is built to increase the reliability of the study. Case study data are often synonymous with the narrative presented in the case study report, and a reader has no recourse if the reader wants to know how the raw data led to the case study’s conclusions. And without a case study database, the raw data may not be available for independent inspection. As this is sufficiently important, this research will develop a formal, presentable database, so that in principle, other readers or investigators can review the evidence directly and not be limited to the written case study reports. Such a case study database markedly increases the reliability of the case study. The lack of a formal database is a major weakness of case study research and needs to be corrected (Yin 2002).

## **3.5 Criteria for case selection and number of cases**

### **3.5.1 Single case and multiple cases**

There are two common case study types suggested by Yin (2002): single case study and multiple case studies. A single case study can be used to build theory and refine concepts (Pettigrew 1985), and also enable the testing of a theory (Markus 1989). A single case study allows researchers to investigate phenomena in depth to provide rich descriptions and understandings (Walsham 1995). Yin (2002) indicated that a single case study is suitable under certain conditions. Firstly, as a revelatory case, such as in Liebow (1967). Secondly, as a critical case for testing an existing theory, such as

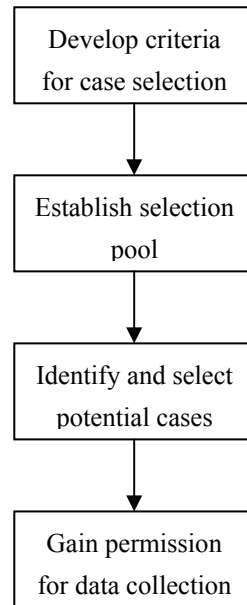
Allison's Cuba missile crisis (1971). Thirdly, an extreme or unique case, from which inferences can be easily drawn and generalised to less extreme cases (Westgren & Zering 1998).

Multiple case designs are desirable when the research is descriptive, theory building, and theory testing. Multiple cases may not be able to provide such rich descriptions as studies of single cases. However, as cited by Darke et al. (1998), Yin (1994) suggests that multiple-case designs allow cross-case analysis and comparisons, and the investigation of a particular phenomenon in diverse settings. However, multiple cases are more expensive and time-consuming to conduct. Eisenhardt (1989; 1991) provided a set of criteria to select the number of cases within multiple case designs, including how much is known about the phenomenon after studying a case and whether the collected data is sufficient to answer the research questions. Accordingly, she indicates that in general, four to ten cases could provide sufficient data.

### **3.5.2 Selection of case(s)**

To select the case(s) for this case study research, criteria were developed for case selection. Those criteria included: (1) multiple retail format; (2) state-owned enterprise; (3) have or have had an e-commerce system; (4) if there is only one case suitable for this research, then the case also needed to meet the single case requirements indicated in Section 3.5.1. A selection pool was established, based on the ranking of the top ten retailers, indicated in Chapter 2. The appropriate case(s) were then selected, based on the criteria. Lastly, permission was gained from the Human Resources Department of the case enterprise to allow the researcher to personally select the employees for both the in-depth and focus group interviews. Figure 3.2 shows the selection process of the case.

**Figure 3.2: Case selection process**



Source: Developed for this research

Referring to the ranking of the top ten retailers in China, (Table 2.10), the Shanghai Brilliance Group is the biggest retailer in China, is state-owned, has active e-commerce arms in its subsidiaries, and is the only retailer in the top ten to have a multiple retail format. Therefore, this company was the only one suitable for this case study, and is importantly a very unique and representative case in China's retail industry.

### **3.6 Data collection procedures**

Case study research can involve qualitative data only, quantitative only, or both (Yin 2002). As cited by Eisenhardt (1989 p538), “quantitative data could point out the relationships which may not be salient to the researcher, and qualitative data is important for understanding the rationale or theory underlying the relationships revealed in the quantitative data, or may directly suggest theory which can then be strengthened by quantitative analysis (Jick 1979)”. Many researchers have tended towards a combination of qualitative and quantitative methods to provide a richer, contextual basis for interpretation and validation of results (Gable 1994; Jick 1979;



Kaplan & Duchon 1988; Trend 1979) and suggested that combined methods have some advantages: it easy to build a richer picture surrounding a phenomenon; findings can be strengthened through the cross-validation achieved; explanations for diverging results can be drawn. Due to the advantages provided by the combined method, both qualitative and quantitative data were collected in this research. The qualitative data included in-depth interviews and focus interviews, and the quantitative data included survey questionnaires. Qualitative methods were used to investigate the variables relating to the organisation, while survey questionnaires were sent to random customers of the Shanghai Brilliance Group.

As indicated in Chapter 2, six groups of factors of e-commerce success were addressed in this research. Accordingly, the following Table (Table 3.4) shows how those factors were addressed by the research methods. The in-depth and focus group interviews addressed all six factors, including senior management factors, organisational factors, e-commerce factors, contextual factors, consumer factors, and aspects that measure e-commerce systems. The survey questionnaires were used to address the consumer factors and aspects that measure the e-commerce system relating to the customer perspective of B2C. The questionnaire was designed based on the literature as summarized in Table 3.3. Internal document (Brilliance Group 2005) and external reports (CNNIC) were used as a secondary source to triangulate the result.

**Table 3.3: literature based items**

<b>Item</b>	<b>Questionnaire item</b>	<b>Source</b>
• Website speed	Web page loading speeds should be acceptable	Liyayem Khalifa & Frini 2000
• Navigation	The navigation of an online shopping website is important	Liyayem, Khalifa & Frini 2000
• 24-hour availability	24/7/365 availability is a basic condition for an online shopping website	Molla & Licker 2001
• Ease-of-use	Ease-of-use is an important standard in system quality	Lee, Katerattanakul & Hong 2005;
• Accessibility	An online shopping website should be easily accessible	Liyayem, Khalifa & Frini 2000
• Accuracy	In an online shopping website, products should be described very well, with pictures, sound, videos	Liyayem, Khalifa & Frini 2000

	etc	
• Up-to-datedness	Information should be updated	Dholakia & Rego 1998
• Comprehensiveness	An online shopping website should have more products than traditional retailers	Liyayem, Khalifa & Frini 2000
• Understandability	The content of a website should be easy to understand	Molla & Licker 2001
• Completeness	The website and the information should be complete	Molla & Licker 2001
• New and special offers	Some new products or promotional offers should be put in an obvious place on the website	Lee, Katerattanakul & Hong 2005
• Contact information	The company details should be provided on the website, such as e-mail address, mail address, telephone, fax	Teo & Pian 2004
• Multimedia presentation	I would like to visit an online shopping website with multimedia presentation, such as text, images, sound, and video	Lee, Katerattanakul & Hong 2005
• Language options	A good website should have different language options	Muyllle, Moeaert & Despontin 2004
• Security	A secure online environment is important to me	Lee, Katerattanakul & Hong 2005
• Privacy	An online shopping website should keep customers' personal information confidential	Wong, Y.K, Hsu. C.J & Steele R 2005
• Product quality	A satisfactory product quality enhances the my trust of the website	Ba & Pavlou 2002; ACCC 2000
• Escrow service	An escrow service, such as a trusted third party, should be available to observe the transaction process	Ba, Whinstom & Zhang 2003
• Insurance	Insurance is useful for me to trust the website	Lee, Katerattanakul & Hong 2005
• FAQs	An FAQs function is very useful to enhance online customer service	Lee, Katerattanakul & Hong 2005; Teo & Pian 2004
• Search engines	An effective and efficient search engine should be available to assist customers	Adapted from ACCC 2000; Teo & Pian 2004
• Human assistance	24-hours call centre or effective human assistance is important to me	Aberg & Shahmehri 2000
• 24-hour service	E-commerce customer service should be available 24/7/365	Gefan, Karahanna & Straub 2003
• Delivery	The delivery method should be the same as the delivery terms and conditions I selected. Different delivery options should be available.	Ba & Pavlou 2002; ACCC 2000
• After-sales service	After-sales service is important to e-commerce	Gefan, Karahanna & Straub 2003
• Customisation	A personalised service is important to me	Singh 2002
• Feedback systems	A feedback and rating system is useful to the customer to make their purchase decisions	Lucking-Reiley 1999 Wong, Hsu & Steele 2005
• Communities	Online communities are useful and interesting	Lee, Katerattanakul & Hong 2005; Teo & Pian 2004

Source: Developed for this research

**Table 3.4: Data collection by different methods**

<b>Factor</b>	<b>Data source</b>
Senior management factors	Interview, Focus group
Organisational factors	Interview, Focus group
E-commerce strategy	Interview, Focus group
Contextual factors	Interview, Focus group
Aspects to measure the e-commerce system	Interview, Focus group, Questionnaire
Consumer factors	Interview, Focus group, Questionnaire

Source: Developed for this research

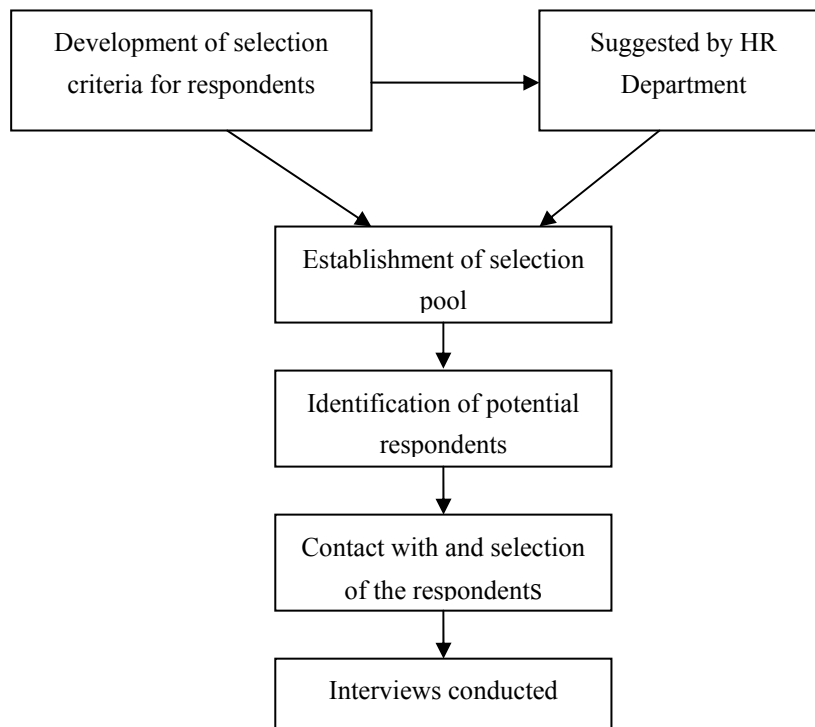
### **3.6.1 Data collection**

The data collection process for the main interviews and surveys was expected to take five to six months. The data collection included two sections: interviews (in-depth and focus group interviews) and questionnaire surveys. The interview questions and survey questionnaires were developed from the literature.

According to Carson et al. (2001), 35-50 interviews would provide a credible picture in a reasonable-sized study. As indicated in the previous section, this research is a single case research of a retail business, and it is impossible to have 35-50 suitable participants in one single case, even including the company subsidiaries. Moreover, not all the employees met the selection criteria (i.e. experience with the business operations of the group and its subsidiaries; knowledge of e-commerce). Therefore, this criterion of 35-50 participants was not suitable for this study. Alternatively, Patton (1990) suggested that information-richness is the primary criterion for identification of the number of participants, and this criterion was used in this research, rather than the criterion of fixed sample size as suggested by Carson et al. (2001). Data collection is concluded with diminishing returns from the incremental cases or interviews, or the researcher has enough cases and data to satisfactorily address the research question (Voss et al. 2002). The in-depth and focus group interviews for this research were established from six central open-ended questions.

An application letter for permission for the research to be conducted was sent to the Human Resources Department of the Shanghai Brilliance Group, prior to data collection. As soon as permission was attained from the company, the potential participants for the in-depth and focus group interviews were selected, based on the selection criteria and discussions with the Human Resource Department of the Shanghai Brilliance Group. The respondent selection process is presented in Figure 3.3. An information letter and a consent letter were sent to the potential participants prior to the interviews, to provide them with information on this research. The in-depth interviews focused on the middle-to-high level managers in the subsidiaries of the Shanghai Brilliance Group, while the focus group interviews focused on the low-to-middle level employees in the subsidiaries of the Group. Each interview lasted around approximately one hour. In total, sixteen in-depth interviews and three focus group interviews were conducted. The qualitative data collection process was completed when the data reached saturation level (Dick 2005).

**Figure 3.3: Process for selection of interviewees**



Source: Developed for this research

The purpose of survey questionnaires include the provision of multiple data sources to triangulate research findings and collect data related to customers which is difficult to collect through interviews. The target population of the survey questionnaires in this research was the customers of the Shanghai Brilliance Group. Due to the lack of a customer database, the survey questionnaires (Appendix 3.2) were sent to random customers in the shopping area of the Shanghai Brilliance Group. A covering letter was attached with the survey questionnaire to give to the survey respondents. A reasonable respondent sample size for survey interviews is between 100 and 200 (Hoelter 1983), as response rates for surveys may vary between 15% and 20% (Zikmund 2003). Therefore, the questionnaires were sent to 1000 potential respondents.

### **3.6.2 Case study protocol**

As suggested by Yin (2002 p67), “the protocol of single-case study research is a major way of increasing the reliability and is intended to guide the investigator in carrying out the data collection”. The protocol contains the instrument as well as the procedures and general rules that need to be followed. This section will briefly introduce the contents of the protocol and make the links between the interview protocol questions and the research questions.

Generally speaking, a case study protocol should consist of an overview of the case study project, field procedures, case study questions, and a guide for the case study report (Yin 2002). The interview protocol of this research followed these steps as well as the questions used to guide the interviews. The overview of the case study project was also provided in a letter of introduction, and sent to the interviewees of both the in-depth and focus interviews, and the organisation. As Yin (2002, p. 73) suggested, there are some preparations before the interview, include, “gaining access to the organisation and interviewees, ensuring sufficient resources while in the field and making a clear schedule of the data collection activities expected to be completed within specified periods of time”. The third step is the heart of the protocol, a set of

substantive questions reflecting the actual line of inquiry (Table 3.5). All interviews utilised the protocol of non-directive and open-ended questions to generate real, rich and deep data. However, Likert-style questions were also included in the questionnaire because of the disadvantages inherent in the exclusive use of open-ended questions in interviews.

The case study interview protocol is at Appendix 3.4, and includes three parts. Firstly, the background information about this project was introduced, including the research topic, aims, contribution, and benefit to the interviewees. Secondly, the data collection procedures and processes were presented to the potential participants, including informing them that the conversational environment would be friendly and non-pressured. Lastly, the protocol listed the research questions and issues.

**Table 3.5: The research issues and the corresponding interview question numbers**

<b>Research issue</b>	<b>Associated interview questions</b>
<b>Research issue 1:</b> <i>How is e-tailing being used in the Shanghai Brilliance Group?</i>	Questions 1, 2, 5
<b>Research issue 2:</b> <i>What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?</i>	Questions 1, 4, 5, 6; Questionnaire sections A, C
<b>Research issue 3:</b> <i>What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?</i>	Questions 1, 3, 4, 6; Questionnaire sections A, C, D

Source: Developed for this research

### 3.7 Analysis of case research data

Case study data analysis is one of the biggest challenges in case studies (Yin 2002). Both qualitative and quantitative data are collected in this study. Neuman (2006) summarised the similarities and differences of data analysis of qualitative and quantitative data which are outlined in Table 3.6. Yin (2002 p110) suggested “unlike quantitative research, there are few fixed formulas or cookbook recipes to guide the analysis process of the case study approach, and the analysis of case study data much depends on an investigator’s own style of rigorous thinking, along with a sufficient presentation of evidence and careful consideration of alternative interpretations”. According to Yin (2002), there are three general strategies for the analysis of qualitative data, including relying on theoretical propositions, thinking about rival explanations, and developing a case description. Five specific techniques could be used for analysing case study data: pattern matching; explanation building; time-series analysis; logic models; and cross-case synthesis. The first four techniques could be used whether a study involves a single or a multiple-case design. This section describes the process of analysis, thus providing guidelines for Chapter 4, Data Analysis and Findings.

**Table 3.6: Similarities and differences in quantitative and qualitative data analysis**

Similarities	Difference
<ol style="list-style-type: none"> <li>1. Both data style from the empirical details of social life.</li> <li>2. Both forms of analysis involve a public method or process.</li> <li>3. All qualitative or quantitative data analysis use comparison as a central process.</li> <li>4. Researchers strive to avoid errors, false conclusions and misleading inferences.</li> </ol>	<ol style="list-style-type: none"> <li>1. Quantitative researchers choose from a specialised, standardised set of data analysis techniques, while qualitative data analysis is less standardised.</li> <li>2. Quantitative data has to be analysed after the data collection, while qualitative researchers look for patterns or relationships early in the research project.</li> <li>3. Quantitative data is used to test a theory, while qualitative researchers create new theory.</li> <li>4. Quantitative researchers assume that social life can be measured by using numbers, while qualitative data are relatively imprecise, diffuse, and context-based.</li> </ol>

Source: Adapted from Neuman (2006)

### **3.7.1 Data analysis strategy**

This study is an exploratory case study which aims to build a theoretical model to measure the success of e-tailing in China's retail industry. Data analysis is the core of building theory from case studies, but is also the most difficult process (Eisenhardt 1989). Three general strategies are suggested by Yin (2002): relying on theoretical propositions; thinking about rival explanations; and developing a case description. Among those three strategies, relying on theoretical propositions was the first and most preferred strategy to be applied in this research, and a theoretical model has been identified in Chapter 2. Thus, this strategy was used to guide the data analysis of this research, as it is extremely useful for focusing attention on certain data and ignoring other data.

### **3.7.2 Data analysis technique**

#### **Quantitative data analysis**

As both qualitative and quantitative data were used in this study, both qualitative and quantitative data analysis techniques were applied. Two hundred valid questionnaires were collected, and the quantitative data was input into SPSS (statistics software). Firstly, demographic information, internet usage and online shopping activities were tested for their correlative inter-relationships: one way ANOVA was used to check the relationship between demographic information and Internet usage, because demographic information are ordinal scales or nominal scales, and Internet usage is interval scale; and contingency table analysis was used to test the relationship between demographic information and online shopping activities, because both of them are nominal or ordinal scales. Then, frequency statistics were conducted for sections C and D of the survey.

#### **Qualitative data analysis**

Unlike quantitative data, qualitative data normally produces huge amount of verbal data, depending on the integrative power of the researcher (Eisenhardt 1989). Previous literature (Dube 2003; Kaplan & Duchon 1988; Kelliher 2005; Taylor-Powell



& Renner 2003; Voss et al. 2002) introduced tactics to deal with qualitative data, and interestingly, similar logic and steps were detailed by these researchers. Miles and Huberman (1994) developed a comprehensively analytic technique which included five steps: (1) putting information into different arrays; (2) making a matrix of categories and placing the evidence within the relevant categories; creating data displays; (3) tabulating the frequency of different events; (4) examining the complexity of such tabulations and their relationships by calculating second-order numbers through means and variances; and (5) putting information in chronological order or using some other temporal scheme.

Accordingly, in this study, the following detailed steps as detailed in previous research were followed:

1. Within-case analysis: Manually review the transcripts, line-by-line and sentence-by-sentence, to discover the key patterns/themes and produce key words/phrases.
2. Produce labels/categories of these key words/phrases. Identify high-level factors and corresponding variables. Match these factors and variables with those from the literature. Revise and update accordingly without sacrificing any factors and variables obtained from the interview.
3. Organize the data as per the factors and variables that have been identified at step 2. As the data is being categorized, other themes that can serve as subcategories may be identified. Continue to categorise until all relevant themes have been identified and labeled.
4. Describe the meaning of categories including key characteristics, scope and limitations. Examples of text were coded into categories that illustrate meanings, associations and perspectives associated with the category.
5. Cross-case analysis: Identify the similarities and differences in the factors and variables under each factor.
6. Use the concept of “Union” in integrating the factors and variables, i.e. combine similar factors and variables and give them a common name. Retain the unique factors and variables.

7. Develop a final table include all the factors and variables identified through steps 1-6. (Kelliher 2005; Miles & Huberman 1994).
8. Develop the theoretical model of successful e-tailing in Shanghai Brilliance Group..

### **3.8 Limitations of case study methodology**

Researchers have suggested that every research method has different strengths and weaknesses. This section addresses three limitations in this case study research, and provides some relevant strategies to address each of these criticisms, to ensure this research remains rigorous, and produces real, rich, and deep data to answer the research question.

Firstly, a case study approach is possible to generate an overly complex theory. Therefore, prior theory was explored and the research issues were carefully developed to address this problem (Eisenhardt 1989). Secondly, external validity is a major weakness of the case study method of research, especially for a single case study, therefore, a new theoretical model will be tested in further research to achieve external validity, however this process is not applicable in this research (Yin 2002). Thirdly, case study research is difficult to conduct, therefore a case study protocol was carefully developed to guide the case research (Yin 2002).

Case study research involves the limitations listed above. However, those limitations can be addressed through careful research design, and are outweighed by the advantages of the case study method, which provides insights and rich findings.

### **3.9 Ethical considerations**

Research ethics is another important concern which needs to be carefully considered in social research (Leedy 1997). Qualitative researchers have the opportunity to explore the private spaces of the world, and they therefore should protect the rights of the respondents or participants. As Emory and Cooper (1991) stated, without carefully

research design, any research methods are possible to cause physical harm, discomfort, pain, embarrassment, or loss of privacy to the participants.

Two approaches have been employed to overcome the ethical issues of this research. Firstly, the interviewees were given information on the purpose of the research. The case study protocol ensured that an ethically responsible research exercise was conducted. An information letter and informal consent were sent to all interviewees before the interviews began, and the participation is totally voluntary basis. Also, the interviewees were told that any information would be confidentiality before the interviews commenced. The data is only accessible by the researcher and his supervisor (issue 1). A recorder machine was used during the interviews, however, the recorder would be turned off if any interviewee requested, and the information would be written manually. Participants could withdraw from this research at anytime (issue 2).

Secondly, the ethical issues in this research were strictly checked by the HREC (Human Research Ethics Committee) of Southern Cross University. As the committee was satisfied with the ethics application, an ethical approval number was given to conduct the data collection procedure (see appendix 3.3). This enhanced the quality of the evidence gathered and improved the overall quality of this research.

### **3.10 Chapter summary**

Chapter 3 presented a discussion of and justification for the qualitative research methodology employed in this research, and the following issues were addressed:

- Realism has been justified as the most suitable paradigm for this study.
- Based on the nature of this study, the case study methodology was justified as the most appropriate approach.
- Four quality criteria were outlined, which were used to test the rigor of this research.

- One single case was selected, and both interviews and survey questionnaires were used to collect data.
- Relevant data analysis strategies and techniques were identified.
- Limitations and ethical considerations were addressed.

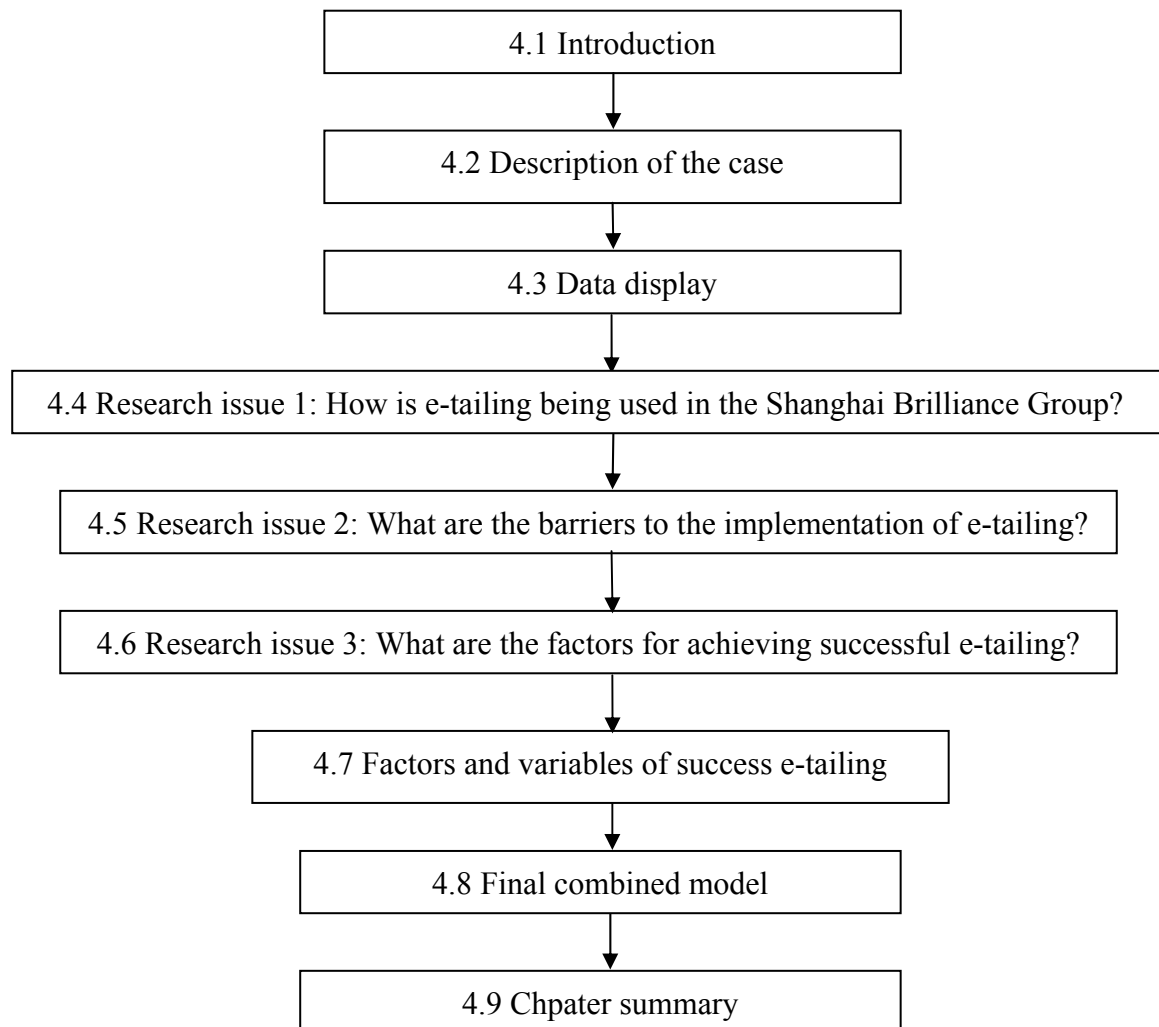
In the next chapter, the collected data is analysed based on the identified strategies and techniques.

## Chapter 4: Data Analysis and Findings

### 4.1 Introduction

Chapter 1 introduced the main structure of this research. The three parent disciplines, e-commerce, the retail industry and the retail industry in China, and success factors of e-tailing were reviewed in Chapter 2, and the research gap and research issues were identified. Chapter 3 presented the research methodology and justified the single case study as a suitable method for this research. In this chapter, the collected data from the primary sources are analysed to answer each of the research issues. The following figure (Figure 4.1) outlines the structure of this chapter.

**Figure 4.1: Structure of Chapter 4**



Source: Developed for this research

## 4.2 Description of the case

As discussed in Chapter 3, a single case study is the research methodology chosen for this research. The Shanghai Brilliance Group was selected for its uniqueness in terms of size, market share, number of stores, assets, and employee numbers. Interview participants were selected from eight main sub-organisations, which represent most retailing models, including department stores, supermarkets, and the administration. From this broad range of participants, an effective overview of the e-commerce operations in the Shanghai Brilliance Group can be generated. In total, sixteen in-depth interview participants were selected, from participants in the high-middle levels of those subsidiaries. Three focus group interviews were conducted among the Shanghai Brilliance Group subsidiaries. Table 4.1 shows the list of subsidiaries according to their retailing model, and the numbers of participants in those subsidiaries.

**Table 4.1: Retailing model of subsidiaries and number of participants**

<b>Name of Subsidiaries</b>	<b>Sub-organisations</b>	<b>Number of interviews</b>
Shanghai No.1 Department Store	Department store	3 in-depth interviews and 1 focus group interviews
Oriental Shopping Centre Ltd	Department store	5 in-depth interviews and 1 focus group interviews
Shanghai No.1 YaoHan Ltd	Department store	1 in-depth interviews
Shanghai YongAn Ltd	Department store	1 in-depth interviews and 1 focus group interviews
New Hua Lian Ltd	Department store	1 in-depth interviews
Shanghai Brilliance Co. Ltd (Administration)	Administrative company	2 in-depth interviews
Lian Hua Supermarket Co.Ltd	Supermarket	1 in-depth interviews
Hua Lian Supermarket Co. Ltd	Supermarket	2 in-depth interviews

Source: Developed from case study database

Table 4.2 provides information on the participants, who were selected on the basis of their position and knowledge of e-commerce, including IT Managers, operation managers, and general managers. Due to reasons of privacy and confidentiality, the real names of the participants are not cited directly, but replaced by the letters A to P and the numbers 1 to 7. The cases were coded by the interview date.

**Table 4.2: In-depth interview respondents' information**

<b>Code</b>	<b>Company</b>	<b>Position</b>	<b>Interview date</b>
A	Shanghai YongAn Ltd	IT Manager	13/4/2006
B	Shanghai No.1 YaoHan Ltd	IT Manager	20/4/2006
C	Shanghai No.1 Department Store	Vice-General Manager	29/4/2006
D	Oriental Shopping Centre Ltd (Nan Dong)	IT Manager	09/5/2006
E	Shanghai No.1 Department Store	Director of General Manager's office	11/5/2006
F	Oriental Shopping Centre Ltd (Nan Dong)	Vice general manager	12/5/2006
G	New Hua Lian Ltd	General manager	12/5/2006
H	Shanghai Brilliance Co. Ltd	IT Manager	15/5/2006
I	Shanghai No.1 Department Store	Marketing Manager	16/5/2006
J	Oriental Shopping Centre Ltd (Xu Hui)	IT Manager	18/5/2006
K	Shanghai Brilliance Co. Ltd	Vice-IT Manager	18/5/2006
L	Oriental Shopping Centre Ltd (Xu Hui)	Vice-General Manager	25/5/2006
M	Lian Hua Supermarket Co.Ltd	General Manager	30/5/2006
N	Orient Shopping Centre Ltd (Nan Dong)	9 <sup>th</sup> Floor Manager	05/6/2006
O	Hua Lian Supermarket Co. Ltd	IT Manager	06/6/2006
P	Hua Lian Supermarket Co. Ltd	Call Centre Manager	08/6/2006

Source: Developed from case study database

Moreover, quantitative data were collected from the customer sector. One thousand questionnaires were sent to random customers in the shopping areas of the Shanghai Brilliance Group, leading to 286 returned questionnaires. Of those, 86 questionnaires were found to be incomplete and the author assumed that these respondents were not fully committed to the survey. This resulted in 200 valid responses; a response rate of 20%. This return rate is acceptable, as suggested by Hoelter (1983). Thus, 200 valid questionnaires were selected for data analysis.

Among the selected customer respondents, 57% were female, showing that there were more females in the shopping centre areas. One hundred and ninety-nine respondents indicated their age, with only one respondent withholding age information. Overall, the majority of the respondents were 21-29 years old (43.7%), followed by those 15-20 years old (23.6%). Twenty-one point six percent of respondents were between 30 and 39 years old. Only 7.5% of the respondents were 40-49 years old, and only 2.5% were 50-59 years old. In total, 199 respondents supplied their education level, and over half had Bachelor degrees (27.6%) and graduate diplomas (31.2%). Another majority group was high school students, with 19.6% having attended high school and 17.1% having completed high school. Only 3% of respondents had a Master's degree, and 1.5% had obtained a diploma. Moreover, 66% of the respondents had a business academic background. Other academic training was represented, in smaller percentages. Only 8% of the respondents were arts/literature/language graduates and 4% had a computer academic background. Social sciences were the fourth-largest group, with only 2% of respondents. Three further academic fields were represented, but only occupied 0.5% of respondents, meaning that there was only one respondent for each of these three academic backgrounds. One hundred and ninety-four respondents indicated their income level. The majority household income before tax annual was less than RMB 60,000. The largest group was in the range RMB 15,000 to RMB 30,000 (31.4%). The second largest group was in the range RMB 30,001 to RMB 60,000, with 25.8%, followed by the group with a household income of less than RMB 15,000, at 24.7%. Nine point eight percent of the respondents were in the



range RMB 60,000 to RMB 90,000, and only 8.2% of respondents earned more than RMB 90,000 annual household income before tax. All of these percentages were calculated in exclusion of the missing data.

### 4.3 Data display

Due to the fact that both qualitative and quantitative data were collected, the data will be displayed based on the data collection method, including in-depth interviews, focus group interviews, and survey questionnaires.

Categorisation of the data collected from the in-depth and focus group interviews was based on the factors and variables addressed in Chapter 2. The frequency of each variable is presented in Section 4.7. The percentages indicate the importance of the factors. Table 4.3 shows an example of the table of factors and variables from the in-depth and focus group interviews.

**Table 4.3: Factors and variables from in-depth/focus group interviews**

Code	Respondent A	Respondent B	Respondent C	Respondent .....	Total	%
Factors						
Variable 1						
Variable 2						
Variable 3						
Variable 4						
Variable .....						

Source: Developed for this research

Descriptive, frequency and correlation tests (ANOVA and Contingency table analysis) were conducted on the quantitative data for related variables.

#### **4.4 Research issue 1:** How is e-tailing being used in the Shanghai Brilliance Group?

This section aims to answer research issue 1: How is e-tailing being used in the Shanghai Brilliance Group? As Table 4.1 shows, seven subsidiaries and one administration organisation of the Shanghai Brilliance Group were identified, and all sixteen in-depth interviews and the three focus group interviews were conducted in these subsidiaries. The researcher used both within-case analysis and cross-case analysis to answer this research issue. Within-case analysis was used to describe the situation of e-tailing within each subsidiary, and cross-case analysis was used to explore the similarities and differences, and triangulate the result.

##### **4.4.1 Within-case analysis**

This section analyses the current situation of e-commerce for each of those subsidiaries in the Shanghai Brilliance Group represented by the participants. The tables below summarise the situation for each company, including the retail model, website name, and e-commerce activities.

##### **Subsidiary 1: Shanghai No.1 Department Store**

Shanghai No.1 Department Store is one of the largest department stores in China. Three in-depth interviews (C, E, and I) and focus group A were employed in this subsidiary. Shanghai No.1 Department Store has the longest history in the Shanghai Brilliance Group, with over 50 years history, and ‘it has over 1200 employees and sales revenue of RMB1.15 billion in 2005’ (respondent C).

Respondent E described their e-commerce system as, ‘the real e-commerce has not started yet, we only have a website, and it is just used for promotion.’ Later on, she added: ‘We co-operate with Dong Fang net, which has just introduced some information on our company; the content is very simple, the introduction to our store and some promotional information, actually, there is no interaction.’ This was supported by respondent I and focus group A. Respondent I also noted: ‘We just put some information online, and as far as I know, most of the information is fixed, hardly

ever updated.’ Both of them pointed out that ‘e-commerce is empty’ in their company. Respondent D and participant 5 of group A complained that there was no specific team in charge of the website: ‘Only (respondent D) and I take responsibility for putting information on the website.’ Table 4.4 gives the profile of e-commerce operations in Shanghai No.1 Department Store, and Figure 4.2 provides the main web page of the company.

**Table 4.4: Profile of e-commerce in Shanghai No.1 Department Store**

<b>Name of subsidiary</b>	<b>Retailing model</b>	<b>Website</b>	<b>e-commerce activities</b>
Shanghai No.1 Department Store	Department store	<a href="http://www.shdsno1.com">www.shdsno1.com</a>	Company introduction, and promotion information

Source: Developed from case study data

**Figure 4.2: Website of Shanghai No.1 Department Store**

Figure removed due to copyright restrictions

Source: <http://www.shdsno1.com/page3.htm>

## Subsidiary 2: Shanghai YongAn Department Store

YongAn Department Store is another important founding subsidiary of the Shanghai Brilliance Group. The previous name was Shanghai Hua Lian Department Store, changed to YongAn on 28 April 2005. Their website is [www.yongan.sh.cn](http://www.yongan.sh.cn). One in-depth interview and one focus group interview were conducted in this subsidiary.

The YongAn Department Store website is more advanced than Shanghai No.1 Department Store in terms of function, as respondent A stated: ‘We have a website, we call it the online store, and this website is mainly focused on both supplier and individual customer.’ However, the online sales have not started to operate yet: ‘Suppliers can check stock information and sales from the website. Also, the website introduces information about our company to the customer, VIP customers can check their accounts online. So far, the website has been implemented for one year, is still in the first stage, and online sales is the next stage.’ When respondent A was asked how many people take responsibility for the website, he suggested that there was one person taking care of it. The situation of e-commerce in YongAn Department Store is summarised in Table 4.5 and Figure 4.3.

**Table 4.5: Profile of e-commerce in Shanghai YongAn Department Store**

<b>Name of subsidiary</b>	<b>Retailing model</b>	<b>Website</b>	<b>E-commerce activities</b>
Shanghai YongAn Department Store	Department store	<a href="http://www.YongAn.sh.cn">www.YongAn.sh.cn</a>	B2B, Company introduction, and promotion information provider, VIP customer service

Source: Developed from case study data

### **Figure 4.3: Website of YongAn Department Store**

Figure removed due to copyright restrictions

Source: <http://www.yongan.sh.cn/>

### **Subsidiary 3: Shanghai Oriental Shopping Centre**

Shanghai Oriental Shopping Centre is the only franchised department store in the Shanghai Brilliance Group. At the end of the interview process, they had seven franchise stores in China, and were still growing. Their website is named [www.herepop.com](http://www.herepop.com). Due to the size of the organisation, five in-depth interviews and one focus group interview were conducted in this organisation.

The purpose of the website is similar to the other subsidiaries, as respondent L indicated that: ‘We have operated this website for one year, and so far it is still used for giving information to customers, such as company information and product information’. Later on she added: ‘The website is operated by a team which co-operates with a third party IT developer’. During the research process, the researcher was told that Shanghai Oriental Shopping Centre was planning to implement their online sales by the end of May 2006, and the online sales system commenced at the end of June 2006. Thus, Shanghai Oriental Shopping Centre is the sole department

store operating online sales in the Shanghai Brilliance Group. However, as a franchise company, online sales can only be conducted by the headquarters store - XuHui Store. Some respondents from the other franchise stores complained about this situation and they are seeking to build their own online website. For example, respondent D pointed out that: ‘There is only some information about us on their website (herepop.com), it is not a franchise, we only have one webpage.....therefore, we are planning to have our own website.’ This was supported by Focus group C. Table 4.6 and Figure 4.4 depict the e-commerce situation and the website of Shanghai Oriental Shopping Centre

**Table 4.6: Profile of e-commerce in Shanghai Oriental Shopping Centre**

Name of subsidiary	Retailing model	Website	E-commerce activities
Shanghai Oriental Shopping Centre	Department store	<a href="http://www.herepop.com">www.herepop.com</a>	B2B, Company introduction, and promotion information, VIP customer service (such as check award point), online shopping

Source: Developed from case study data

**Figure 4.4: Website of Shanghai Oriental Shopping Centre**

Figure removed due to copyright restrictions

Source: [www.herepop.com](http://www.herepop.com)

#### **Subsidiary 4: Shanghai No.1 YaoHan Department Store**

Shanghai No.1 YaoHan Department Store is the biggest retailer in the Shanghai Brilliance Group operating under the department store retail format, in terms of sales revenue. Only one participant from the IT department was invited to participate in this research. Their website is [www.no1yaohan.com](http://www.no1yaohan.com), which began operations in 2005.

According to respondent B, the e-commerce system was built by the IT division of Shanghai No.1 YaoHan Department Store. The website of YaoHan Department Store is also focused on both suppliers and customers, including updating promotional information, VIP member information, and sales information for suppliers, but does not include online sales, as summarised in Table 4.7. Figure 4.5 shows the Shanghai YaoHan Department Store website.

**Table 4.7: Profile of e-commerce in Shanghai YaoHan Department Store**

<b>Name of subsidiary</b>	<b>Retailing model</b>	<b>Website</b>	<b>E-commerce activities</b>
Shanghai No.1 YaoHan Department Store	Department store	<a href="http://www.no1yaohan.com/">http://www.no1yaohan.com/</a>	B2B (inventory check), Company introduction, and product promotion, VIP customer service

Source: Developed from case study data

#### Figure 4.5: Website of YaoHan Department Store

Figure removed due to copyright restrictions

Source: <http://www.no1yaohan.com/>

#### Subsidiary 5: Shanghai Xin Hua Lian Department Store

Shanghai Xin Hua Lian Department Store was the final department store interviewed, and is the only department store operating without a website. The general manager of this department store was interviewed.

The respondent explained that the store does not have an independent website because the store is one of the subsidiaries under the Shanghai Hua Lian (YongAn) Department Store.

**Table 4.8: Profile of e-commerce in Shanghai New Hua Lian Department Store**

<b>Name of subsidiary</b>	<b>Retailing model</b>	<b>Website</b>	<b>E-commerce activities</b>
Shanghai New Hua Lian Department Store	Department store	None	N/A

Source: Developed from case study data



### **Subsidiary 6: Lian Hua Supermarket Co Ltd**

Lian Hua Supermarket is the chief player in the supermarket industry in the Shanghai Brilliance Group, and it seems to be the most successful e-commerce player in the group, in terms of launch time, sales revenue and number of members. The company commenced its e-commerce venture in September 2000. At the time of this research, three e-commerce websites were operating, providing different services to customers, and in total 14000 products were available online. This website was built by the subsidiary's own e-commerce company (Shanghai Lian Hua E-commerce Company). The general manager of Lian Hua E-commerce Company was interviewed.

As stated by respondent M, the function of the website is to focus on the customer, including online sales, customer service, and VIP service. He also noted: 'The size of their e-commerce has reached RMB5.2 billion from their e-commerce member cards, and the number of members has reached 7.5 million, including 4 million in Shanghai'. The situation of Lian Hua e-commerce is summarised in Table 4.9 and Figure 4.6 presents the website.

**Table 4.9: Profile of e-commerce in Shanghai Lian Hua Supermarket**

<b>Name of subsidiary</b>	<b>Retailing model</b>	<b>Website</b>	<b>E-commerce activities</b>
Shanghai Lian Hua Supermarket	supermarket	<a href="http://www.lhok.com">www.lhok.com</a>	Online shopping, customer service and VIP service such as award point checking

Source: Developed from case study data

#### **Figure 4.6: Website of Lian Hua Supermarket**

Figure removed due to copyright restrictions

Source: [www.lhok.com](http://www.lhok.com)

#### **Subsidiary 7: Hua Lian Supermarket Co Ltd**

Hua Lian Supermarket launched its e-commerce activities in 2002. The IT and call centre managers were interviewed for this research.

As respondent O noted, the company's e-commerce operations include 'B2B and B2C, such as supply chain management, online sales, and an introduction to the company.' However, she also suggested that the function of online sales could be ignored due to poor performance. Respondent P pointed out that there is no specific department, team or person in charge of e-commerce: 'Our Hua Lian Supermarket does not have a particular division or person responsible for the website, but the divisions co-operate amongst themselves. In my department, only two out of eight are working on e-

commerce.’ Table 4.10 and Figure 4.7 present the current status and website of Hua Lian Supermarket.

**Table 4.10: Profile of e-commerce in Shanghai Hua Lian Supermarket**

<b>Name of subsidiary</b>	<b>Retailing model</b>	<b>Website</b>	<b>E-commerce activities</b>
Shanghai Hua Lian Supermarket	Supermarket	<a href="http://www.962828.com">www.962828.com</a>	Online shopping, customer service, company introduction.

Source: Developed from case study data

**Figure 4.7: Website of Hua Lian Supermarket**

Figure removed due to copyright restrictions

Source: <http://www.962828.com/index.jsp>

#### **4.4.2 Cross-case analysis**

According to the data collected from both in-depth interviews and focus group interviews, the Shanghai Brilliance Group has a relatively poor e-commerce operation, despite being the biggest retailer in China. All of its subsidiaries operate their e-commerce in different ways, apparently without any control by the Group. Table 4.11 summarises the situation of e-commerce in the subsidiaries of the Shanghai Brilliance Group. The first column shows the name of the subsidiary, and the retail format follows, in the second column. The third and fourth columns present the website and its function, and include name, year, B2B and B2C. The builder or operator of the e-commerce operation in those subsidiaries is identified in the last column.

It is worth noting that six out of seven subsidiaries have an operating website. Both supermarkets have been operating websites for at least three years and the department stores launched their websites after the supermarket stores. Moreover, in total, three websites offer online sales, only one department store out of five allows online sales, and both supermarkets have an online sales function on their site. Most of the department store websites only allow customers to view company and promotional information, and lack online interactivity.

Another interesting finding from this research was that two out of the three companies offering online sales have a separate division or company to take responsibility for the e-commerce operations. The rest of the companies have either none or limited human resources dedicated to e-commerce.

Overall, the Shanghai Brilliance Group's e-tailing is still in the preliminary stages in terms of revenue, launch date, functions, and human resources. However, within the Shanghai Brilliance Group, the supermarkets have a more advanced e-commerce business than the department stores.

**Table 4.11: Current situation of e-commerce in the Shanghai Brilliance Group**

Company	Retail model	Website (launch year)	Function		Developer	Maintenance
			B2B	B2C		
Shanghai No.1	Department store	<a href="http://www.shdsno1.com">www.shdsno1.com</a> (2005)	None	Provide information about company and promotion	Dong Fang Net	Maintained by director of general manager's office
Yong An	Department store	<a href="http://www.yongan.sh.cn">www.yongan.sh.cn</a> (2005)	Information sharing about sales, product stock, and checkout	Information providing, such as membership, promotion, and company	Yong An IT division	Maintained by only one employee in the operations division
No.1 Yao Han	Department store	<a href="http://www.scea.org.cn">www.scea.org.cn</a> (2005)	Information sharing about suppliers' account	Provide promotion information, VIP information	Third party developer	Maintained by IT division
Oriental Shopping Centre	Department store	<a href="http://www.herepop.com">www.herepop.com</a> (2005.5)	None	Information on sales, product, and promotion; online shopping (Oct 2006)	Third party developer	Maintained by third party developer
New Hua Lian	Department	None	None	None	None	None
Lian Hua	Supermarket	<a href="http://www.lhok.com">www.lhok.com</a> (2000.9)	None	Online shopping, membership service	Lian Hua e-commerce company	Lian Hua e-commerce company
Hua Lian	Supermarket	<a href="http://www.962828.com">www.962828.com</a> (2003)	Supply chain management	Online shopping, promotion information	Third party developer	Cooperation between divisions

Source: Developed for this research

## **4.5 Research issue 2: What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?**

This section addresses the barriers to implementing e-tailing in the Shanghai Brilliance Group, and will assist the company in understanding the problems associated with implementing e-tailing in the Shanghai Brilliance Group, as well as in China's retail industry in general. Using the information from this research, the company will be able to make appropriate plans and set strategies to overcome those difficulties, which include barriers in the external environment and the internal organisational environment.

### **4.5.1 External barriers**

#### **High cost of computer and internet access**

Six participants of the in-depth interviews mentioned that computer and internet facilities are the basic requirements of e-commerce: '....., if someone wants to shop online, PC and internet access are the basic requirements' (respondent A).

The phrase 'popularity of personal computers (PC)' was the most frequent phrase used by respondents. For example, 'This (e-commerce) has to be accepted by customers, but how many Chinese customers have computers? How much internet access they have, .... So I think this is a problem of computer popularity.' (respondent F). This opinion was supported by other respondents (C, F, G, and P).

#### **Lack of payment facilities and banking services**

Fifty percent of participants stated that e-commerce needs support from banks to supply effective payment facilities, and almost all of them were dissatisfied with the banking service. For example: 'It's not easy to conduct online shopping, it includes online payments, the relationship with the bank, and reliability, and it's not so easy.' (respondent A). Respondent F used the word 'terrible' to describe the banking services.

‘Security’ was one of the issues that participants worried about in relation to online payments and banking services. Respondent E noted that bigger banks might have better security, but not the small banks. Respondent O also argued, ‘The password is possible to be stolen, this makes the customer distrustful of online trade.’

Another issue mentioned by respondents was the high charge rate. For example, respondent H said: ‘We have thought about online payments; the main problem is the expense, like CHINAPAY, we have to pay 2%-3% to the bank.’ This was also supported by respondent O.

All three focus groups suggested that the payment facilities and banking services were not satisfactory. Participant 3 of group B made a comment about current banking services and payment facilities: ‘online payment is a problem, very complicated. There is a long process to registe online bank, I need to go to the bank 3-4 times only for a card, its not convenience.’

Three participants complained about the complication of online payments and banking services. Participant 1 of group A said: ‘Online checkout problems must be resolved to make the system effective, because the payment processes are very complicated. We have talked to the bank several times (nothing happens).’ Participant 1 of group B used her experience to describe the complications: ‘Online payment is a very complicated problem. Firstly I have to register; and the registration process is very long. I have been to the bank 3-4 times, which is inconvenient.’ This was supported by participant 2 of group B: ‘I went to the bank; and it took a long time to register. In the end, I didn’t register because I forgot the passwords, because there are too many of them.’

### **Advanced retail networks**

Three participants from the in-depth interviews stated that advanced retail networks have a negative effect on e-commerce.

Respondent B described the activities of netizens: ‘I believe they use the internet mainly to watch the news and play games, and would not shop online intentionally. There are a lot of stores around this area.’ Respondent M argued that online shopping may not be as convenient, due to there being too many physical stores: ‘Shanghai’s retail network is very good, customers only need to spend 5 minutes walking to the nearest stores.’

### **Cultural distrust**

Culture was mentioned by four out of the sixteen participants as well as one focus group, as one of the barriers to China’s e-commerce.

Two respondents linked culture to consumer attitudes and the popularity of the credit card. For example, respondent E said: ‘I think it is related to our consumer attitudes; the payment method is the key. In western countries, it is all electronic, but we do not have the capability to do that, we cannot even promote credit cards.....’ This opinion was supported by respondent H: ‘This is because of the popularity of the credit card, which is very popular in foreign countries. I carry more cash and use the credit card less.’ Respondent I used the word ‘cautious’ to describe the Chinese customer. Participant 1 of group C defined the culture as lacking trust: ‘I think the first problem is trust, because of the cultural background.’

### **Lack of legal framework and policy**

Seven out of the sixteen participants said that policy and legal frameworks might be a factor that affects the development of e-commerce in China’s retail industry.

Some participants thought that there were few policies in China. For example, respondent E said: ‘The most important thing is to have a law. Firstly, we lack laws and rules. The information law was just established last year, but is not operative. Secondly, when we do have laws, are the laws enforceable?’. Respondent F linked policy to online security: ‘How many state policies or bank rules can guarantee that an



online payment is 100% secured? ... ethics in China is worse than in western countries, so in the hard environment (law and policy) and the soft environment (ethics),..... E-commerce still has a long way to go in China'.

Policy and legal frameworks were mentioned by four participants as necessary to make the online environment secure. Respondent L suggested that: 'The government should make a law to control online trading, and treat online cheating seriously, like a crime.' This was supported by respondent D: 'There is no law at all. It is better to have some punishment for stealing customer information. It is difficult to handle if we are just concerned with technology. Lack of punishment must be a problem.'

All three groups mentioned policy as another important factor affecting the development of e-commerce. Participant 2 of group A suggested that a system or policy should be addressed to inspect e-commerce activities. Participant 5 of group A talked about the fact that there is no law to protect online companies from hackers: '.....we call the police, but there is no method to stop them, we can do nothing about it.' This was supported by participant 3 of the same group: 'Online banking is still very weak; an electronic signature law was just published, a law to control online crime. It's a bit better now.'

Participant 3 of group B provided an example to show the mismatch between the current law and e-commerce operations: 'It is illegal to transport perfume between different locations; some legal issues are involved, so we may change the name of the product, but if we follow the law, it is illegal.'

Groups B and C talked about a recent activity organised by the industry association to encourage the development of e-commerce. Jing Ding is a government-organised retailers' competition in which an e-commerce sites gain points for retailers. When the participants were asked about how e-commerce reaches their customers, participant 2 of group C said: 'As long as the organizers of Jing Ding know, it is

enough.’ This demonstrates that e-commerce operators do not really care about their customers, but open websites for Jing Ding competition only. However, it shows that policy is useful to encourage companies to conduct e-commerce.

### **Education in e-commerce**

Seventy five percent of the in-depth interviewees (see table 4.15) noted that online shoppers need the necessary knowledge to shop online. Respondent A said: ‘Not many people know how to use e-commerce’. Respondent B linked the educational system to knowledge of e-commerce: ‘So far, many people do not know how to use it. Of my generation, who were born in the early 70s, many may not know how to operate it. Like me, if I was not doing this job, I would not know how to shop online.’ He also linked the overseas study experience to knowledge of e-commerce.

Five participants used the word ‘white collar’ to describe knowledge, for example, ‘White collar workers can accept the new technology, but blue collar workers do not have opportunities to learn PCs’ (respondent B).

As in the in-depth interviews, the words ‘students’ and ‘white collar’ were often repeated by groups A and C, to describe education. Participant 5 of group A explained: ‘Online consumers are mainly students and white-collar workers, they have consuming habits, and know how to use computers.’

The survey results also supported this viewpoint. A significant relationship was found between education and online shopping activity,  $X^2$  (D.F. = 5, n=199) =13.007,  $p<.05$  (Appendix 4.2).

### **Physical shopping experience**

Eleven participants suggested that e-commerce was still in a preliminary stage due to the need of consumers for the physical shopping experience. Most of the participants mentioned that besides products, physical retailers also provide services, for example:

‘I always believe e-commerce is a new sales channel. We do not attract customers by our products but conveniences in traditional department store. I sell products, but the additional value is service. It is different with supermarkets, because it is a different retail format; customers come to our store to enjoy the service’ (respondent A). Respondent D also noted that they offer service to customers, especially to their VIP customers: ‘We do not have much demand for this (E-commerce), especially as our customers, and especially our VIP customers, would like to shop in our stores by themselves. They are rich, and they may want to enjoy the service.’

Another participant from the same organisation described the physical shopping experience as social communication: ‘More people are enjoying the shopping process. This might be more important than the shopping results; most girls want to have some friends to shop with - they may argue about the products, and finally even not buy the products’ (respondent F).

Respondent L used the words ‘leisure’ and ‘entertainment’ to describe the physical shopping experience: ‘People think that going to a department store is a kind of entertainment, they do not treat it like a task.’ Respondent M also suggested, ‘Chinese people feel good about spending money and they would like to bring their wife and children to a department store.....that feeling cannot be replaced by e-commerce.’

All three groups also mentioned that the physical shopping experience is one of the barriers to e-commerce. ‘Consumer habit’ was often repeated by participants, for example, participant 3 of group A said: ‘in our traditional culture, if I want to buy something, I have to feel it physically, then decide to buy or not. This is the habit of our customers.’ Participant 1 of group B also provided a similar opinion: ‘It does not feel like reality, maybe because we have always shopped physically, ever since childhood.’

Some other participants thought physical shopping was a kind of relaxation, and that shopping physically is an enjoyable process. Participant 2 of group B said: 'People want to be served, they enjoy the shopping process, people still like to "guangjie" (physical shopping).'

#### **4.5.2 Internal barriers**

##### **Senior management commitment**

The level of commitment of senior management was mentioned by twelve out of the sixteen in-depth interview participants. Senior management commitment refers to the senior executives' favourable attitude towards, and explicit support for, the project (Molla 2004). The participants indicated that senior management commitment leads to other effects of the implementation of e-commerce in the organisation. For example respondent A connected senior management commitment to investment:

*'If the enterprise thinks e-commerce is a serious strategy, there must be some moves. So far, there is not much investment as the conditions are not conducive.'*

Similar to respondent A's comments, respondent D also linked senior management commitment to investment: 'E-commerce was not well-developed in the early stages, and the leaders were not so concerned about it. Normally, we only did some up-dating, and not much investment, and the website was not effective.'

Some participants also pointed out that there is no separate division in charge of the e-commerce operation centrally, due to the lack of commitment at the senior management level. For example, according to respondent D, e-commerce is being temporarily operated by the marketing department in the organisation. Respondent I stated: 'I think e-commerce can be implemented smoothly, but the key is whether you (the enterprise) take it seriously; it does not work if it depends on one of the divisions or co-operation between divisions.' This was supported by respondent M:

*'In the early stages, we had support from senior management; we had a plan; each division co-operated with the other, such as for data, information, checkout processes, and all were supported from the senior management level. We also had two special meetings - coordination meetings. If I am not at this level (general manager of an e-commerce company, which is equal to the vice-general manager in the Group) or a department manager, I cannot talk about the business with other vice-managers who are in charge of the financial and marketing departments. I would not have such power to deal with the business as a middle-level manager.'*

Five participants suggested several reasons for the lack of senior management commitment. Those reasons included strategic direction and the knowledge of the senior management level of e-commerce. For example, respondent E noted that: 'I think it all depends on whether the company is willing to invest some resources in e-commerce, depending on whether they understand the importance of e-commerce. Firstly, they do not understand the importance, or even the basic concepts of e-commerce. If they knew, they might set a specific division to be in charge of e-commerce, such as Lian Hua.' Respondent H mentioned that e-commerce does not match the current strategy: 'In the IT strategy based on the Group's strategic direction, we have mentioned e-commerce, but obviously, it's not important. Currently, we seek profit and size, e-commerce cannot provide either of these (in the short term).'

All three groups also mentioned that there was a lack of senior management commitment for e-commerce in their organisation. When the question was asked, participant 5 of group A laughed and said: 'I do not think we would have any problems in conducting e-commerce if we had such an objective, if we really wanted to do it. We have suitable employees to operate e-commerce, the key is whether the leader is interested.' Participant 4 of group A also predicted the future of e-commerce

in the company and linked senior management to the investment: ‘In the next several years, I feel the top level managers are the key (to success), if we have sufficient investment.’

Participant 5 of the same group provided a real example of senior management commitment:

*‘We received a call from the organisation, which told us that our net name was going to be registered by another organisation. The company did not do anything about it, because they do not really know about it (e-commerce), they did not realise the dangers.’*

Group B also linked senior management commitment to the investment. Participant 4 said: ‘The key is the support from the senior management level; that’s the problem of high level management. For example, in some companies, most divisions have certain budgets every year, and we (e-commerce) do not have one.’ Another member, participant 7, focused on the reasons for lack of senior management support. She explained that senior managers are only focused on the benefits when they are the senior managers, whereas e-commerce may not be able to provide direct benefits in the short term. ‘.....so I do not think there is problem if there is support from the senior management level. The key is whether they can see the outcome (profits) when they make the decisions. More directly, it depends on the profits, that’s all. If they cannot see the profits when they are in a management position, why do they (senior management level) need to do that (e-commerce)?’

Group C provided similar comments about senior management commitment, as participant 2 said: ‘It all depends on the leader; whether he thinks we need a powerful e-commerce to support our company.’ Participant 7 of this group suggested that the company should focus more on the long term: ‘The leader has to focus on it; they should have a long-term objective.’

## **Investment**

All participants from the in-depth interviews stated that they do not have enough investment in e-commerce. For example, respondent K said: ‘We do not have much investment in B2C e-commerce, because we have not seen a success model.’ Four respondents had this to say about not having sufficient human resources as a result of a lack of investment. Respondent C mentioned: ‘I feel there is not enough human resources, not enough investment.’ Respondent E laughed when she was asked about the investment in e-commerce in her organisation. She believed that three kinds of investment are not enough: ‘The investment in e-commerce from the organisation management is absolutely not enough; there are no specific funds for e-commerce, such as facilities, money, and human resources. The investment is not enough.’ However, a success story was provided by respondent M:

*‘We invested RMB50 million to build a separate e-commerce company. It is totally different between the professional (HR) or unprofessional (HR), and enough investment and not enough investment.’*

Respondents G and I linked the retail format to investment: ‘Investment? We do not have investment. We are a department store, they (the Shanghai Brilliance Group) would not make an investment in our e-commerce; the supermarket e-commerce is better than us,’ and: ‘I think that the department store will not invest in e-commerce, but maybe the supermarket will.’ The difference between investments in different retail formats can be considered because of the different product categories.

Investment was also noted strongly by all three groups. Three people from group A answered the question at the same time. Participants 5, 4 and 1 said: ‘We do not have any investment, it is still not coming; let’s just wait and see.’ Participant 1 added the comment: ‘If we invest in it (e-commerce), we need patience, and continuous investments.’

Participant 4 of group B suggested that e-commerce could provide huge benefits to the company, but he also noted that sufficient investment is essential, and said: 'Currently, it is not enough.' Participant 1 interrupted him and said: 'Two more words, really, really not enough.' Participant 4 also linked investment to the quality of an e-commerce system: 'Business is business, one cent shows one percent quality. We need to seek high quality and low cost, but it is impossible to buy a product worth RMB100 with an RMB1 investment.'

Group C also confirmed that they do not have sufficient investments. 'We do not have special investments, only some equipment, and daily maintenance,' (participant 7). Participant 5 of this group was not satisfied with the status of investments so far, and he gave the example of another famous e-tailer to show the importance of investment: 'To be honest, we don't have any investment, .....I personally think we need to attract the customer first. In the early stages, we have to put in a lot of money, a lot of money into e-commerce, such as Taobao has done. Their investment in advertising is very strong.'

### **Senior management's knowledge of e-commerce**

Sixty three percent, or 10 of the 16 participants, believed that senior management does not have enough knowledge of e-commerce. Respondent D used the word 'research' to describe knowledge: 'Our enterprise does not really care about e-commerce, and he/she (top manager) thinks it would not make us profits. I think we do not have enough research in this area, especially for those leaders in large enterprises, who hardly have any contact with e-commerce.' Respondent M classified knowledge into three categories: 'As a leader, you have to do some preparation, when you want to do it (e-commerce). At this point, I like it. I used to develop some software myself, and I have worked for finance and management and I am familiar with all kinds of knowledge, including financial, business, and software.' Respondent O linked 'managerial experience' to 'knowledge':



*‘...those CEOs and leaders have international experience. They may see opportunities in the domestic market, and they think they can keep on working for several years until the consumers grow up, so they would build a website (e-commerce) even if it lost money now.’*

The age of the managers was another issue linked to knowledge by participants. Three young respondents said that the senior management level lacked knowledge of e-commerce because of their age. Respondent B pointed out: ‘I do not believe they (senior management) will implement e-commerce. They do not really understand the concept, whereas young people like us may.’ Respondent O stated: ‘The people at the decision-making level are 40-50 years old; they do not care about e-commerce. If they do not want to implement it, we cannot do anything at all.’

Among the focus group interviews, only one person in group A mentioned the lack of knowledge of e-commerce at senior management level. Participant 5 of group A linked knowledge to senior management commitment: ‘They do not really know about it (e-commerce), they did not realise the dangers.’ She also said, ‘.....but e-commerce is virtual stuff, senior managers cannot see the tangible benefits, so they would rather open a new physical store than e-commerce, because at least they have a building to look at.’

### **IT/IS expertise**

Thirteen of the the sixteen interview participants believed that there were not enough human resources in their enterprise, either in quantity or quality. In terms of quantity, two participants from a department store mentioned that there was only one staff member responsible for e-commerce. Respondent A also said that the staff only does some operative work: ‘E-commerce is mainly operated by one person. Of course, it needs co-operation with other divisions. So the duties of this employee are to collect, upload, integrate, and maintain the platform.’ Respondent M from a supermarket

suggested that e-commerce needs more staff to operate it: 'If it only has two or three employees, you cannot make it. So far, we have 250-260 employees (in the e-commerce company) in total, excluding the customer service division.'

The quality of the e-commerce employees was also a problem. Four out of thirteen participants stated that most staff working on e-commerce depended mainly on their own experience, and five participants mentioned that they need professional staff, rather than relying on experience: 'They are not professional, but through practical experience, they have become professional or semi-professional staff. They can fix computers when something goes wrong' (respondent C). She did not realise that e-commerce is far more than hardware, or a computer. Respondent F said that syntheses of talents are needed to operate e-commerce: 'You cannot let the marketing manager or public relations manager operate the e-commerce enterprise.' She also said:

*There is a gap here. Someone who knows retailing may not be interested in IT, and the professional IT people do not know anything about retailing. If there is a person who has knowledge in both these areas, I believe he could find a shortcut to e-commerce in China's retail industry.'*

Respondent N, who works with respondent F, also noted: 'We need a specific person in charge of e-commerce. This person is really important, and he has to be a knowledgeable person, including of computers, retailing, and business.' Respondent O from a supermarket confirmed a lack of marketing people in e-commerce. She said: 'E-commerce is our responsibility. The techniques required are not very difficult, so even recent student graduates can do it. But we do not have a marketing person in our department. We have to ask for a person from the marketing department.'

All three groups provided a similar picture of human resources in e-commerce. Currently, there are not enough human resources invested in e-commerce, as

Participant 5 from group A said: ‘Now, actually, only two people have the time to take care of the website.’

Participant 6 of group B linked human resources to better online service: ‘.....as for customer service, it needs a lot of professional staff.’ This was also supported by participant 2. Another two members linked human resources to the effectiveness of an e-commerce campaign. Participant 7 said: ‘There is another big problem. If we only have support from the leader but are without a real team, e-commerce will not work. A professional analyst might provide a lot of help for the e-commerce operation.’

Group C also noted that there are not enough human resources in their company to conduct e-commerce. Participant 3 of group C indicated the source of current staff who work on e-commerce: ‘There is no increase in human resources; they all come from other divisions of the company.’ Participant 4 of group C believed that human resources is the second most important factor of e-commerce:

*‘I think talented and professional staff is one of the important things. Of primary importance is investment from the leader, then there is the problem of the team. I think we need professional, synthesised talent.’*

### **Information systems**

Five participants suggested that e-commerce needs a properly developed information system, and that currently, the condition of the information systems in the group is not good. For example, respondent M said: ‘Actually, the whole departmental system does not have a fully developed information system to support the business (and e-commerce). Therefore the e-commerce business does not work.’ Two respondents from the same subsidiary provided examples of the poor quality of the information system. Respondent E noted that its information system only can be used in Windows 98, not XP. Respondent I also defined the poor quality of the information system: ‘A few years ago, the sales volume reached 10 million on our anniversary day. It’s on

record, the information system was broken down.’ Two other respondents also suggested that a poor information system was due to lack of investment. Respondents K said:

*‘This is an investment problem. You can buy better stuff if you have money, but so far, we do not have the full facility of an information system, and we are not a monopoly enterprise, so we do not have much investment.’*

Poor information systems and IS management capability were mentioned by all groups as well. A Hong Kong student, a new employee from group A, suggested that effective data is needed to support e-commerce: ‘E-commerce needs a huge database, and each store needs a database as well, but in China, not many companies have databases. They have a lot of products, but there is no effective information system to store all the product information. I have seen many stores do it manually, not by computer, and this is the difficulty.’ Participants 4 and 5 from group A confirmed this comment: ‘Our current internal information system cannot support (e-commerce).’

Contrary to group A, participant 4 of group B demonstrated confidence in IS: ‘We have a huge database, and currently, the system can support it, that’s not a problem. The website developer also developed our IS, there are no any technical problems.’ However, participant 7 of group B argued that there is not enough management capability to handle the IS, and doubted that the database contained much product information.

### **Integration**

Integration was mentioned by eight participants. Six out of eight participants suggested that an integrated supply chain is a basic requirement for implementing e-commerce. Respondent B believed that delivery costs are lower in an integrated supply chain system: ‘I believe we will reach a consolidated purchasing and storage process system. Brilliance purchases the products for us. Maybe in a few years, when

we achieve real integration, online bookings will be processed directly by the stock centre. I think the cost would not be that much.’ Respondent D talked about more product information after the integration of the supply chain: ‘I think it is more suitable (to implement e-commerce), after integration. All products are controlled by the stock centre and that would be a problem if we doing it individually, because many products are not under our control, it is all controlled by the stock centre, then we put the information online and update the information. The process is not very smooth.’

Also, four participants suggested that the integration between the different information systems is also important to the implementation of e-commerce. Respondent B said: ‘There are all different information systems being used in the subsidiary, because all the internal information systems were developed by different third party companies. It is therefore difficult to integrate.’ He also stated: ‘I believe that e-commerce will be developed but so far, all subsidiaries have a different internal information system. If those systems could be integrated, I believe there will be a united website in the near future.’ Respondent H from the IT department of Shanghai Brilliance Co Ltd described the situation of internal information systems in the all subsidiaries: ‘We have started to integrate the information systems. There were 16 different internal information systems in 20 subsidiaries and generally, those information systems have been integrated. Eighty-five percent of companies use the same information system. We employ the best third party to conduct the integration work. So far, there are still three companies who have not integrated to the same information system.’

All three groups also indicated integration as one of the barriers to the implementation of e-commerce. Both Groups A and B linked integration to centralisation: ‘It is difficult to conduct e-commerce in a single store, and it will be more difficult at the company level because of integration.’ This was supported by participant 2 of group

B: 'The company has a problem - it is very large, and the integration process is very long.'

Group C focused more on the current integration process, and mentioned the benefits: 'We have not completed an integrated checkout, but the stock has been integrated.' (Participant 7). Another participant, participant 2 of group C, linked integration to the reduced price of online products: 'We are integrating our stock process, which provides benefits to e-commerce. The suppliers do not need to pay the participation fees, and it makes price reductions possible.'

### **Organisational culture**

Twelve participants stated that organisational culture was a barrier to implementing e-commerce in their organisation. Respondent B used the words 'venture', 'old logic', and 'not brave' to describe the organisation's lack of innovativeness to implement new strategies. Respondent D linked organisational culture to age and experience: 'It may relate to previous experience. In traditional organisations, the new technology or stuff may not be accepted quickly. However, it may not be like this in new or young organisations, as there are many young managers and leaders in those new organisations.' Some respondents argued that a lack of innovativeness in the organisational culture was due to the owner of the enterprise. For example, respondent K said: 'Our company has a long history, and we are a state-owned enterprise, so we seek stabilisation, and do not take any risks....'. Respondent J stated that state-owned enterprises lack innovativeness because they only focus on tangible profits: 'If the company is privately-owned, they may consider that a website may have future benefits for the 2<sup>nd</sup> or 3<sup>rd</sup> generation, but state-owned enterprises are different, they want to see immediate benefits ....'. Respondent K also used the word 'follower' to describe the organisation's lack of innovativeness.

Four participants also mentioned that the organisational culture results in low employee motivation towards innovativeness. Respondent C stated that the lack of

promotional opportunities is the reason employees lack motivation. Respondent G, who works in the same company as C, summed up the current organisational culture:

*'...if you have done some creative stuff well, they may not have any encouragement policies, but if you fail, then you are finished (fired or never have the chance to be promoted). In my opinion, the company should allow for failures in new strategies. That's the thing we do not have now. It seems that you have to succeed, or otherwise, it shows that you do not have sufficient capability.'*

### **Strategic direction**

Eight in-depth interview participants and two focus groups mentioned that the current strategic direction of the Group is not e-commerce, but that its current tasks are integration, and expanding the retail network. They all used the word 'integration' to describe the current strategy of the organisation. Different integration perspectives were mentioned by those respondents. Respondent C talked about the integration of procurement and internal information systems: 'We are still working on integration, we are a subsidiary; the integration process has taken two years already, in many aspects, including procurement, e-commerce may be...' and 'because of the integration of information, the integration of procurement is still in progress, and perhaps they think that e-commerce can wait. Therefore, maybe the subsidiaries lag behind.' Respondent F focused on integration within the franchise enterprise: '...now we have six franchise stores, and the business of these six stores needs to be integrated ...' Respondent P explained that the reason for integration in the Brilliance Group was the different histories of the stores. She also indicated the current strategic direction: 'Integration is being conducted in the Brilliance Group, because Lian Hua is in the Hong Kong stock market and we are in the Shanghai Market. Only one enterprise can be maintained in the next three years, so, this is the main aim.' And, 'I think we are expanding our stores, and our retail network.'

Participant 3 of group A believed that the current strategic direction of the Brilliance Group is not in e-commerce:

*'As we all know, most of its money is used to occupy the physical locations, the money is used to expand the retail network. Hhe did not put e-commerce into a strategic position.'*

This view was supported by most of the participants. Participant 5 of group A linked the strategic direction to investments: 'As you can see, we won't consider e-commerce in the next few years. Obviously, you can see how many new stores we open every year; very obviously, the strategic direction is not in e-commerce.'

### **Product categories and price**

Product considerations were another important barrier which concerned almost all participants (15 out of 16). Most of the participants suggested that 'standardised products' such as rice and drink are easy to sell online; and 'personalised products such as cloth and shoes are difficult. Respondent B commented that for personalised products, customers need to see and feel the product and respondent F also provided the same point: 'Cloth is different, it relates to the model, the material, and the feeling.' Many participants argued that it is related to the retail model, as respondent G said: 'Department stores sell personalised, luxury products, and it is difficult to standardise.' 'Supermarkets provide product information online, but department stores provide little product information, because there are always new product arrivals, whereas supermarket products are standardised - the products don't change everyday' (respondent K). Respondent H explained that 50% of the products in department stores are cloth, and the most popular online products are CDs and books. This means that few of the department store products are suitable for online sales. A participant from the supermarket said that digital cards are also easy to be sold online: 'Another category is the digital product, such as mobile recharge cards, online game cards, and



IP telephone cards. These products do not require much labour, and make good profits.’

This opinion was supported by all three groups and CNNIC report (2006). Most participants said that ‘high touch’ products are difficult to sell online, and most products in department stores are ‘high touch’.

However, some participants had a different opinion, participant 1 of group A believed:

*It is possible to sell ‘high touch’ products online, but the brand needs to be considered. High class, famous brand cloth is ok for selling online.*

Participant 7 of group B and other participants from that B also argued that ‘high touch’ products such as cloth can be sold online, but the price should be lower. For example, participant 3 of group B talked about the price of products: ‘There are limits on price; I won’t buy the very expensive product online.’ This was supported by other participants. Participant 1 of group B said: ‘The thing that attracts me to online shopping is the price.’

The survey results showed similar findings to the interviews. Most of the products in the top 10 lists were ‘low touch’ products, however, interestingly, amongst the ‘high touch products’, cloth and accessories were the largest category, as shown in table 4.12 (see appendix 4.3). This is possibly because of the extremely low price of these products, as indicated by the interview participants, this is also supported by survey questionnaire, 43% respondents (see appendix 4.4) who have conducted online shopping suggested that the reason to shopping online is cheap price. However, most cloth and accessory products sold by the subsidiaries of the Shanghai Brilliance Group are middle-high class products, and it is impossible to reduce the price to a very low level.

Overall, product consideration maybe one of the reasons why supermarkets have a better e-commerce performance than department stores in the Shanghai Brilliance Group.

**Table 4.12: Product categories**

Product category	Percentage
Cloth and accessories	35.4%
Books and magazines	33.8%
Consumer electronics	33.8%
Others	24.6%
Computer & IT	18.5%
Movies	18.5%
Home, lifestyle and baby	16.9%
Music	15.4%
Sporting goods	15.4%
Computer games	12.3%
Antiques and art	10.8%
Business (office and industrial)	10.8%
Cameras and accessories	10.8%
Toys, hobbies and crafts	9.2%
Jewellery, gems and watches	4.6%
Cars, bikes and boats	1.5%
Phones	1.5%
Pottery and glass	0%

Source: Developed for this research based on survey data

### **Organisational mission**

Two participants complained about the mission of their organisation. Respondent C doubted whether e-commerce could improve their productivity due to the nature of state-owned enterprises: ‘Our store has 56 years of history, is a state-owned retailer, and we are accepting social responsibility. This is the “Guo Qing” (typical situation in China): on the one hand, we have to meet our profit objectives, and on the other hand, we have to make society stable by maintaining and creating employment opportunities. For us, it is impossible to fire spare staff. We cannot do that, because it

is a state-owned enterprise. Theoretically, the government should take responsibility, not us, but we have to.'

This was also supported in the focus group interviews. Two groups blamed their companies for not trying to achieve maximum profits and productivity. Participant 4 of group B gave an example of the Pacific Department Store to make a comparison: 'It relates to the different structure, such as the Pacific Department Store. They do not care about the reward (competition organised by government), because they only seek profits and productivity.' Participant 1 of group A linked mission to strategic direction: 'I think it is related to the enterprise and its objectives, what they want to achieve; then they can start to work, they cannot succeed without objectives.'

### **Profit objectives**

Five participants mentioned that they are tired of trying to reach the profit objectives given to them by the higher levels of the organisation. Four of them indicated that to reach the profit objectives, they do not have much money for investing. For example, 'I just said we need RMB 1,500,000 to update our information system. We have to take care of it by ourselves, because they won't give us one cent, and the task won't be changed either, this is the situation of China.....it makes it difficult for us' (respondent C). Another two respondents from the same organisation also gave the same opinion: 'Even with such a difficult task, we do not have much money for investing, our system needs to be updated, but we do not have specific money for that,' (respondent E). Respondent J also confirmed that to achieve the task, the organisation might reduce the budget from of another department.

All the groups also complained that they feel it is difficult to reach the profit objectives. Participant 2 of group B linked the profit objectives to investment: 'I have to be really careful about any investment in any other area.' This was supported by Participant 5 from group A, who said: 'In our store, there is no investment, just profit generation, so e-commerce has to be conducted by the higher levels of the

organisation, or they need to provide us with investment funds. Also we do not have money to update our system.’

### **Business processes**

Nine participants of the in-depth interviews said that the current business processes did not match the requirements of e-commerce. ‘Outright purchase’ was the most frequent phrase mentioned by the participants; for example, respondent F described the current percentage of the outright purchases in her organisation: ‘In foreign retailers, 50% or 60% of the products are outright purchases, which means you have to pay to buy the product; not like us, we charge a participation fee from the supplier, and only few product categories are bought by us, such as watches; not much, maybe only 5% or 3% are outright purchases....’. She also noted the benefits of the outright purchase: ‘If the percent of outright purchases can reach 50% of our products, we will gain a competitive advantage, because I have buyer, I bought products from the global market, and those products may only be sold from my store in China, this is the one purpose of the integration of procurement.’ Such business processes result in some barriers to implementing e-commerce, as mentioned by some participants. Respondent H linked business processes to the accuracy of information, price of products, and delivery issues: ‘We do not own the products, so the products may not be available in stock. If we put information on the product online, this makes it difficult for us...for a friendship group it is easy to do that as they own most of the products, and have a high profit margin’. ‘We do not own most of the products, so we do not have a proper delivery system. Most of the products are delivered by the suppliers. It is not right; we should employ a third party delivery company, but we have not reached a certain amount (of outright purchases of products).’ Respondent L said they are a kind of business real estate rather than a retailer, due to the fact that they do not own many products. She also explained the reason for not purchasing the products outright: ‘Outright purchases are risky, as we could have a stock problem. Based on our current capability, we cannot control the buyers, so we let the suppliers take the risk. Actually, the supplier is the one who has the fastest response to the

market, not us.... Our current core competence is the selection of suppliers, not control of the product. Unlike supermarkets, which have a high percentage of outright purchases, we only have gold or luxury watches.’

As discussed in the in-depth interviews, all three groups also believed that the current business processes are not suitable for the development of e-commerce. Most participants noted that they do not own the products, which makes e-commerce difficult to operate. Participant 7 from group B explained the reason:

*‘We invite the supplier to come into our department store and I believe that if the outright purchases cannot reach a certain percentage, the supply chain will not support e-commerce, because the process will be very complicated .....Who takes the job of delivery? If anything happens, who takes responsibility? So, the percentage of outright purchases is very important.’*

Participant 6 of group B believed that such business processes affect the quality of information on the website: ‘Actually, our store does not have the capability to tell the customer if the product is available. We have to ask the supplier as well, and that is not an e-commerce process.’ This was supported by participant 7 of the same group: ‘We feel it is difficult to put information online, because we do not have the product available.’

Participant 5 of group B linked the current business processes to the price of the products: ‘The most important thing is price; we do not have a channel, we do not have our own product, so, our price is not competitive.’

### 4.5.3 Summary of barriers

Overall, seven external barriers and twelve internal barriers to e-commerce were identified from the interview and focus group data. Most of those barriers were also mentioned in Section 2.2 as success factors of e-tailing. Table 4.13 summarises those barriers with their frequency in the interviews.

**Table 4.13: Barriers to the implementation of e-commerce**

Barriers	In-depth interviews (16)	Focus group interview (3)
<b>External barriers</b>		
High cost of internet access	6	0
Lack of payment facilities and effective banking services	8	3
Advanced retail networks	3	0
Distrustful culture	4	1
Lack of legal and policy framework	7	3
Education in e-commerce	12	2
Need for physical shopping experience	11	3
<b>Internal barriers in the Shanghai Brilliance Group</b>		
Business processes	9	3
Strategic direction	11	2
Senior management commitment	12	3
Investment	16	3
Senior management knowledge of e-commerce	10	1
IT/IS expertise	13	3
Mission	2	2
Profit objectives	5	3
Information systems	5	3
Integration	8	3
Organisational culture	12	0
Product categories and price	15	3

Source: Developed from case study database

### **4.6 Research issue 3: What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?**

This section addresses research issue three. In addition to addressing those barriers that were identified in Section 4.5, this section discusses the variables which are beneficial to achieving successful e-tailing in the Shanghai Brilliance Group. These variables relate to the organisation, senior management, e-commerce strategy, external environment, customer characteristics, and e-commerce system measurement as identified in Section 2.4. Some factors have been discussed in section 4.5 as barriers. However, some new variables are explored and other variables portray a different meaning than in the literature.

#### **4.6.1 Organisational factor**

##### **Centralised structure**

Ten out of the sixteen participants discussed ‘centralisation’ during the e-commerce operation. Terms like ‘high level organisation’, ‘information technology centre’, and ‘headquarters’ were often repeated. Respondent C said: ‘In the last 2 to 3 years, with the founding of an information technology centre the organisational structure is becoming more effective, it’s a good start.’ Respondent D, the manager of information technology and finance in a franchise department store, said: ‘We were an independent division, but now as franchise enterprise, the Brilliance Co. Ltd. (the Brilliance Group administration) has an information division, and we belong to them.’ Respondents F and G suggested that the company headquarters and the Brilliance Co. Ltd should think about establishing e-commerce in the subsidiary companies. Respondent L provided similar comments:

*‘We are only one single store and we had difficulties during the operational process, especially in developing the website, and it still needs a bigger platform. We hope that someday, we can operate on a bigger platform, like Brilliance Co. Ltd’*

Respondent M from the e-commerce division of Lian Hua Supermarket summarised his experience: ‘We have a professional division for e-commerce, and this is the key to success.’ This was supported by Respondent O, from another supermarket, Hua Lian. Respondent O voiced her jealousy of the individual divisions of e-commerce in the Lian Hua Supermarket: ‘We do not have a specific person in charge of e-commerce and it will not develop. Lian Hua has an independent e-commerce company, but we just sit and wait. It would not be a success.’ She also commented on the low efficiency levels reached, without a separate e-commerce division: ‘I need to communicate with other divisions about e-commerce, but actually, they do not think it’s their job, we do not have a specific e-commerce division’. Respondent P, from the same company as Respondent O, had a similar comment: ‘We do not have a specific division or person in charge of the website. ....I wish there would be a specific division or person in charge of e-commerce.’ Later on, she also described the current work efficiency of e-commerce: ‘The process is so slow, I do not have power or money. We have to go through all the other divisions, and all those other divisions think it is not their job, and they do not think it’s important, so productivity is low.’

Centralisation was mentioned by all groups. Participants agreed that a bigger platform is better for the operation of e-commerce. Participant 5 of group A explained that e-commerce should be thought of as a group strategy, rather than a company strategy:

*‘What I want to say is that it is difficult to achieve success if you just rely on our single store. I think this should be considered by the Co. Ltd .....’*

### **Brand reputation and brand name**

Eleven participants stated that a famous brand name and a good reputation offer competitive advantages when establishing an e-commerce company, such as Ebay, (respondent A). Respondent H talked about the good brand name and reputation of the Shanghai Brilliance Group: ‘We do not have a brand problem; the customers believe in us.’ Respondents C and I mentioned that their customers believe in them because



they guarantee after-sales service: 'If a customer is shopping at our company, after-sales service is guaranteed. We will communicate with them, and provide door-to-door service.' Respondent G believed that the customers trust them due to their state-owned background. Respondent J linked brand name to trust: 'One thing is that trust needs to be enhanced. If you want e-commerce to work well, you should provide confidence first, then people trust you. At this point, herepop is our website and I believe we have the advantage over smaller websites, especially C2C, because customers need more time to test their trustworthiness.' Besides trust, brand name and reputation can also lead to customers' belief in service quality, as noted by respondent L. Most of the participants believed that famous brands and the reputations of the website are the most important concerns. For example: 'I personally believe in those websites which have certain reputations. I won't go to those websites which nobody knows, even if the products or services are really cheap.' (respondent B).

All participants in all three groups agreed that their famous brand names and brand reputations were very useful in enhancing their e-commerce activities. Participant 5 of group A also linked brand name and reputation to trust:

*'I do not know if I am right or not, but because the Brilliance Group is formed by No.1 Department Store and Hua Lian Department Store, most people do not know about the brand 'Brilliance', and the famous traditional brand is getting lost. I believe that consumers have attachments to those old brands, and that these brands enhance the trust in our service, and trust is very important in e-commerce.'*

Participant 1, also from group A, believed that brand name and brand reputation were very good tools to protect customer information in lieu of available protection technology: 'Our reputation is good and we can use our reputation to protect customer information.'

Participant 6 of group B linked brand name and brand reputation to product quality: ‘another problem is product quality: if our store conducts B2C, we can use our reputation to give guarantees to the customers.’

Overall, the respondents agreed that good brand name and reputation is related to trust, product quality, security and privacy and service.

### **Size of organization**

Five participants thought that size is one of the variables affecting e-commerce operations, and most of them believed that larger organizations are easy to conduct E-commerce in terms of their rich resources and other advantages. Four of them suggested that the company should have enough spare money to conduct e-commerce, for example, respondent G said: ‘My store will not do that, it should be conducted by the organisation above. How much profit does my store have? We only have two to three staff members to carry out our maintenance.’

Groups A and C discussed the effect of company size in e-commerce operations. Participant 1 of group A believed that e-commerce is easier to conduct in a small sized company due to the huge integration issues in a big company: ‘I do not totally agree with what (participant 5 from group A) said. I feel it is difficult to do e-commerce at the level of Brilliance Co. Ltd. It is difficult in one single store, but over the whole company would be more difficult.’ However, participant 2 of group C discussed the benefits of a large company in operating e-commerce activities: ‘The Brilliance Group should conduct e-commerce; it has price advantages and direct contact with suppliers.’

### **4.6.2 E-commerce strategy-related factor**

#### **E-commerce return considerations**

Consideration of the returns from e-commerce is useful in motivating the company to implement e-commerce, as pointed out by all in-depth interviewees and focus group

participants. All participants indicated that their organisations do not have much confidence in the return on investment of e-commerce. Respondent B said: ‘As a company, we do not have much confidence in the return on investment.’ Twelve participants said that the expectations of ROI in their organisation are short-sighted: ‘I have done some research on China’s e-tailing, and I did not find anyone who could gain a tangible profit from it.’ (Respondent K). Respondent N also said, ‘...the investment in e-commerce is a deep hole, our company would like to invest to build a new facility (a shopping mall) rather than a website.’ Three other respondents suggested that the enterprise should have a long-sighted vision of e-commerce, As respondent L said: ‘It depends on what you want from e-commerce. I think we should focus more on the intangible benefits rather than the tangible benefits.’

Five participants linked ROI to senior management commitment and investment, as respondent D said,

*‘They do not care about e-commerce; they think there is no profit in it.’ And, ‘I think the process of e-commerce is affected by the effect, meaning that if the effect (ROI) is good enough, they may run it out faster. If customer numbers or the sales volumes in the first half year, if the actual effect exceeds expectations, that might affect further implementation.’*

This sentiment was supported by all three groups. Participant 1 of group A indicated why it is difficult to make a profit from online selling: ‘The profit is too low if the online sales cannot reach a certain level in the short term, and most electronic products are low profit margin products.’

Participant 3 of group B indicated that the company will not operate an e-commerce arm before they are sure of the profits: ‘We still doubt the profitability of e-commerce. After all, the company needs to make a profit on any investment. It is not acceptable if there is no profit outcome.’ This was supported by participant 7 of that group.

### **Strategic alliances**

Nine participants talked about partnership as useful and effective in implementing their e-commerce ventures. Different co-operational areas were mentioned, including information technology support, and partnership with supplies and other popular e-commerce websites. Respondent D from a franchise subsidiary said the maintenance of the website is currently conducted by a third party company and Respondent I indicated the requirements of the third party IT company: ‘Those jobs (e-commerce) are very technical and we completely rely on a big internet company.’

In addition to co-operation with an IT company, three participants also suggested that a strategic partnership was useful to enhance the supply chain. Respondent E said her company was using an out-sourced transport company to deliver the goods, and currently she is not really satisfied with the service provided by the out-sourced company. ‘We would employ a better third party company, if we really were a market economy.’ Respondent H suggested co-operation with a supplier to attain a competitive advantage in terms of size: ‘We need famous and luxury brands. Now while we are franchising, it is difficult to compete individually, so we need to increase our size, by franchising, and united together, form a strategic alliance with suppliers.’

Respondent M from the e-commerce company of a supermarket group said they were co-operating with another e-commerce company: ‘We have some co-operation, for example, we have a link between us, their customers can even conduct payments through our membership.’ Another respondent described the co-operation with another e-commerce website: ‘If we do it by ourselves, it seems powerless, so, last week, we had a meeting with the general manager of Wuyou Company. They are very interested in co-operation.... Because we need his platform and he needs our product.’

Only one participant from group C mentioned that strategic alliances are a necessary factor that should be considered. Participant 4 provided a real example:

‘We are currently cooperating with famous Chinese websites, such as Ebay, Taobao, and Wuyou and through this cooperation, we hope to take advantage of their online resources.’

### **E-commerce cost considerations**

Nine participants mentioned that the cost of implementing e-commerce should be carefully considered by the organisation. Surprisingly, none of them talked about the cost of an e-commerce system. The main costs they mentioned were from support activities. Three participants noted that delivery costs are high, for example, respondent G said: ‘We need professionals; the cost of forming a specialised delivery department is huge.’ Such high costs of delivery are caused by the fact that the organisation does not have an integrated supply chain system. Also, three participants talked about the cost of human resources, rather than equipment costs: ‘The cost of equipment is getting lower, but the cost of labour is increasing, such as development costs and third parties’ (respondent H). Respondent N argued that the cost of advertising e-commerce is much more expensive than developing a website: ‘... as far as I know, the ratio between the cost of a website and the cost of advertisement is 1:5, for example, the cost of building a website is 1 million, but you may need to spend 5 million to advertise it.’ However, respondent N also argued that cost is not a problem to a state-owned enterprise, but the key is whether they want to invest:

*‘To be honest, we spent a few hundred million RMB to build this building. Is that money enough to build a website? So, money is not a problem to a state-owned enterprise.’*

Two groups discussed the cost of e-commerce, and they all believed that the related costs need to be considered. Participant 4 of group B stated that the cost of e-commerce is huge in the early stages, and this was supported by participant 5 of the same group:

*'I do not think the cost will be low, at least it won't be low in the beginning stages. But if you include technology and logistic investment, it can be very costly.'*

Participant 7 from group B talked about the increasing costs of after-sales service: 'How about the after-sales, this is a problem of cost.' Participant 5 of group C also asked a question about the cost of after-sales service, and participant 2 of group C talked about after-sales service: 'After-sales service is very complicated, clothes sizes are different, and the cost of time is very high.' Participant 5 of group C proposed another cost issue:

*'I think that if B2C e-commerce wants to succeed the cost will be huge. Hardware equipment is not a problem, the key is advertisement: if we want the customers to know, the cost is very high.'*

### **E-commerce promotional campaigns**

Seven participants indicated that successful e-commerce needs a plan and a marketing campaign. Respondent E linked poor e-commerce campaigns to a lack of human resources: 'When I took over the website, it almost corrupted. There was no plan, no strategy, and no professional employees.' Respondent K also noted that the website name is strange and it is difficult to attract customers: 'Firstly, they have a very strange website name.....when the website was ready, not many people knew of its existence.' Three participants suggested that they should have a specific campaign focusing on developing VIP customers or memberships: 'Another issue is membership. It is developing now, and so far, our company has 7.5 million members, 4 million in Shanghai, and the value of our customer membership has reached RMB5.2 billion .....our OK card is our main income.'

Specific e-commerce campaigns were mentioned by all participants. There was consensus on the importance of providing customers with information on the website,

and attracting them to online shopping. Participant 1 of group A suggested that media advertising was important: ‘Actually, I do not think it’s a problem. If I have a website, if necessary, I will do it through newspaper and radio.’ Participant 4 of group C provided a similar viewpoint: ‘.....increase the click rate of the website, such as through advertising.....’ Another participant from Hong Kong in group A talked about marketing campaigns: ‘I will give you the example of supermarkets. Supermarkets are very competitive and attract customers on price. The most obvious tool is free delivery, and the product prices are 10% cheaper than in the open market, but there is a lower expenditure.’

### **First mover advantage**

Lastly, only one participant of in-depth interviews, Respondent N, noted that the first mover has an advantage: ‘The advantage we have now is that most other stores do not operate e-commerce, .....so its easy to build our brand with our customer.’

After first mover advantage was discovered from the indepth interviews, it was also mentioned by groups A and C. Participant 4 of group C said: ‘If we could do B2C earlier than other businesses, the customers would feel that we were the first successful B2C enterprise, which impresses the customer.’

### **4.6.3 External factor**

#### **Competitive pressure**

When the participants were asked about competitive pressure, only five admitted that there are some pressures, but almost none of them mentioned pressure from e-commerce. For example, Respondent B said: ‘The competition is getting stronger, as foreign retailers come in (to the Chinese market). But so far, I do not feel any pressure.’ This was supported by Respondent C: ‘We feel a lot of pressure from other retailers, such as supermarkets, and it is increasing.’

However, some respondents thought that e-commerce will become the new trend and driving force in the near future. ‘Competitive pressure from e-commerce is not so obvious, but, with continued development, e-commerce will put pressure on us’ (Respondent C). Respondent D agreed that e-commerce is the future trend, and he also noted that department stores have an unbalanced advantage: ‘I think the development of e-commerce will be very fast, even faster than the development of traditional department stores. Traditional retailers are facing a lashing from e-commerce, but we have the advantage of customer service and the physical environment, which e-commerce does not have. However, if only in sales, e-commerce has a great future.’

Contrary to the participants from department stores, one respondent from a supermarket talked about competitive pressure in more details: ‘The competition is huge. Lian Hua and Nong Gong Shang have websites and have a high customer demand....online shopping is simple, and low cost.’ This shows that the supermarket industry feels more competitive pressure from e-commerce than department stores.

### **Credit history system**

A new factor was discovered in the focus group interviews, even though only one person mentioned it. Participant 4 of group C believed that society as a whole needs an effective credit history system to take care of business and personal reputation. This factor is coded as credit history system under external factors.

### **4.6.4 Customer-related factor**

#### **Age**

Fourteen participants defined most of their e-commerce target customers as young people. For example, respondent B said: ‘Young customers will come to our website, but I believe that customers who are in their 40s will not come to our website.’ Respondent C linked age to their target customer: ‘...our customers are mainly middle-aged, and many are tourists, so they do not have much demand for e-



commerce.’ She also noted that the middle-aged customer is not in the habit of shopping. This was supported by respondent E who comes from the same subsidiary as respondent C. A participant from a supermarket also held the same opinion: ‘The supermarket customers are an average of 35 years old, and most of them are women. They need assistance from their child to conduct online shopping.....’

Participants used different words to describe the ‘young’. For example, respondent H used the word ‘fashionable’; respondent N used ‘office workers’ to describe the young, and ‘faster thinking’, and ‘innovative’.

All the groups thought that age was one of the variables of the use of e-commerce. Most participants believed that young people like to use e-commerce more than older people. For example, participant 7 of group C said: ‘Our young generation has such a demand.’ Participant 5 from the same group stated that the age of online shoppers is usually below 35 years old. Participant 3 of group B linked age to trust: ‘Some young people will buy some standardised products online, and some people feel unsafe online, especially some older people.’

The survey results indicated that age is significant to internet usage (see appendix 4.1), but not to online shopping activity (see appendix 4.2).

## **Gender**

Gender was not mentioned by any participants in the in-depth interviews. However, two focus groups, B and C, indicated that gender may have some effect on online shopping. Participant 6 of group B offered data on the gender of online shopping users from Taobao: ‘I have seen a Taobao report, and females occupy 75% of the users of online shopping.’ Participant 2 of group B added a comment: ‘That is because females are more willing to try new things than males.’ Interestingly, the answers from group C were totally opposite. Participant 4 of group C believed that

males are more like to shop online because females like to guangjie (do physical shopping).

However, based on the survey results, gender is not significant to either internet usage or online shopping activity (see appendix 4.1, 4.2).

### **Income**

Half the participants mentioned that income is another important issue in conducting online shopping in their subsidiary. Respondent D from a department store linked income to the product: ‘The customer should have some money, because the products we sell are high class, luxury products. Most cheap products can be bought in supermarkets, but in our store, the products are expensive, so the customers are different.’ Later, he stated that college students have the knowledge, but they lack income, so they may not match the profile of their target customer. Other participants used the words ‘have some class’, ‘white collar’, ‘middle class’, and ‘office worker’ to describe their customer income level. For example, respondent D said, ‘I think if we want to develop e-commerce, we have to have a customer group from the middle class to support this retail format.....’

Two groups also indicated that income is an element affecting the use of online shopping. Participants used words ‘white collar’ to describe the income level: ‘Customers usually belong to a certain age, and their income level is usually mainly be at the white collar level.’ (participant 1 from group B).

This is supported by the survey results, which showed that income is significant to both internet usage and online shopping activity (see appendix 4.1, 4.2).

## **Experience**

Only one participant mentioned that previous experience is useful in encouraging customers to shop online: ‘Successful previous experience is also important’ (respondent E).

## **Innovativeness**

Ten participants suggested that the online shopper needs to be an innovator, and willing to accept new things. For example, respondent N said: ‘.....the key is customers who are young, faster thinking, and innovative. They are willing to use it.’ This was supported by respondent L: ‘Generally, they should be curious about new things, and glad to accept them. That is at the core, because if they are very traditional, they won’t become our e-commerce customers.’

Respondent G described innovativeness as ‘chasing fashion’. ‘The young white collar, fashionable person would like to use e-commerce. E-commerce might be not easy, but they think it is cool, and they want to try something different.’

All three groups agreed that innovativeness affects the use of online shopping. Participant 4 of group B even believed innovativeness was the most important customer factor:

*‘The key is the capability to accept the new things. Age is not a problem, gender is not a problem, income is not a problem either, it is just that they buy different products.’*

Participant 4 of group C described innovativeness with the word ‘fashion’ as well,

*‘Another characteristic is the capability to accept new things. They might want to be always at the height of fashion.’*

### **Work and lifestyle**

Four participants and one group thought work and lifestyle encouraged online shopping. For example, respondent A said: ‘When society reaches a certain level, people are too busy to shop physically.....’. Another participant, respondent E, agreed on this point: ‘If I am busy, I would like to shop online.’ Respondent L again used the term ‘white collar’ to describe the work and lifestyle of online shoppers. She said: ‘.....when the white collar workers become busier, they think that spending time shopping is a kind of waste, so they might be .....’

On the other hand, respondent B thought that people who have a lot of spare time would like to shop online as well: ‘.....they are not that busy at work so might be go to the website and have a look.....’. Also, almost half of respondents (44.6%) who have conducted online shopping suggested that online shopping save their time and energy; 60% of them selected “convenience” is the reason to conduct online shopping (see appendix 4.4).

### **Membership**

Ten participants from the in-depth interviews and one group from the focus groups agreed that the main target customers of e-commerce are VIP or membership customers. Respondent A explained the reason: ‘Our VIPs are a better age level, educational level, and income level than the ordinary customer.’ Respondent F also stated that VIP customers are more loyal to the store: ‘Our e-commerce is mainly focused on VIPs. ....our store sells luxury products, not normal products, and customers do not have to buy them, therefore the VIP customer is our most important group.’ Respondent M from a supermarket also confirmed that membership brings them huge benefits: ‘Our e-commerce must be a membership style. Currently, most of our revenue is from our members.’

#### 4.6.5 E-commerce system-related factor

The e-commerce system is one of the most important factors in e-commerce. The four categories of e-commerce systems constitute 28 variables, including system quality (5); content quality (9); trust (5); and support and service (9). As mentioned in Chapter 3, those variables were collected mainly from the survey questionnaire, as Table 4.14 shows, and all of those variables were indicated by the majority of respondents, and shows their importance to the e-commerce system.

**Table 4.14: Factors and variables in an e-commerce system**

Variables	Measures	Percentage of respondents
<i>System Quality</i>		
SQ1	Easy to use	86%
SQ2	Loading speed	86.5%
SQ3	Availability	83%
SQ4	Accessibility	87%
SQ5	Navigation	83.5%
<i>Content Quality</i>		
CQ1	Accuracy	94.5%
CQ2	Up-to-dateness	89%
CQ3	Comprehensiveness	79%
CQ4	Understandability	93%
CQ5	Completeness	83.5
CQ6	New and special offers	91%
CQ7	Contact information	90.5%
CQ8	Multimedia presentation	88%
CQ9	Language options	83.5%
<i>Trust</i>		
TR1	Confidential customer information	96%
TR2	Secure transaction systems	91.5%
TR3	Product quality	88%
TR4	Escrow service	82.4%
TR5	Insurance	89%
<i>Support and service</i>		
SS1	Online help system (FAQs)	88%
SS2	Human assistance	91.4
SS3	24 hour service	88.5%
SS4	Delivery	89%
SS5	After-sales service	91%
SS6	Feedback system	82%
SS7	Online community	80%
SS8	Search engine	90.5%
SS9	Customization	83%

Source: Developed from case study database

Both the in-depth and focus group interviews were used to collect data, however, due to the poor condition of e-commerce systems in the Shanghai Brilliance Group and

the lack of professional e-commerce staff, it can be understood that some of those variables were not mentioned. Among those variables, 23 were discussed in either the in-depth interviews or focus group interviews: 4 from the category of system quality; 8 from the category of content quality; 3 from the category of trust and 8 from the category of support and service.

### **System quality**

In the first category of e-commerce systems, four variables were suggested in the interviews: website speed, navigation, 24-hour availability, and ease-of-use.

#### *Navigation*

Two participants suggested that effective website navigation systems are important for the website, and that they were satisfied with their current navigation system, for example, respondent B said: 'I think our navigation system is very convenient, very clear, and that customers can understand it.' Respondent E provided his standard for a good navigation system: 'In terms of the website menu, customers do not need to read the guide if the navigation system is effective. Real e-commerce should achieve this, because then more customers will accept e-commerce.' This was supported by participant 2 of group B, who noted the importance of an online shopping guide, '.....if the navigation of e-commerce is effective.'

#### *Website speed and uninterrupted accessibility*

Interestingly, only one respondent specifically noted the importance of website speed, and two respondents stated that 24-hour availability is necessary. Respondent B said that there were no specific employees taking care of the website over a 24-hour period, but he also suggested that real B2C should function uninterruptedly, every day of the year. Respondent D felt that such access was the biggest advantage of e-commerce. She said: 'If we want to conduct e-commerce, uninterrupted access every day of the year is the basic requirement, otherwise, do not do e-commerce.'

### *Ease-of-use*

Lastly, ease-of-use was mentioned by three participants. Respondent E thought that ease-of-use was the most important aspect of e-commerce, because e-commerce offers convenience. Another two participants were more concerned with the payment process, for example, respondent H said: ‘There are a lot of netizens now, but few of them are really familiar with e-commerce. It is very complicated. If I want to use my credit card online, I need to apply and register with the bank.’ Respondent I discussed his experience: ‘I have tried many times, but it does not work, so I go to the shop by myself.’

Two participants from two groups suggested that e-commerce should be easy to use: ‘I feel the current process of online shopping is complicated. We are not familiar with the operational process. I just felt that is is complicated, very complicated.’ (participant 2 of group B). This was supported by participant 5 of group C: ‘A website should be easy to use, and convenient.’

### **Content quality**

Content quality is another important aspect of an e-commerce system. Eight sub-variables were examined by the respondents, including accuracy, up-to-dateness, comprehensiveness, comprehensibility, completeness, new and special offers, content information, and multimedia presentation.

Respondent K suggested that content quality was the key to judging the quality of a website. Another participant from a supermarket, respondent M, stated that content quality needs to be enhanced over a long period, with increased product and customer information. As with the issue of system quality, human resources and investments are also linked to e-commerce content quality, as discussed by respondents E and N.

### *Accuracy of information*

Three out of the sixteen interview participants suggested that a website needs accurate content. All three respondents were dissatisfied with the current information process and content accuracy. For example, respondent B talked about the online database, saying: 'The customer still needs to make a call to get the latest the information.' Respondents I and P indicated that online product prices and product categories would be more accurate if the information was up-to-date.

Participant 1 of group A also believed that online information had to be accurate, and reflect reality, and this is difficult, as mentioned by participant 7 of group B, because of the ownership of the product: 'I feel it is difficult to provide information online, because the products are not in your hands.' Participant 4 of group C provided a real example to explain the difficulty of providing accurate online information:

'I will give you an example. We sell leather skins, which should be very standardised, one cow skin is RMB3500. But sometimes there are spots on the leather, which is very normal. But the customers are very tough on that, and they cannot accept it. This is the mismatch between information.'

### *Up-to-dateness*

Twenty five percent of participants thought that effective up-to-dateness is necessary for a website. For example, respondent D indicated that: 'A website needs to be updated frequently....., that would be great.' Participant 4 of group A also noted that, 'A specific team is necessary to update the information.' The respondents agreed that up-to-dateness is necessary, but the current situation is not so good, as (respondent B) said, they update their data monthly, depending on their promotional activities.

Up-to-dateness was suggested by the three focus groups as one of the daily operations of an e-commerce system. Two of the focus groups were not happy with the current situation: 'In the retail industry, such as the Pacific Department Store, the website is



only used for communication of information; but they are better than us, they will update it.’ (participant 4 of group A). This means that the website of the Group is not updated very often. Participant 4 of group B believed that there was no technical problem in updating the information, but he still doubted the process:

*‘It should be able to be updated at anytime. The website should be connected to the database, and should not have any problems. The information that suppliers give can only be put online the next day, and over the weekend, it is slower.’*

### *Comprehensiveness*

Three participants thought that a website needs more information. Respondent K suggested: ‘Simple and limited content cannot attract the customer.’ Respondent E also supported this viewpoint: ‘More information is needed. All information should be included, and then an interactive platform is necessary as well.’ Respondent E made a comment that their website is not worth visiting: ‘To be honest, I think our website is not worth visiting; there is nothing on it, and there is no incentive to look at it.’ All groups believed that online information should cover more areas, and offer more details on the products and other services. 38.5% survey respondents (see appendix 4.4) who have conducted online shopping indicated the purpose to shop online is to buy something that difficult to find.

### *Understandability and new and special offers*

Two participants thought that content should be written clearly, and be easy to understand. Three other participants suggested that a website should give more information about promotions and new products. For example, respondent L said: ‘We can offer some (product) sets, based on the demands of our customers, add some knowledge and concepts, and some luxuries, gift sets or new products.’ This opinion was supported by group B.

### *Completeness*

Two groups discussed the current content situation of their website and explained the result of incomplete website content. Participant 6 of group C said: ‘There is an empty outline online, there is no product at all.’ Participant 1 of group A indicated the result of an incomplete website:

*‘Customers will complain when they cannot see anything on the website.’*

### *Contact information*

Only one person noted that contact information is useful to enhance the company’s reputation. This may be because the other respondents believed that their brand names and reputations are famous enough.

### *Multimedia presentation*

Only one person mentioned multiple presentations online, in all the in-depth interviews and focus group interviews. Participant 2 of group A believed that China has only poor technology to support three-dimensional presentations, which is useful to attract online customers.

## **Trust**

Trust is one of the biggest issues in e-commerce, as evidenced by the frequent mention of some words during the interviews, including, reputation, credit history system, and ethics. Those words reflect a lack of trust in China’s culture. As in the literature, some variables were mentioned by interview participants, including security, privacy, and product quality.

### *Security*

Ten participants noted that security is an important factor of trust. Respondents D and I used the word ‘hacker’ and ‘phishing website’ to describe the dangerous online environment in China. Respondent B also supported this view: ‘There are a lot of

cheaters online.’ Participant 4 of group A also confirmed the improving trends in online security: ‘Its getting better now; many e-commerce companies use their offline business names online.’ Respondent E blamed the lack of security on poor technology. Respondent L thought: ‘The core problem is ethics, and then there is the difficulty of technology.’

Two groups talked about online security, and it seemed that they were not currently worried about it. Participant 4 of group B explained that his lack of concern was due to the fact that some secure online payment facilities are available. He said: ‘Another problem is security. If the company wants to build a website, there are some mature payment platforms available, such as Union pay, and it should be safe.’

#### *Privacy*

Six participants mentioned that they worry about online privacy. For example, Respondent O said: ‘A lot of customer information becomes corrupted and customers may receive strange calls ..... this makes e-commerce difficult to operate.’ Two respondents even said: ‘They can do nothing about it,’ and: ‘They have not really started to think about it.’ Security codes and firewalls were mentioned by some respondents, which are the only technical tools available to protect customer information. Respondent K had an alternative viewpoint: ‘Internal management is also important in improving the privacy issue.’

#### *Product quality*

Seven participants indicated that product quality was a barrier to e-commerce. Respondent A said: ‘We offer all our product information, but it is impossible to sell all of our products online, such as some famous brands.....’. This shows that customers are not willing to buy expensive products online, because they are concerned about product quality. Moreover, most of the respondents linked product quality to the quality of the after-sales service. For example, respondent D said: ‘Product quality has to be ensured, and after-sales service must be guaranteed .....’.

This demonstrates that better after-sales service can address the issue of product quality and enhance customer confidence.

Groups A and B also discussed the issue of product quality. A new employee from group A explained his concerns: 'I am concerned about product quality. If the product I bought is not what I wanted to buy, why did I buy it? Or if I want to buy a new product, but it is actually secondhand, it is useless, because the quality is already low.' As discussed previously, participant 1 of group B believed that brand name and reputation is useful to enhance customer trust in product quality.

### **Support and service**

The final and one of the most important categories of an e-commerce system is support and service. Eight participants generally agreed on its importance. For example, respondent C stated that an effective website needs successful customer service. This was supported by respondent L: 'We need strong customer service; in case anything happens, and we need to rely on strong customer service to fix it.' Eight variables were mentioned during the interviews, including FAQs, search engines, human assistance, 24-hour service, delivery, after-sales service, feedback systems, and online communities.

#### *FAQs*

Only one participant indicated that an e-commerce system needs FAQs. Respondent H argued that: 'A professional website should prepare answers for the frequently asked questions from customers.'

#### *Search engines*

Groups B and C discussed the issue of search engines. Group A suggested that their website should be locatable with a search engine such as Google or Baidu. Group C also complained that currently, their website could not be found on search engines. Interestingly, all the participants in those groups talked about external search engines,

such as Yahoo and Google, but no-one mentioned internal website product search engines. This shows that their current e-commerce systems lack effective internal search engines.

#### *Human assistance and 24-hour service*

Four participants indicated that effective human assistance, such as call-centre employees, is also important in the virtual world. Respondent D gave an example of Taobao and Eachnet: 'I think Eachnet is better than Taobao because of their attitude towards customer service, the number of staff .....'. Within the group, respondents L and O confirmed that they had a human assistance team to serve customers. Respondents M, O, and P from a supermarket also pointed out that call-centres play an important role in their e-commerce system. However, only one respondent suggested that customer service needs to be available 24-hours a day.

Groups B and C also talked about human assistance. Participant 6 of group B suggested they use call-centres to provide human assistance: 'I understand what (participant 4 of group B) talked about. Most enterprises have call-centres now.' Participant 5 of group C described the characteristics of human assistance employees in more detail:

*'The staff need to be careful and patient. The work might be very boring and they have to be familiar with the product and have a better attitude.'*

#### *Delivery*

Ten participants talked about e-commerce delivery services. Respondent E indicated that: 'The delivery range is only in Shanghai. They use a third party to deliver to other areas.' This was supported by respondent L. However, respondents I and M complained about the delivery service: '.....it is fast but very rough.' (respondent I). Respondent M also stated that the means of delivery was very poor: 'only bicycles.....'

All groups agreed that a quality delivery service is important to e-commerce. Participant 2 of group A suggested that e-commerce should provide customers with more delivery options: ‘Another problem is delivery. Normally, delivery takes 3-5 days, but what about when I am working, I won’t be at home whole day.’ Most participants doubted that the current delivery system is suitable for e-commerce. Participant 4 of group B suggested that an effective third party delivery is useful: ‘As I said before, many websites are hiring a third party logistics company.’ This was supported by participant 2 of group C.

#### *After-sales service*

Three out of the sixteen participants talked about a product return service and they agreed that a product return service is one of the important issues in e-commerce. For example, respondent I complained about his experience of return services: ‘If you buy a wrong product, you have to send it back by yourself. This is really terrible, but what can I do?.....’ Respondent L admitted that product return services are difficult to handle and she linked the return to the ethics of customer: ‘I think reasonable returns are acceptable. This is very normal and it is your right, but both of us (store and customer) need to have ethics and a good reputation, .....it costs too much.’

As in the in-depth interviews, all groups talked about after-sales service. Participant 5 of group A believed that after-sales service could provide an extra competitive advantage for them:

*‘I want to say another website can do everything we do, but why does the customer need to come to our website? Because our store can provide better after-sales service. This is very important, it is our competitive advantage.....’*

#### *Feedback systems*

Surprisingly, only one participant and one group mentioned feedback systems and confirmed their effectiveness. This might be because most feedback systems are used

in C2C websites, but this research is based on B2C e-commerce, and store reputations are more reliable than that of the individual seller, as in C2C e-commerce.

### *Online communities*

Five participants mentioned community as an effective e-commerce tool, and many activities were outlined, such as blackboards, clubs and BBS. All participants agreed that communities could enhance interaction between customer and store. For example, respondent N said: 'We provide this platform and many people can join, .....besides shopping, the website also offers interaction, but our website cannot achieve it.'

Two groups also agreed that communities could encourage more people to join the discussion and communicate with each other and allow the company to understand more about their customers.

#### **4.7 Factors and variables of successful e-tailing**

This research is the first study in investigating successful e-tailing in China and aims to build a comprehensive theoretical model. Therefore, as long as a factor was mentioned in either the interviews or on the questionnaires, it is treated as one of the success factors. The new comprehensive model will be tested in future research. Tables 4.15 and 4.16 provide the final list of factors and variables of e-tailing success, as obtained from the in-depth and focus group interviews. Altogether, six factors and 64 variables were identified from either interviews or the survey questionnaire. However, two factors identified from the literature review were not found in either interviews or the survey. These were the relationship between senior managers and task co-ordination. Of the 64 variables, seven new variables were identified. Six new variables were revealed during the in-depth interviews and also in the focus groups. These new variables are: (1) membership; (2) organisational mission; (3) profit objectives; (4) e-commerce campaigns; (5) business size; and (6) first mover advantage. One extra factor was only discussed in the focus group interviews, (7) credit history system.

Moreover, several variables and their meanings differed from those in earlier studies, some are too narrow and some are too general. Product considerations and product return services are worth mentioning. This study shows that product considerations not only include 'high touch' and 'low touch' products, but also product price. Some participants highlighted the need for competitive online prices to attract customers. This is also supported by survey questionnaire, 43% respondents (see appendix 4.4) who have conducted online shopping suggested that the reason to shopping online is cheap price. Therefore, the name of this factor is changed to product categories and price. The meaning of product return service seems too narrow to cover the issue of after-sales service. The majority of the participants used the term 'after-sales service' to describe all the service activities beyond the meaning of the factor 'return service.' Therefore, the 'return service' factor is replaced by 'after-sales service'.



It is interesting to note that out of 64 variables, only two variables were mentioned by all participants, and one factor was mentioned by fifteen participants. These three variables are: (1) investment; (2) return on investment; and (3) product categories and price. Product categories and price is one of the most significant variables affecting successful e-tailing (Smith 2000; Steinfield 2004; Turban et al. 2006), as suitable products are much easier to sell online (Turban et al. 2006). Like any other strategies, e-commerce returns is an important benchmark to see if e-commerce is worth implementing (Frank 2004; Gunasekaran et al. 2005). The results of this research show that most participants do not have much confidence in the profitability of e-commerce before they actually conduct e-tailing. The variable, 'investment', is perhaps the most important for the success of e-tailing. The related variables, 'IT/IS expertise' and 'information system infrastructure' were also mentioned strongly by the participants: 'We do not have enough professional staff' and, 'The internal information system is terrible' were frequent complaints made by the participants. E-commerce will not be successful when there is not enough investment in related areas.

**Table 4.15: Factors and varibales of e-tailing success: from in-depth interviews**

Code	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Total	%
<b>E-commerce system measurement</b>																		
<b>EC/SYSTEM QUALITY</b>																		
• Website speed															√		1	6.2%
• Navigation		√			√												2	12.5%
• 24-hour availability		√		√													2	12.5%
• Ease-of-use					√			√	√								3	18.7%
• Accessibility																	0	0%
<b>EC/CONTENT QUALITY</b>																		
• Accuracy		√							√							√	3	18.7%
• Up-to-dateness		√		√						√					√		4	25%
• Comprehensiveness				√	√						√						3	18.7%
• Understandability		√			√												2	12.5%
• Completeness					√												1	6.2%
• New and special offers		√					√					√					3	18.7%
• Contact information		√															1	6.2%
• Multimedia presentation																	0	0%
• Language options																	0	0%
<b>EC/TRUST</b>																		
• Security		√		√	√	√	√		√	√		√			√	√	10	62.5%
• Privacy		√		√							√		√		√	√	6	37.5%
• Product quality	√	√	√	√					√	√						√	7	43.7%
• Escrow service																	0	0%
• Insurance																	0	0%

EC/SUPPORT AND SERVICE																			
• FAQs								√										1	6.2%
• Search engines																		0	0%
• Human assistance				√			√					√			√			4	25%
• 24-hour service	√				√													2	12.5%
• Delivery	√			√	√		√	√	√			√	√		√	√		10	62.5%
• After-sales service				√					√			√						3	18.7%
• Customisation																		0	0%
• Feedback systems				√														1	6.2%
• Communities	√						√			√	√			√				5	31.2%
Senior management factor																			
• Senior management commitment	√	√	√	√	√		√	√	√	√			√		√	√		12	75%
• Investment	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	16	100%
• Knowledge of e-commerce	√	√	√	√	√	√		√					√		√	√		10	62.5%
• Relationship between managers																		0	0%
Organisational factor																			
• Information system infrastructure					√			√	√		√		√					5	31.2%
• IT/IS expertise	√	√	√	√	√	√	√	√	√			√	√	√	√			13	81.2%
• Centralised structure			√	√		√	√	√		√		√	√		√	√		10	62.5%
• Brand name and reputation	√		√	√			√	√	√	√	√	√		√		√		11	68.7%
• Strategic direction	√		√	√		√	√	√	√	√	√				√	√		11	68.7%
• Organisational culture		√	√	√	√	√	√		√	√	√	√		√		√		12	75%
• Business processes						√	√	√	√	√	√		√		√	√		9	56.2%

• Task coordination																		0	0%
• Mission (NEW)			√					√										2	12.5%
• Profit objectives (NEW)			√		√				√	√	√							5	31.2%
• Size of organization (NEW)						√	√	√	√	√								5	31.2%
<b>E-commerce strategy</b>																			
• Integration	√	√	√	√				√			√	√					√	8	50%
• Strategic alliances				√	√			√	√	√		√	√	√	√	√		9	56.2%
• Return on investment	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	16	100%
• Cost considerations	√	√			√		√	√			√		√	√	√			9	56.2%
• Product categories and prices	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		15	93.7%
• E-commerce promotional campaigns (NEW)				√	√			√	√	√	√				√			7	43.7%
• First mover advantage (NEW)															√			1	6.2%
<b>External factor</b>																			
• Government policy and laws		√		√	√	√	√	√				√						7	43.7%
• Competitive pressure		√	√	√										√		√		5	31.2%
• Costs of internet and PC	√	√	√			√	√									√		6	37.5%
• Payment facilities and banking services	√			√	√	√	√	√				√				√		8	50%
• Advanced retail networks	√											√	√					3	18.7%
• National culture					√	√		√	√									4	25%
<b>Consumer factor</b>																			

• Age	√	√	√		√	√	√	√	√	√		√	√	√	√	√	14	87.5%
• Gender																	0	0%
• Education	√	√		√	√	√	√	√	√		√	√		√		√	12	75%
• Income	√			√		√	√	√				√		√		√	8	50%
• Experience					√												1	6.2%
• Innovativeness		√			√		√	√	√	√	√	√		√		√	10	62.5%
• Work and lifestyle	√	√			√							√					4	25%
• Physical shopping experience	√	√		√	√	√	√				√	√	√	√	√		11	68.7%
• Membership (NEW)	√	√		√	√	√	√		√	√		√	√				10	62.5%

Source: Developed from in-depth interview database

**Table 4.16: Factors and variables of e-tailing success: from focus group interviews**

<b>Factors</b>	<b>Group A</b>	<b>Group B</b>	<b>Group C</b>	<b>Total</b>
<b>E-commerce system measurement</b>				
<b>EC/SYSTEM QUALITY</b>				
• Website speed				0
• Navigation		√		1
• 24-hour availability				0
• Ease-of-use		√	√	2
• Accessibility				0
<b>EC/CONTENT QUALITY</b>				
• Accuracy	√	√	√	3
• Up-to-dateness	√	√	√	3
• Comprehensiveness	√	√	√	3
• Understandability		√		1
• Completeness	√		√	2
• New and special offers				0
• Contact information				0
• Multimedia presentation	√			1
• Language options				0
<b>EC/TRUST</b>				
• Security		√	√	2
• Privacy				0
• Product quality	√	√		2
• Escrow service				0
• Insurance				0
<b>EC/SUPPORT AND SERVICE</b>				
• FAQs				0
• Search engines	√		√	2
• Human assistance		√	√	2
• 24-hour service			√	1
• Delivery	√	√	√	3
• After-sales service	√	√	√	3
• Customisation				0
• Feedback systems	√			1
• Communities	√		√	2
<b>Senior management factor</b>				
• Senior management commitment	√	√	√	3
• Investment	√	√	√	3
• E-commerce knowledge	√			1
• Relationship between managers				0
<b>Organisational factor</b>				
• Information system	√	√	√	3
• IT/IS expertise	√	√	√	3
• Centralised structure	√	√	√	3
• Brand name and reputation	√	√	√	3
• Strategic direction				0

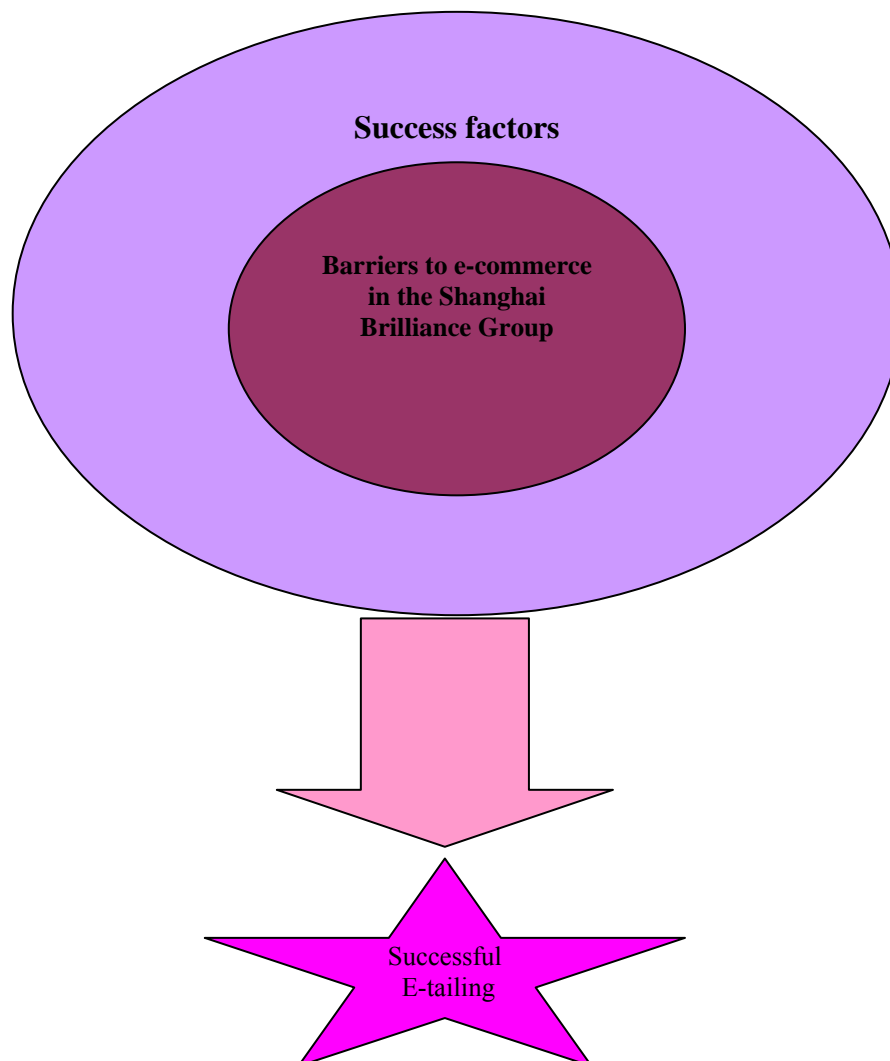
• Organisational culture	√		√	2
• Business processes	√	√	√	3
• Task coordination				0
• Mission (NEW)	√	√		2
• Profit objectives (NEW)	√	√	√	3
• Size of organization (NEW)	√	√	√	3
<b>E-commerce strategy</b>				
• Integration	√	√	√	3
• Strategic alliances	√	√	√	3
• Return on investment			√	1
• Cost considerations		√	√	2
• Product categories and prices	√	√	√	3
• E-commerce promotional campaigns (NEW)	√	√	√	3
• First mover advantage (NEW)	√		√	2
<b>External factor</b>				
• Government policy and law	√	√	√	3
• Competitive pressure				0
• Costs of internet and PC				0
• Payment facilities and banking service	√	√	√	3
• Advanced retail networks				0
• National culture		√		1
• Credit history system (NEW)			√	1
<b>Consumer factor</b>				
• Age	√	√	√	3
• Gender		√	√	2
• Education	√		√	2
• Income	√		√	2
• Experience				0
• Innovativeness	√	√	√	3
• Work and lifestyle			√	1
• Physical shopping experience	√	√	√	3
• Membership (NEW)			√	1

Source: Developed based on the database

#### 4.8 Final combined model

Data from both interviews and survey questionnaires were analysed, based on three research issues (Sections 4.4, 4.5, 4.6). It is worth noting that the barriers are part of the success factors as the only difference between ‘barriers’ and ‘other factors’ is that the barriers are actually currently affecting e-commerce in the Shanghai Brilliance Group in a negative way. Therefore, success factors include barriers and other important variables, as indicated in Chapter 2. Figure 4.8 shows the relationship between barriers and success factors and the success of e-tailing.

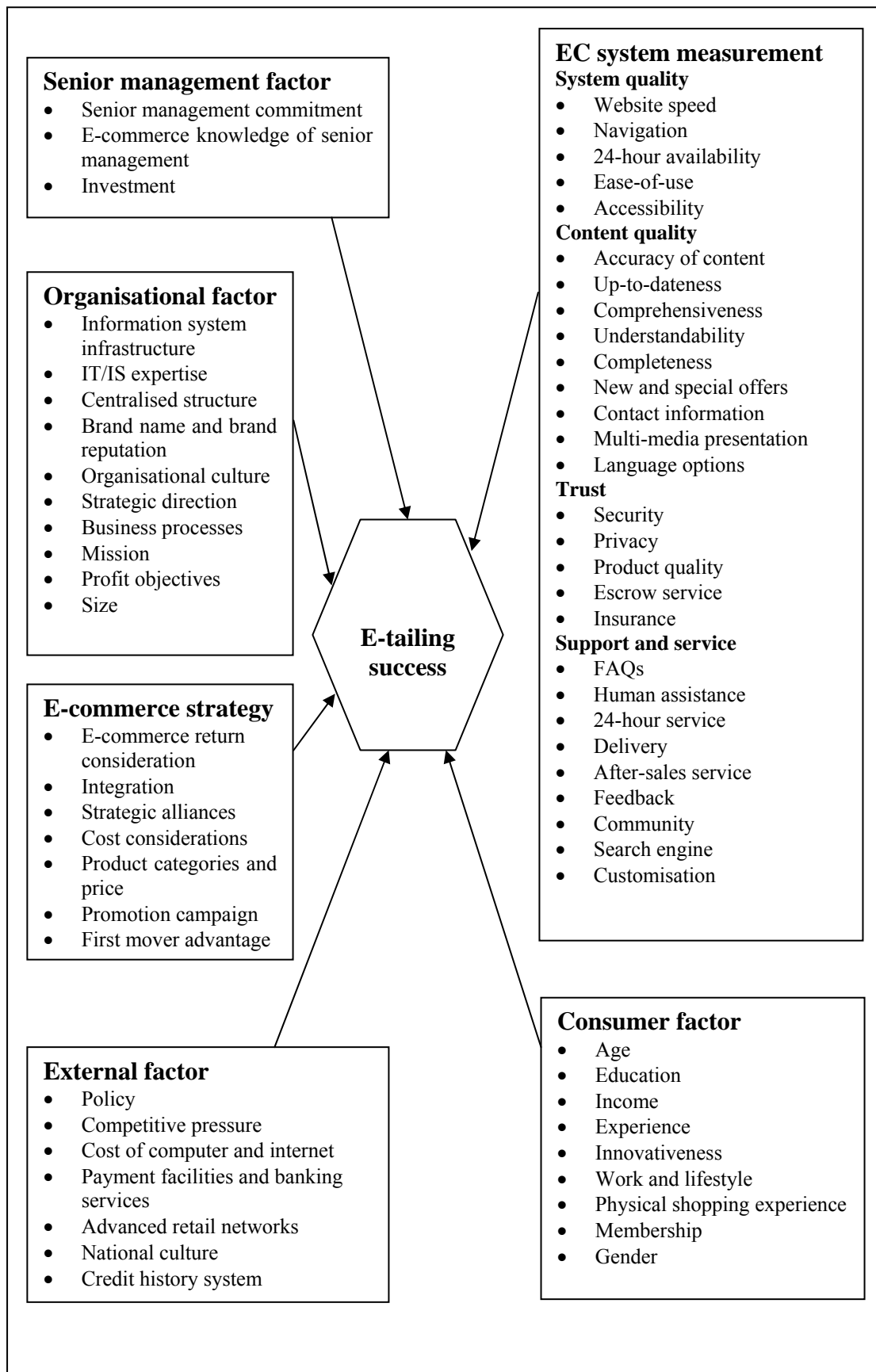
**Figure 4.8: Factors in the achievement of success in e-tailing**



Source: Developed for this research



**Figure 4.9: Final combined model**



Source: Developed for this research

Figure 4.9 above presents a combined model of e-tailing success. This is a comprehensive model which includes all the factors and variables identified in both interviews (16 in-depth interviews and 3 focus group interviews) and 200 survey questionnaires. In total, six factors and 64 variables were found to have an impact on the success of e-tailing. However, it is worth noticing that the interview discussions were focused more on the senior management factors, organisational factors, e-commerce strategies, customer factors, and external factors, while the survey questionnaires concentrated on the measurement of e-commerce systems and consumer factors. This model can be used in further investigations to test the model in new contexts.

One important aspect of the model is the identification of the six factors and their variables, which consist of: (1) organisational factors; (2) senior management factors; (3) e-commerce strategies; (4) external factors; (5) consumer factors; and (6) e-commerce system measurement. Those factors and variables can be considered the 'criteria' of successful e-tailing in the focus company. However, it must be noted that not all the variables listed in Figure 4.9 are applicable to other Chinese retail companies. A careful analysis is necessary before addressing the variables for other companies.

### **Senior management factor**

The senior management factors revealed in the interviews are senior management commitment, investment, and e-commerce knowledge of senior management.

#### *Senior management commitment*

Horsti et al. (2005) found 'senior management commitment' to be significantly related to the success of e-commerce. Teo and Ang (1999) reported that 'senior management commitment' was the most frequent answer provided by their research respondents. Harvey (2000) confirmed that senior management commitment is useful in creating a suitable environment for e-commerce. Moreover, other researchers (Gibbs et al. 2002; Sabherwal et al. 2004; Stylianou et al. 2003) also indicated poor e-commerce results due to lack of senior management support such as low investments, poor quality of facilitating information systems and poor quality in the information system team.

In this study, twelve out of the sixteen in-depth interview participants and all three focus groups believed that senior management commitment was an important factor in development of e-commerce.

#### *Investment*

Investment was suggested in the literature as having an important role in e-commerce (Epstein 2005; Gunasekaran et al. 2005; Molla 2004). Stylianou et al. (2003) confirmed that organisations need sufficient funding to implement an e-commerce strategy. Accordingly, Gibbs et al. (2002) suggested that it is easier for large firms to achieve success with e-commerce due to their having access to appropriate resources.

All interview participants and group members stated that investment is essential to the implementation of e-commerce, and most complained that they did not currently have enough investment in terms of financial resources or human resources.

#### *Knowledge of management*

Some researchers (Bai & Lee 2003; Epstein 2005; Stylianou et al. 2003) have suggested that top management's knowledge of e-commerce is important. For example, Stylianou et al. (2003) found that a higher level of e-commerce knowledge is positively related to senior management commitment. Frank (2004) suggested that e-commerce would not be successful if the leaders do not understand the importance of the architecture.

Sixty two percent of in-depth interview participants and one focus group pointed out that the current management had insufficient knowledge of e-commerce, which is one of the reasons causing a lack of commitment at the senior management level.

#### **Organisational factor**

Organisational factors were explored and frequently mentioned at both the in-depth and focus group interviews. Those factors include:

1. information systems;
2. IT/IS expertise;
3. centralization;
4. brand name and brand reputation;

5. organisational culture;
6. strategic direction;
7. business processes;
8. organisational mission;
9. profit objectives;
10. size of the organization.

#### *Information systems*

Sabherwal et al. (2004) found that the condition of the internal information system was important to an e-commerce system. However, it was affected by investment and senior management commitment.

Participants E, H, I, K and M, and all three focus groups felt that they were facing the challenge of the quality of the internal information system, which did not support an e-commerce system.

#### *IT/IS expertise*

Molla (2004) found that human resource investment was important to effectively implementing an e-commerce strategy. This has been supported by Udo (2001), who confirmed that there is a shortage of professional e-commerce staff in many companies' e-commerce projects.

The majority of participants (13 in-depth interviewees and three focus groups) stated that they did not have enough human resources in their e-commerce projects, in either quality or quantity.

#### *Centralisation*

Adelaar et al. (2004) suggested that a centralised approach is important to e-commerce, especially in the integration process.

Centralisation was suggested by ten in-depth interview participants and all three focus groups. A specific and separate division to take responsibility for e-commerce was highly recommended by those participants and groups. For example, an information technology centre is one of the divisions they suggested but they also complained that

there was no such division or organisation in their company, and that most of the divisions treated e-commerce as a 'favour' instead of a 'job' or a 'responsibility'.

#### *Brand name and brand reputation*

Many researchers have found that brand name and reputation are useful for e-commerce. For example, Epstein (2003) indicated that a well-positioned brand name easily attracts high hit rates. Teerling and Huizingh (2003) found that physical brand loyalty is positively related to site loyalty.

Eleven participants and all three groups talked about the effect of brand name and brand reputation on e-commerce. All of them agreed that their current brand name and brand reputation were useful in attracting customers to their site, and there was no doubt that customers would trust them more, because of their brand.

#### *Organisational culture*

An innovative organisational culture is useful to encourage entrepreneurial and innovative business cultures to e-commerce (Gibbs et al. 2002; Newton 2000).

Three quarters of the participants from the in-depth interviews mentioned that the current organisational culture did not encourage them to try something new. 'Lack of innovativeness' and 'lack of motivation' were the two most frequent phrases used to describe their organisational cultures. Interestingly, none of the three focus groups talked about organisational culture at all.

#### *Strategic direction*

Roger (2001) suggested that e-commerce has to match a company's goals and strategies. Eleven in-depth interview participants and two groups recognised that the current strategic direction of the company was not towards e-commerce. They all pointed out that the current strategy of the company was to expand their retail network and to occupy physical locations. As a result, e-commerce was not being developed rapidly, due to the mismatch with current strategic decisions.

### *Business processes*

Epstein (2005) found that internal business processes must support e-commerce. Over half of the participants of the in-depth interviews (9 participants) and all three focus groups pointed out that the current business processes did not support the development of e-commerce. All of them agreed and suggested that an increase in the percentage of outright purchases would be helpful for e-commerce.

### *Organisational mission*

Company mission is a new variable that has not been found in previous e-commerce literature. Two in-depth interview participants and two groups stated that the mission of the company affects the implementation of e-commerce. They mentioned that their group and their companies have to take responsibility for creating more job opportunities, even if they do not need more employees. On the other hand, e-commerce may not be able to create more work opportunities and in fact may create redundancies due to its high productivity. Therefore, companies and groups lack the motivation to implement e-commerce.

### *Profit objectives*

Five individual participants and all three groups talked about the difficult profit objectives. They linked profit objectives to investment and the condition of their information systems. Most of them suggested that to achieve the profit objectives, they have to relinquish investments, in order to generate the additional profit. This is one of the reasons for the poor quality of information systems.

### *Size of organisation*

Organisational size was another variable of concern of both the in-depth interview participants (5/16), and focus group members (3/3). Interestingly, there was a debate about the size of the organisations; some participants suggested that large organisations find it easy to conduct e-commerce because they have more resources to invest, and others provided the opposite opinion, that e-commerce is easy to conduct due to its inexpensiveness.

### **E-commerce strategy**

Seven e-commerce strategies were mentioned in both the in-depth interviews and focus-group interviews.

#### *E-commerce return considerations*

Frank (2004) and Wang et al. (2002) found that e-commerce return considerations were an important method of encouraging firms to make the investment in e-commerce, saying that companies always invest limited or no resources if they do not have confidence in the ROI.

All the participants and groups of this research mentioned that they did not have enough confidence in e-commerce return considerations, and interestingly, most of them were more focused on the financial results, and hardly mentioned any other benefits provided by e-commerce.

#### *Integration*

Epstein (2004) indicated that integration is important in reducing channel conflict in e-commerce and Roger (2001) found that well-integrated systems enhance both efficiency and service. Supply chain integration may be one of the most important integrational processes. As Agrawal et al. (2002) found, an integrated supply chain could reduce operational costs by up to 30%, and reduce or eliminate cycle time.

In this study, integration was mentioned by half of the in-depth interview participants and by all three focus groups. It was indicated that integration was an important factor in the implementation of e-commerce, especially supply chain integration. Moreover, they also mentioned that internal information system integration and integration within the group are important to the success of e-tailing. The finding also supported by some internal studies (Brilliance Group 2005; Xu 2006), they suggested well-integrated process is very important to E-commerce operation.

#### *Strategic alliances*

Strategic alliances offer many benefits to e-commerce (Gunasekaran 2005; Strauss 2001). For example, Harvey (2002) argued that through co-operation between a traditional firm and IT companies, the traditional firm can easily have enough

technological experts to achieve their online goals. Epstein (2005) also indicated that a company can access a large online customer database through co-operation with an internet service provider.

Nine participants from the in-depth interviews and one focus group mentioned the need for strategic partners in e-commerce projects. Such benefits include easy access to the e-commerce market, and improved quality and reliability of the e-commerce system. Currently, some of the companies in the Shanghai Brilliance Group are co-operating with their partners to place product information on their websites and to maintain their e-commerce system.

#### *E-commerce cost considerations*

Barsh (2001) noted that the cost of e-commerce may be a considerable issue. Nine in-depth interviewees and two groups talked about the cost of e-commerce projects. Three kinds of cost emerged: (1) delivery costs due to a poor supply chain system; (2) human resource costs for e-commerce specialists; and (3) advertising costs. Interestingly, participants were more worried about costs such as labour and advertising than the costs of e-commerce hardware.

#### *Product categories and prices*

Product issues have been discussed by many researchers (CNNIC 2006; Smith 2000; Turban & King 2004). For example, Smith (2000) indicated that products can be classified as 'high touch' or 'low touch'; and that 'high touch' products such as cloth and shoes are far less popular online.

Almost all participants and groups recognised that product issues are important in e-commerce, except respondent P. They suggested that 'standardised products' are easy to sell online. Moreover, they suggested that product price is another factor. For example, if the products are 'high touch', lower prices are still useful for attracting online purchasers. The survey questionnaire gave a similar result, in that most 'standardised products' such as books and magazines, consumer electronics, computer and IT equipment were frequently suggested by respondents. However, cloth and accessories were the top product categories mentioned by respondents. This may be because the low prices of these products encourage sales. This was supported in the



groups, with one member from group B indicating that the reason she buys cloth online is the cheap price. High-priced products such as jewellery, gems and watches, cars and phones, are difficult to sell online.

#### *E-commerce promotional campaigns*

Seven participants and all three groups suggested that they currently lacked a specific marketing campaign to promote their e-commerce, including how to attract customers to their sites, and some other activities such as membership. Respondent E pointed out that the reason for a poor e-commerce campaign is the lack of professional e-commerce specialists.

#### *First mover advantage*

Only one participant and two focus groups mentioned that first entry is one of the important factors in e-commerce as it provides extra benefits to e-commerce.

#### **External factor**

External factors were also suggested by both in-depth interviewees and focus group members. These factors included government policy and legal frameworks, competitive pressure, costs of PCs and internet access, payment facilities and banking services, advanced retail networks, national culture, and a credit history system.

#### *Government policy and legal frameworks*

Government policy and legal frameworks have an impact on the diffusion and development of e-commerce. Gunasekaran (2005) suggested that there is a lack of a legal framework for e-commerce, especially in the global context. Molla (2004) also argued that there were no worldwide accepted policies due to the different stages of development within the IT industry. Gibbs et al. (2002) indicated that effective national policies are useful to reduce the costs of access and increasing infrastructure availability.

Seven individual participants and all three groups agreed on the importance of government policy. On the one hand, the majority of the in-depth interviewees pointed out that one important reason for implementing their current e-commerce was encouragement from government. On the other hand, participants also recommended

that government policies and laws were necessary to establish a secure online environment and to enhance online trust.

#### *Competitive pressure*

Gibbs et al. (2002) identified competitive pressure as a driving force to push the company towards the adoption of e-commerce.

Competitive pressure was mentioned by only five participants from the in-depth interviews. Some of them pointed out that they did feel a lot of pressure from other retail formats, but only a few of them specifically indicated that e-commerce was the next trend in the retail industry.

#### *Cost of PC and internet access*

Ernst and He (2000) indicated that low speed and high cost internet access was one of the barriers in China. A United Nations (2003) report stated that the major developing countries faced the problem of low income levels and relatively high costs for e-commerce development. This has been supported by the CNNIC report (2006).

Six in-depth interviewees discussed the cost of PC and internet access as one of the variables of e-commerce in China. They were concerned about the popularity of the computer and internet access in China, especially in the countryside.

#### *Payment facilities and banking services*

Ernst and He (2000) argued that most companies do not have the motivation to implement online checkout services, due to high charge rates and banking services.

Half of the in-depth interview participants and all three groups indicated the necessity of online payment facilities and effective banking services. Several issues emerged. For example, participants complained of the high charge rates of online payment facilities and the complicated processes of payment facilities. The service quality of the banks was also a complaint of some participants. All participants were in general agreement that effective payment facilities and banking services is important to online security.

### *Advanced retail networks*

Dedrik et al. (2001) argued that e-commerce may be less convenient, while most retail networks are within walking distance for residents.

Advanced retail networks were mentioned by three in-depth interviewees. Their comments were in line with the literature, in that current Chinese retail networks are convenient and advanced, which makes e-commerce relatively less convenient.

### *National culture*

Culture was also mentioned by researchers as playing an important role in e-commerce. Stylianou (2003) pointed out that China is a cash-based consumer culture, and that the lower popularity of the credit card makes online payments difficult. The United Nations report (2003) generated the same result.

Four participants and one focus group suggested that culture was one of the variables affecting e-commerce activity. All individual participants indicated that in the Chinese culture, liability is not favoured, and therefore customers do not like to use credit cards. This was also supported by the survey questionnaires, with only 35.5% of respondents stating that they would like to use a credit card to conduct online shopping. One member from group B linked the culture to trust, suggesting that in the history of Chinese society, people lack trust between each other, making e-commerce more difficult.

### *Credit history system*

The credit history system was a new variable which emerged from the focus group interviews. It shows an independent credit history system is necessary to record the credit history of customers and sellers. A member from group C suggested that the E-commerce market should have an effective credit history system would enhance online trust.

### **Consumer factor**

Consumer factors were investigated in both the in-depth interviews and the survey questionnaire, and included gender, age, education, income, experience, innovativeness, work and lifestyle, physical shopping experience, and membership.

### *Gender*

Teo (2001) found that males and females have a different outlook on e-commerce activities, and that males prefer to conduct online purchases. This has been supported by Hui and Wan (2006), who argued that this is because females need the physical shopping experience. Other studies (CNNIC 1998-2006; Ono & Zacadny 2003) also found that females are less intense users of the internet.

Only two groups (B and C) mentioned that males are more willing to shop online than females. However, none of the participants from the in-depth interviews thought that gender was a factor in e-commerce. The results from the survey also indicated that gender is not a significant factor of either internet usage or online shopping activities.

### *Age*

Limayem et al. (2000) found that younger people conduct more online purchases than aged people. The recent CNNIC report (2006) also found that 90% of internet users in China are under 40. However, Teo (2001) found that a young age is significantly related to internet use for messaging and downloading, but not related to online browsing or purchasing.

The majority of the participants from both the in-depth interviews (14/16) and focus group interviews (3/3) believed that age of the consumer plays an important role in e-commerce activity. They were in general agreement that young people are more willing to conduct e-commerce activities. A member from group B linked age to innovativeness, saying: 'The reason why age is a factor, is because young people are more innovative, not because of the age itself.' Through analysis of the survey questionnaires, age was found to have a significant relationship to internet usage but not to be significantly related to online shopping activity. This finding is in line with the findings of Teo (2001).

### *Education*

Gibbs et al. (2002) pointed out that IT literacy is higher among the highly educated across countries such as the United States and Japan. Dillion and Reif (2004) suggested that people who have a higher level of education and computer skills are more comfortable with making e-commerce purchases.

Seventy five percent of the in-depth interviewees and two of the focus groups (A and C) indicated that education was another consumer factor of e-commerce. Primarily, they believed that consumers should have a certain amount of knowledge of e-commerce. This was supported by the survey results, in that education was found to be significantly related to online shopping, but not internet usage. This demonstrates that education does not affect internet usage, but that people do need to have some educational level and the necessary knowledge to conduct online shopping. This is in line with the findings of Dillion and Reif (2004).

### *Income*

Gibbs et al. (2002) suggested that e-commerce is more popular in those countries in which income is equally distributed such as Japan, Germany and France. Fogg et al. (2001) stated that a higher income encouraged people to conduct more online shopping.

Half of the in-depth interviewees and two groups (A and C) agreed that income was a necessary pre-condition to conducting e-commerce activities, arguing that the income of the consumer was related to conducting online shopping. The survey provided a supportive result, that income had a significant relationship with both internet usage and online shopping activities.

### *Experience*

Many researchers have found that user experience is significantly related to e-commerce activities. Dillion and Reif (2004) pointed out that people with more experience of online shopping have a more positive attitude towards online purchasing.

Only one participant indicated that previous experience may affect future online shopping activities. Ninety point five percent of the survey respondents also confirmed that excellent previous experience enhances their trust in a website.

### *Innovativeness*

Innovativeness was found by Limayem (2000) to be one of the most important variables influencing online shopping behaviour. Ten out of the sixteen participants in

the in-depth interviews and all three groups noted innovativeness as an important characteristic of the online consumer.

#### *Work and lifestyle*

One quarter of the in-depth interviewees and one focus group indicated that busy work and lifestyle could encourage people to conduct online shopping. This was supported by the survey, which found that convenience and saving time were the top two reasons for shopping online.

#### *Physical shopping experience*

Eleven participants from the in-depth interviews and all three groups believed that the desire for the physical shopping experience was one of the variables affecting e-commerce activities. They believed that customers wanted to enjoy the service and the process of shopping in a physical store. Interestingly, two out of the three participants from the supermarket company did not mention this factor, indicating the difference between different retail formats and different products.

#### *Membership*

Membership was another emergent factor from this research. Ten in-depth interview participants and one focus group pointed out that most consumers who shop online on their website already belong to their membership, or that their target online customers are those customers who have already joined the physical store. This is because most of their membership customers have the same characteristics, such as higher income, better education and younger age, therefore, members have high chance to shop on company's website than ordinary customers. Also, membership customers would be more loyal to the site than the ordinary customer. It is suggested that the E-commerce strategy should focus on their current members or/and have effective membership campaign.

#### **E-commerce system measurement**

The following data on the measurement of e-commerce systems heavily relies on the responses to the questionnaires, and is therefore a reflection of customer expectations and desires. However, not all the variables in this section were mentioned in the interviews.

### *System quality*

According to the literature (Cognitavive 1999; Dellaert & Kahn 1999; Dreze & Zufryden 1997; Horsti 2005; Molla & Licker 2001; Turban & Gherke 2000; Wolfinbarger 2000), system quality is the primary aspect of e-commerce and includes eas-of-use, website speed, availability, accessibility and navigation. All of these variables were found to be important to e-commerce from the results of the questionnaire responses.

### Ease-of-use

Eighty-six percent (see table 4.14) of all survey respondents pointed out that ease-of-use of an e-commerce system is important. This was supported by three participants of the in-depth interviews and two focus groups.

### Website speed

Eight-six point five percent of survey respondents stated that website download speed should be appropriate (see table 4.14). Interestingly, only one participant from the in-depth and focus group interviews talked about website speed.

### Availability

The majority (83%) (see table 4.14) of the 200 survey respondents suggested that an e-commerce website should be available over a 24-hour period. This was supported by two in-depth interview participants.

### Accessibility

Eight-seven percent of the survey respondents believed that a website should be easy to access (see table 4.14), however this factor was not mentioned in either the in-depth or focus group interviews.

### Navigation

Eight-three point five percent of survey respondents stated that a website should offer an effective guide for new users (see table 4.14). Two in-depth participants and one focus group also provided a similar comment.

### *Content quality*

Content quality consists of the following seven variables: (1) accuracy; (2) comprehensiveness; (3) understandability; (4) contact information; (5) new and special offers; (6) multimedia presentation; and (7) language options. These variables have been recommended by researchers (Alba et al. 1997; Calkins et al. 2000; Dholakia & Rego 1998; Lee et al. 2005; Limatem 2000; Lohse & Spiller 1998(a); Muylle et al. 2004; Zhao et al. 2002) as important variables of an e-commerce system. In this research, these variables were also strongly supported by the survey respondents.

#### Accuracy

Almost all questionnaire respondents (94.5%) (See table 4.14) indicated that a website should provide accurate information. This was supported by 18.7% of in-depth interviewees and all three focus groups.

#### Up-to-datedness

Up-to-datedness was mentioned by 89% of the respondents from survey questionnaire, it showed that the website information should update regular (see table 4.14). Four in-depth interview participants and all three focus groups also indicated the importance of up-to-datedness.

#### Comprehensiveness

Seventy-nine percent of survey respondents noted that it is a good idea to provide more information online (see table 4.14). Three in-depth interview participants and all three focus groups provided the same comment.

#### Understandability

Ninety-three percent of survey respondents felt that the content of a website should be easy to understand (see table 4.14). However, few in-depth interviewees (2) and focus groups (1) mentioned this factor.



### Completeness

Eighty-three percent of survey respondents suggested that a website and its information should be completed (see table 4.14). This was supported by one of in-depth interviewee and two three focus groups.

### New and special offers

New and special offers was mentioned in both the surveys (91%) (see table 4.14) and in-depth interviews (3).

### Contact information

Over 90% (see table 4.14) of survey respondents suggested that a website should provide company contact information such as address, telephone and fax number. Again, only one participant of the in-depth interviews noted the necessity for contact information.

### Multimedia presentation

Eighty-eight percent of survey respondents suggested that multimedia presentation is useful for attracting customers to a website (see table 4.14). One member from group A provided an example of the application of 3D techniques on a website.

### Language options

Language options was mentioned by most survey respondents (83.5%) (see table 4.14), but none of the participants in the in-depth interviews or focus groups talked about the application of different languages online.

### *Trust*

Trust was another important aspect of e-commerce systems suggested by researchers (Ba & Pavlou 2002; Egger 2000; Gefen et al. 2003; Jarvenpaa & Tractinsky 1999; Pavlou et al. 2002; Reichheld & Schefter 2000), and includes security, privacy, product quality, and escrow services and insurance. Most of the survey respondents stated strongly that these trust variables were important to e-commerce.

### Security

Ninety-one point five percent of survey respondents (see table 4.14), 10 out of the 16 in-depth interview participants and two focus groups thought that security was extremely important to an e-commerce website.

### Privacy

As another important issue of 'trust', privacy was mentioned by almost all survey respondents (96%) (see table 4.14). Additionally, six participants of the in-depth interviews also indicated the importance of privacy.

### Product quality

Product quality was noted by 88% of respondents (see table 4.14), suggesting that it is an important issue in e-commerce. Further, seven participants of the in-depth interviews and two focus groups also discussed the issue of product quality.

### Escrow service

Survey respondents also mentioned that an escrow service 82.4 (see table 4.14) are important to enhance trust and reduce online risk.

### Insurance

Insurance is important in virtual environment to enhance the trust. Insurance was indicated by 89% of respondents (see table 4.14), suggesting that it is an important issue in e-commerce. Interestingly, there are no in-depth interviewees and groups mentioned insurance.

### *Support and service*

The final aspect of an e-commerce system which emerged from this research is support and service. Nine variables were generated from the literature (Aberg & Shahmehri 2000; Genfen & Devin 2001; Madeja & Schoder 2003; Owens 2005; Parasuraman et al. 1988; Santos 2003; Schneider 2006), and it was found from both the survey and interviews, that support and service is an important factor in the success of e-commerce.

### Online help system (FAQs)

FAQs was another factor frequently mentioned by survey respondents (88%) (see table 4.14), but given less attention by interviewees, with only one interview participant mentioning the issue.

### Human assistance

Over 90% of respondents believed that good service provided by human assistance is essential to an e-commerce website. This factor was also discussed by four in-depth interviewees, and two focus groups.

### 24-hour service

Eighty-eight point five percent of survey respondents felt that an e-commerce website should offer a 24-hour customer service. In contrast, only two participants of the in-depth interviews and one focus group mentioned this factor. Further, other participants had differing opinions on this issue, and in fact, some websites do not operate seven days a week.

### Delivery

Delivery issues were supported by survey respondents, in-depth interviews (10) and focus group interviews (3). More specifically, 89% of respondents from survey suggested that delivery is important to online shopping.

### After-sales service

After-sales service arose from all three data sources, survey respondents (91%), in-depth interviews (3/16), and focus group interviews (3/3). The comments provided during the interviews indicated that after-sales service is important because product quality and product descriptions are often inaccurate.

### Feedback system

Eight-two percent of survey respondents agreed that a feedback system was useful on an e-commerce website. Once again, only one interviewee and one focus group mentioned feedback systems, showing the company's lack of knowledge and experience of e-commerce.

### Online communities

Eighty percent of survey respondents, five in-depth interviewees and two focus groups stated that online communities are important on an e-commerce website and useful for encouraging interaction between customers and the organisation.

### Search engines

Over 90% of survey respondents and two focus groups thought that an effective search engine was useful and important to a website. However this factor was not mentioned by all the in-depth interviewees, who are from a high level of management.

### Customisation

Eight-three percent of survey respondents agreed that an e-commerce website should offer online customization tools or facilitates. However, this was not mentioned in the interviews, which demonstrates the mismatch between customer demand and supply.

## **4.9 Chapter summary**

Through the use of in-depth interviews, focus groups and survey questionnaires, this research has produced a comprehensive model to examine the factors and variables of organisational e-tailing success. A single case study and random customer surveys were included in the study: 16 in-depth interviews, three focus group interviews, and 200 survey questionnaires. The interviews were transcribed and analysed by the researcher, and the survey questionnaire data was analysed by SPSS. As expected, the results from both the in-depth interviews and focus group interviews more specifically focused on organisational factors, senior management factors, e-commerce strategies, consumer factors, and external factors, even though some variables of e-commerce system measurement were mentioned. On the other hand, the survey questionnaires were more concentrated on customer factors, and the variables pertaining to the measurement of e-commerce system.

This study contributes to the literature on e-commerce by taking both a qualitative and quantitative research approach to build a comprehensive model, therefore, this research was exploratory in nature. The resultant model will be useful for future academic research and will also have applications for organisations venturing into e-tailing. The next step is to test this model with a quantitative approach.

## Chapter 5: Conclusion

The purpose of this chapter is to discuss the research issues identified in Chapter 2, based on the findings presented in Chapter 4. The implications of the findings are considered in terms of both theory and practice and the limitations of this research and future research recommendations are presented. The structure of Chapter 5 is shown in Figure 5.1

**Figure 5.1: Structure of Chapter 5**



Source: Developed for this research

## 5.1 Introduction

The purpose of this research was to explore the success factors of e-commerce in China's retail industry, through the application of the research problem, 'How can successful e-tailing in China's retail industry be achieved? Three research issues were identified to address this research problem:

**Research issue 1:** How is e-tailing being used in the Shanghai Brilliance Group?

**Research issue 2:** What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?

**Research issue 3:** What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?

Chapter 2 identified these three research issues, reviewed the literature relating to the three parent disciplines, e-commerce (Section 2.2), retailing industry and retailing in China (Section 2.3), and e-tailing success factors (Section 2.4), and presented the body knowledge on those disciplines. The research gaps and research issues were developed in Section 2.6. According to the literature, e-commerce could be beneficial to organisations, individuals and society, in areas such as increased global reach, cost reduction and improved quality of life. Some of the benefits of successful e-commerce are summarised in Table 2.3. These benefits and the implications of e-commerce are becoming the latest business concerns. As the largest mobile phone market in the world, and the second largest internet market, China has the potential to develop successful e-commerce. However, China's e-commerce is still in the preliminary stages in terms of sales revenue, especially for click-and-mortar B2C enterprises. Prior research has explored and identified many factors and variables which influence successful e-commerce activities, but most of those studies were conducted in a western context. It was therefore necessary for research to be undertaken in the context of Chinese e-commerce. Therefore, the aim of this research was to build a comprehensive model to measure the factors and variables which lead to successful e-commerce in China, specifically in the Chinese retail industry.

Chapter 3 presented the methodology of this research. Firstly, realism was selected as the appropriate paradigm (Section 3.2) and the case study research design was employed, based on the nature of this research (Section 3.3). The Shanghai Brilliance

Group was justified as the only suitable case in the selection pool, therefore, this research is a single case study of the Shanghai Brilliance Group. The data were collected from both the business perspective (in-depth and focus group interviews) and the customer perspective (survey questionnaires), to generate a rich picture of B2C e-commerce in China. The process of data analysis employed for both the qualitative and quantitative data was discussed (Section 3.7) and finally, the research limitations (Section 3.8) and the ethical issues of the research (Section 3.9) were presented.

The qualitative and quantitative data were presented and analysed in Chapter 4, indicating the current situation of e-commerce in the Shanghai Brilliance Group. Both the in-depth interview and focus group participants pointed out the barriers to implementing e-commerce in the Shanghai Brilliance Group. In addition to the barriers, success factors were discussed to address successful e-tailing. Those findings were discussed in Chapter 4 and a final combined model was generated using qualitative and quantitative data, in answer to the three research issues.

This chapter discusses the findings of this research in response to the research issues, and provides recommendations for future research.

## **5.2 Discussion of research issues**

### **5.2.1 Research issue 1**

This section discusses research issue 1: ‘How is e-tailing being used in the Shanghai Brilliance Group?’

In-depth and focus group interviews were conducted in seven subsidiaries (five department stores and two supermarkets) and one administration organisation of the Shanghai Brilliance Group (Brilliance Co. Ltd.). Six out of seven of these subsidiaries have their own websites (four department stores and two supermarkets). Both supermarket subsidiaries have been operating their websites for at least three years, while the operation of websites in the department store subsidiaries began less than two years prior to this research.

In terms of the function of those six websites, three provide a B2B service to their suppliers, and all six websites offer various activities for customers, such as promotional information, membership services, and online shopping. Interestingly, only one website, that of a department store, offers online sales, while both supermarket websites have been conducting online sales for several years.

Moreover, the developers of those websites differ. Four out of the six websites were developed by a third party IT company or involved a third party, while the IT division of YongAn Department Store built their own website, and Lian Hua Supermarket established its own e-commerce division to operate its e-commerce website. The subsidiary companies have also taken different approaches to the operation of their e-commerce activities. Two companies, Shanghai No 1 Department Store and YongAn Department Store, currently employ only one person to operate their website. The YaoHan Department Store website is operated by an IT division, which also has responsibility for internal systems. As the only department store subsidiary which offers online shopping, the Oriental Shopping Centre hires a third party to conduct the daily operation of its website. According to the interview data, there is no specific division or department in the Hua Lian Supermarket to manage their e-commerce activities; their e-commerce operation requires cooperation between different divisions, but none of those divisions are willing to take responsibility for it. In terms of online sales, members, and related revenue, Lian Hua Supermarket is the best e-tailer in the Shanghai Brilliance Group. The supermarket has reached RMB5.2 billion in revenue from their online membership program, and 7.5 million members. Lian Hua Supermarket is also the only subsidiary which has established a specific e-commerce company to conduct their online business.

Overall, the supermarket subsidiaries have launched e-commerce, including online shopping, earlier than the department store subsidiaries. This is probably because of the products they sell, and because of the fact that they fall under different industry departments, with different leaders. Moreover, the Oriental Shopping Centre is the only department store which offers online sales, and it is the only department store which hires a third party company to manage their e-commerce. Lian Hua, as the most successful e-commerce operator in the Shanghai Brilliance Group, also has its own e-



commerce company to conduct its e-commerce project. Therefore, it can be seen that a specific team and efficient human resources are important to e-commerce.

### 5.2.2 Research issue 2

This section discusses research issue 2: What are the barriers to the implementation of e-tailing in the Shanghai Brilliance Group?

The data from all three sources (in-depth and focus group interviews and survey questionnaires) indicated that there are some barriers to the implementation of successful e-tailing in the Shanghai Brilliance Group. Table 5.1 depicts these barriers in the categories of external and internal barriers. Some of the barriers to the development of e-commerce in China were identified in Section 2.2.4.3. Those barriers mainly related to the macro-environment, and included: (1) the high cost of internet access; (2) lack of payment facilities and effective banking services; (3) advanced retail networks; (4) lack of cultural trust; (5) poor delivery networks; (6) lack of legal and policy frameworks; (7) education in e-commerce; (8) product issues; (9) customer need for the physical shopping experience; and (10) after-sales service.

**Table 5.1: Barriers to implementing e-tailing in the Shanghai Brilliance Group**

External	Internal
<ol style="list-style-type: none"> <li>1. high cost of internet access</li> <li>2. lack of payment facilities and effective banking services</li> <li>3. advanced retail networks</li> <li>4. lack of cultural trust</li> <li>5. poor delivery network, lack of legal and policy frameworks</li> <li>6. education in e-commerce</li> <li>7. need for the physical shopping experience</li> </ol>	<ol style="list-style-type: none"> <li>1. business processes</li> <li>2. senior management commitment</li> <li>3. investment</li> <li>4. senior management knowledge of e-commerce</li> <li>5. IT/IS expertise</li> <li>6. organisational mission</li> <li>7. profit objectives</li> <li>8. information system infrastructure</li> <li>9. integration</li> <li>10. organisational culture</li> <li>11. product issues</li> <li>12. strategic direction</li> </ol>

Source: Developed for this research

Chapter 2 discussed other barriers as being included in the success factors of e-commerce, and those barriers were also suggested during the interviews, mainly relating to the organisational perspective. They are: (1) business processes; (2) senior

management commitment; (3) investment; (4) senior management knowledge of e-commerce; (5) human resources; and (6) return on investment.

Two new barriers have been identified by this research: organisational mission and profit objectives, both mentioned by participants of the in-depth and focus group interviews.

### 5.2.3 Research issue 3

This section discusses research issue 3: What are the factors for achieving successful e-tailing in the Shanghai Brilliance Group?

Table 5.2 makes the comparison between the success factors addressed in Chapter 2 and the research findings presented in Chapter 4. “Confirm” is used to show the variables that both found in literature and the collected data; “disconfirm” is used to display the variables that were not found from the collected data but identified from the literature; “extend” is used to represent the new variables. It also shows that there are many barriers and success factors not addressed by the Shanghai Brilliance Group. Those barriers and success factors were discussed in Sections 2.2.4.3 and 2.4. Moreover, some new factors and barriers have been extended from the findings of this research.

**Table 5.2: Comparison of the literature and research findings for research issue 3**

	Factors	Relevant literature	Findings from the research (interviews/survey)
<b>E-commerce system measurement (system quality, content quality, trust, and support and service)</b>	EC/SYSTEM QUALITY		
	• Website speed	√	Confirm
	• Navigation	√	Confirm
	• 24-hour availability	√	Confirm
	• Ease-of-use	√	Confirm
	• Accessibility	√	Disconfirm/Confirm
	EC/CONTENT QUALITY		
	• Accuracy	√	Confirm
	• Up-to-dateness	√	Confirm
	• Comprehensiveness	√	Confirm
	• Understandability	√	Confirm
	• Completeness	√	Confirm
	• New and special offers	√	Confirm
	• Contact information	√	Confirm
	• Multimedia presentations	√	Confirm
	• Language options	√	Disconfirm/Confirm

	EC/TRUST		
	• Security	√	Confirm
	• Privacy	√	Confirm
	• Product quality	√	Confirm
	• Ecrow service	√	Disconfirm/Confirm
	• Insurance	√	Disconfirm/Confirm
	EC/SUPPORT & SERVICE		
	• FAQs	√	Confirm
	• Search engines	√	Confirm
	• Human assistance	√	Confirm
	• 24-hour availability	√	Confirm
	• Delivery	√	Confirm
	• After-sales service	√	Confirm
	• Customisation	√	Disconfirm/Confirm
	• Feedback systems	√	Confirm
• Communities	√	Confirm	
<b>Senior management factor</b>	• Senior management commitment	√	Confirm
	• Investment	√	Confirm
	• e-commerce knowledge	√	Confirm
	• Relationship between managers	√	Disconfirm
<b>Organisational factor</b>	• Information system infrastructure	√	Confirm
	• IT/IS Expertise	√	Confirm
	• Centralised structure	√	Confirm
	• Brand name and reputation	√	Confirm
	• Strategic direction	√	Confirm
	• Organisational culture	√	Confirm
	• Business processes	√	Confirm
	• Task coordination	√	Disconfirm
	• Organisational Mission	None	Extended
	• Profit objectives	None	Extended
• Size	None	Extended	
<b>E-commerce strategy</b>	• Integration	√	Confirm
	• Strategic alliances	√	Confirm
	• Return on investment	√	Confirm
	• Cost considerations	√	Confirm
	• Product categories and prices	√	Confirm
	• E-commerce promotional campaign	None	Extended
	• First mover advantage	None	Extended
<b>External factor</b>	• Government policy and laws	√	Confirm
	• Competitive pressure	√	Confirm
	• Cost of internet and PC	√	Confirm
	• Payment facilities and banking services	√	Confirm
	• Advanced retail networks	√	Confirm
	• National culture	√	Confirm
	• Credit history system	None	Extended
<b>Consumer factor</b>	• Age	√	Confirm/Disconfirm
	• Gender	√	Confirm/Disconfirm

	• Education	√	Confirm
	• Income	√	Confirm
	• Experience	√	Confirm
	• Innovativeness	√	Confirm
	• Work and lifestyle	√	Confirm
	• Physical shopping experience	√	Confirm
	• Membership	None	Extended

Source: Developed for this research

Firstly, the surveyed customers were all concerned with e-commerce system measurements. As the end-users of an e-commerce system, they indicated what they considered to be the important functions of online shopping sites. Effective e-commerce systems need to have reliable systems with careful content design, and moreover, online trustworthiness and qualified support and service would enhance the effectiveness and efficiency of an e-commerce system. However, this research found that some e-commerce system measurements mentioned by the customers were not mentioned by the organisational interviewees, indicating that organisations do not understand what their customers concerns and desires are in relation to online systems. Therefore, a mismatch is indicated between customers and organisations, in terms of e-commerce systems.

Secondly, three out of the four senior management factors were mentioned by the organisational interviewees: senior management commitment, investment, and the e-commerce knowledge of senior management. Among those factors, some inter-relationships were indicated at the interviews, indicating that investment in e-commerce is the result of senior management commitment, and the commitment of senior management derives from their knowledge of e-commerce.

Thirdly, almost all of the organisational variables extracted from the literature were mentioned by the interviewees except task coordination, this is probably because the group never has a systemic E-commerce approach and lacks of E-commerce knowledge and experience. This suggests that organisational factors have some effect on the quality of an e-commerce system. For example, the e-commerce system is the web-front store, and the organisation provides the backup support for that system. Without effective support and strong internal systems, the e-commerce system cannot be a success. Furthermore, some new factors were identified in the organisational

categories, some being typically Chinese, due to the Chinese market economy, such as organisational missions and profit objectives.

Fourthly, seven e-commerce strategy success factors arose from this research, including five confirmed variables and two new, extended variables. This suggests that organisations are concerned with e-commerce returns and cost considerations, and that they believe that effective strategies are important to the success of e-tailing, such as promotional campaigns and strategic alliances. This finding shows that organisations currently consider strategy initiation and assessment, but lack strategy formulation and implementation.

Fifthly, external factors are an aspect of the E-tailing success which cannot be controlled by the organisation. This category consists of a number of barriers, such as the PC and internet costs, payment facilities and banking services, and advanced retail networks. One new factor was identified in the interviews conducted for this research, namely the credit history system, suggesting that currently there is a lack of an effective credit history system throughout Chinese society. A well-operating credit history system would be useful to build reputation and enhance customer trust.

Sixthly, consumer factors describe the characteristics of the online customer. Most of the variables were confirmed by both the interviews and surveys, however, the customer surveys indicated that age and gender are less significant to online shopping activities. The new factor arising from the interviews is membership: participants believed that e-commerce activities should be more focused on the customers who have current membership.

The aim of this research was to investigate the factors and variables of successful e-tailing in China. According to the literature, six factors and 59 variables have been identified. The findings of this research confirm that most of those variables are important to the success of e-tailing in China, and some new variables have been explored. However, the organisational interviewees seem less concerned with the quality of their e-commerce systems than the customer, rather, the organisational interviewees were more concerned with the organisational factors, senior management factors, e-commerce strategies, and external factors.

#### **5.2.4 Discussion of the research question: ‘How can successful e-tailing in China’s retail industry be achieved?’**

This research investigated methods for the achievement of successful e-tailing in the Shanghai Brilliance Group, through addressing the success factors and barriers in the Group. The literature (Chapter 2) suggested that six factors and 59 variables need to be addressed to achieve successful e-tailing, including senior management factors, organisational factors, e-commerce strategies, external factors, consumer factors, and e-commerce system measurements.

This research found that e-commerce is poorly implemented in the Shanghai Brilliance Group and its subsidiaries. Most of those companies only provide information online, and do not offer online shopping. It also found that there is a lack of professional staff or dedicated organisational divisions to manage and operate the e-commerce ventures. Also, within the Group, the supermarket companies have more advanced e-commerce operations than the department stores.

Moreover, seven external barriers and twelve internal barriers were identified by this research and presented in Table 5.1. These barriers need to be carefully addressed prior to the implementation of e-commerce.

Finally, this research confirmed that all six factors are important to the success of e-tailing in the Shanghai Brilliance Group. However, some variables were not confirmed from the data and some new variables emerged. Those new variables have not previously been defined in the literature. Thus, this research made a contribution to this area of study.

### **5.3 Implications of the research**

#### **5.3.1 Implications for theory**

The findings of this study have expanded the existing body of knowledge on e-tailing by focusing on the factors affecting the implementation of e-commerce in China’s retail industry. Several implications for theory of the success of e-tailing and related issues have arisen from this research:

1. Important variables for successful e-tailing;
2. A model to guide the implementation of e-tailing;

3. National focus;
4. Contribution to the retail industry;
5. Need for future research.

*Important variables for successful e-tailing*

The first implication of this research is the exploration of the success factors in e-tailing in China's retail industry. This study found that the six factors and most of the variables are important to successful e-tailing in China. Some organisational factors were found to be very important to e-tailing success in terms of frequency see table 4.15 and 4.16, and section 4.8 for detailed discussions, including:

1. Senior management commitment;
2. Investment;
3. E-commerce knowledge at the senior management level;
4. IT/IS expertise;
5. Return on investment;
6. Centralisation;
7. Brand name and brand reputation;
8. Organisational culture;
9. Strategic direction;
10. Product categories and prices.

In addition, seven new variables were identified see table 4.15 and 4.16, and section 4.8 for detailed discussions:

1. Membership;
2. Organisational mission;
3. Profit objectives;
4. E-commerce campaigns;
5. Size of organisation;
6. First mover advantage;
7. Credit history system.

These findings are considered to be the most important contribution made by this research.

### *A Model to guide successful e-tailing*

A new theoretical model has been generated by this research to measure the success factors of e-tailing in China. This is the second major implication of this research. The developed model explains the barriers and the important variables which need to be concerned when implementing an e-commerce system. This is the first comprehensive model of the success factors for predicting e-tailing success to be generated.

### *National focus*

This research is focused on the context of the Chinese retail industry. As far as the researcher is aware, this is the first research paper that has investigated e-tailing success in China. Most of the previous research in the field of e-commerce has been conducted in western countries. A few prior studies (CNNIC 2006; Ernst & He 2000) on e-commerce in China only focused on customer characteristics and external barriers, but did not investigate the function of the e-commerce system in China. Moreover, there has been no research investigating the implementation of e-commerce in Chinese organisations. Thus, the factors relating to the organisation section need to be explored and confirmed. As indicated in Chapter 3, this research used a single case study as the research methodology and successfully filled the research gap on successful e-tailing in China's retail industry.

### *Contribution to the retail industry*

This research found that e-commerce, especially e-tailing, is under-utilised in China's retail industry due to a lack of investment (financial and human resources), inappropriate business processes, lack of integration, product categories and prices, and so forth. Interestingly, supermarkets have more advanced e-commerce systems than department stores. However, all the interviewees from both the department stores and supermarkets realised the benefits of e-tailing. As they indicated, they have more advantages in the implementation of e-commerce than pure-players, in terms of brand name and brand reputation, customer service and customer trust. This is the first research paper to investigate e-tailing activities in China's retail industry. Furthermore, due to the unique case, this research has provided a successful answer to the research problem.



### *Need for future research*

According to the literature review presented in Chapter 2, e-commerce has developed rapidly in China over the last decade. However, the data collected for this research from both the interviews and surveys indicated that e-tailing is less popular than expected and is still in the preliminary stage in China's retail industry. This research generated the success factors and barriers that need to be addressed to achieve successful e-tailing in China. The findings of this research are useful as a theoretical foundation for further research. The variables newly generated by this research include those from the organisational and customer perspectives, the external environment and the measurement of e-commerce systems. This data will be useful for future studies in a variety of research settings.

### **5.3.2 Implications for policy and practice**

In addition to the theoretical findings, this research also provides contributions to the policy and practice of e-tailing in China, and contributes to a deeper understanding of successful e-tailing in China, from the point of view of policy and practice. Those implications are:

1. The need for e-tailing by China's retailers;
2. External barriers in the e-tailing environment;
3. Internal barriers to the implementation of e-tailing;
4. Strategies and other success factors.

At the end of this section, Figure 5.2 to 5.7 (d) present the success factors of E-tailing and the strategies to address those factors and variables.

### *The need for e-tailing in China's retail industry*

As discussed in Chapter 2, the internet and e-commerce developed rapidly in China in the last decade. China has become the biggest mobile phone market and the second largest internet market in the world. Further, e-commerce has also developed rapidly. As one of the major applications of e-commerce, e-tailing offers many benefits to retailing organisation, including:

- Generating sales from additional distribution channels;
- Reaching large numbers of customers and reducing operational costs;
- Interaction with customers;
- Multi-channel supports;

- Personalised customer service.

This research confirms the differences between a company which operates an effective web-front store and a company which does not have an effective web-front store, in the Shanghai Brilliance Group. For example, Lian Hua Supermarket generates RMB5.2 billion in sales revenue from their online membership and the number of members reached 7.5 million in 2005, while another supermarket, Hua Lian, cannot provide online sales statistics due to a limited volume. The department store subsidiaries of the Shanghai Brilliance Group have less-developed e-tailing operations than the supermarkets. Moreover, Lian Hua Supermarket's e-commerce membership card is to be changed to a Brilliance Card which will allow customers to conduct shopping at all subsidiaries in the Shanghai Brilliance Group. This decision has been made because of the already positive results of e-commerce in Lian Hua Supermarket.

#### *External barriers to e-tailing*

There are many external barriers to the diffusion and implementation of e-commerce in China. These barriers include:

1. The high cost of internet access;
2. Lack of effective payment facilities and banking services;
3. Advanced retail network;
4. A cultural lack of trust;
5. Lack of government policy and legal frameworks;
6. Lack of education in e-commerce;
7. Customers' need for the physical shopping experience.

The first obstacle to the diffusion and implementation of e-commerce is the high cost of internet access and computers. The interview participants of this research doubted that the majority of people in China have computer and internet access, especially in rural areas. The survey also found that income level is significant to internet usage. To reduce this barrier, the average income level in China needs to be increased. Due to the speed of growth of the Chinese economy, this barrier could be eliminated in the near future.

Lack of payment facilities and effective banking services is another barrier to e-tailing in China. Organisations do not have many online payment platform options, and the service quality of e-commerce needs to be improved. This is mainly because the Chinese banking and financial industry is not open to the market. Most banks are state-owned, and foreign banks are only allowed to conduct a limited service in China. However, based on the contract between the Chinese government and the WTO, the banking and financial sector in China was opened up at the end of 2006. This means that more foreign banks will enter the Chinese market, leading to increased competition. The related banking services will therefore improve. The organization needs to cooperate and colaration with reliable bank service providers.

The third barrier is the advanced retail network. China has a much more advanced retail network than some western countries such as Germany and Australia. Customers have easy access to a retail store in most areas, making e-tailing relatively less convenient for Chinese shoppers. Therefore, the online store or e-tailing has to be differentiated and of a high quality system, and support and services to attract customers to online shopping.

Culture is another barrier in China. The Chinese cash-based culture makes customers averse to using credit cards, which makes online payments unpopular and difficult. Another cultural issue is lack of trust, which leads customers to worry about security and privacy in the face-to-face situation, and even more so in the virtual environment. Moreover, as it is difficult for customers to view online products, they worry about product quality. However, there are several ways to reduce these cultural biases. A famous brand name and good brand reputation are important, as customers would pay more money on a website that they trusted. Also, providing customers with comprehensive and detailed information on the online shopping process would reduce their concerns. Further, a strong legal framework is also important in enhancing trust. However, such a legal framework does not exist in China. This issue is discussed as the next barrier.

China lacks government policies and legal frameworks for e-commerce. Numerous legal issues occur online due to issues of privacy and security. Both organisations and customers worry about their online equity and rights. Consequently, organisations are

concerned about implementing e-tailing, and customers use e-commerce only as an information channel, rather than a distribution channel. Therefore, the Chinese government needs to formulate policies and regulations covering the implementation and operation of e-commerce. In the current situation, the organization needs to design their E-commerce strategy complying with the current legal and policy situation.

The sixth barrier is the lack of education in e-commerce. This may be contributing to the reasons why customers lack trust in e-commerce and an ignorance of how to conduct online shopping. The surveys conducted for this research found that education is significant to online purchasing practices. Frequent advertising of e-commerce needs to be implemented to distribute basic information on e-commerce. This advertising could be in the form of public events organised by the Shanghai Brilliance Group, or exhibitions on e-tailing platforms.

Lastly, the need for the physical shopping experience also leads to less use of e-commerce. Customers enjoy the process of shopping and the service provided by sales people. This is especially important in the department stores. This barrier can only be reduced but not eliminated, with advanced e-commerce systems and effective online support and service.

#### *Internal barriers to e-tailing*

Barriers to the implementation of e-commerce implementation do not only exist in the external environment, but also the internal organisational environment. These barriers are:

1. Business processes;
2. Strategic direction;
3. Senior management commitment to e-commerce;
4. Senior management knowledge of e-commerce;
5. Investment;
6. IT/IS expertise;
7. Organisational mission;
8. Profit objectives;
9. Information systems;

10. Integration;
11. Organisational culture;
12. Product categories and prices.

The current business processes do not support e-commerce, especially in the department stores. Currently, suppliers are invited into the store and paid commission on sales; the companies do not buy products, and the percentage of outright purchases by the retailer is very low. This leads to low profit margins, and is slow to reflect market demand and leads to difficulties in providing accurate product information online. To reduce this barrier, retail companies need to adjust the business process through increasing the percentage of outright purchases, beginning with products which are easy to sell online. Product categories and prices is another barrier and will be discussed later in this section.

The strategic direction of the Shanghai Brilliance Group is not currently focused on e-commerce. They are trying to expand their retail network and improve integration within the Group. This is one of the reasons why they do not put many resources into e-commerce. However, most new stores are struggling to make a profit, and integration is slow, but still proceeding. Therefore, the Group needs careful analysis of their present strategies, to decide which strategies could provide more benefits in both the short and long terms. Moreover, the Group needs to have effective strategic planning for its online operations.

Two closely related barriers are senior management commitment to and knowledge of e-commerce, as one of the basic reasons for the lack of senior management commitment to e-commerce is a lack of knowledge of e-commerce amongst the senior managers. Consequently, senior management teams do not understand the benefits or costs of e-commerce and e-tailing. Providing senior management with training on e-commerce is essential to their commitment. Promoting appropriately trained, younger managers into the decision-making teams would also be useful as it has been shown that that the younger generation has more knowledge of e-commerce than the older generation in China.

Investment is the fourth barrier internal barrier. Most subsidiaries of the Shanghai Brilliance Group have no e-commerce investments. Only one supermarket company, Lian Hua, had a first stage e-commerce investment of RMB50 million, and is currently the most successful e-tailing company in the group. This indicates the importance to its success of investment in e-commerce. Gaining management support and commitment is one of the ways to reduce this barrier, and education in e-commerce assists in gaining this support and commitment. Another way to increase investment is to reduce the annual profit objectives, another barrier to e-commerce in the Group. In other words, the organization needs to allocate sufficient funds for E-tailing implementation.

Insufficient human resources leads to low quality e-commerce systems and e-commerce marketing campaigns. The majority of the Shanghai Brilliance Group subsidiaries do not have specific teams or employees responsible for e-commerce. In other words, e-commerce is not their primary job, but merely the work they do if they have the time. Only two subsidiaries have established specific e-commerce divisions or established cooperation with a third party IT company, and these two subsidiaries have a better e-commerce performance amongst the department stores and supermarkets. Therefore, the Shanghai Brilliance Group should hire some professional e-commerce employees to manage their e-commerce operations. This issue also relates to the commitment and investment of senior management in e-commerce, as without that commitment and investment, the necessary policy and strategic decisions will not be made.

One of the organisational missions in the Shanghai Brilliance Group, arising from the fact that it is a state-owned enterprise, is to maintain employment opportunities, and as a consequence, dismissal of redundant employees is not permissible. Therefore, it would be beneficial for the Group to approach the government on other solutions for redundancy employees, e.g. offering alternative employment or training in e-commerce, to provide the needed e-commerce specialists within the Group. This would solve both problems, not only the e-commerce human resource issue but also the employment issue. However, the quality of the e-commerce training program would need to be high enough to ensure the required quality of potential e-commerce staff.

As indicated above, profit objectives is one of the reasons the Group makes only a low investment in e-commerce. Currently, all the subsidiaries are struggling to reach the profit objectives made by the Group. A reasonable profit objective would release investment funds for the subsidiaries. If this is not feasible, the Group needs to create specific investment funds for e-commerce ventures.

Poor information systems are another barrier to the implementation of e-commerce. As differing information systems are in use in the Group subsidiaries, standardised information integration is not possible. Moreover, the quality of most of the internal information systems is unsatisfactory. The Group needs to improve their integration processes between information systems, and use a capable third part to develop a common e-commerce system. To facilitate this, the e-commerce and information systems should ideally be developed by the same out-sourced company.

The tenth barrier to e-commerce in China's retail industry is integration. As discussed previously, the integration process in the Group is slow and unsatisfactory, not only within the information systems, but also the supply chain. The Group therefore needs to develop an adequate supply chain, including delivery methods, to support e-tailing. This is also related to the obstacle of poor business processes, as the current business processes do not need a full supply chain system, due to low inventory and the low the percentage of outright purchases made by retailers.

The organisational culture of the Shanghai Brilliance Group is also a barrier to the success of e-tailing within the Group. As an organisation, the group lacks creativity and innovativeness. Employees are not encouraged to suggest new ideas or offer comments. Therefore, the company needs a motivational policy to encourage creativity and innovation within the staff.

Product categories and price is the final internal barrier to successful e-commerce in China's retail industry. As the literature suggested, some products are easy to sell online, while others are not. The interviewees of this research pointed out the supermarkets have more 'low touch' products to sell online than the department stores. To reduce this bias, the Group needs to provide multimedia presentations on the

products, especially for the ‘high touch’ products. Additionally, price discounts may increase the online sales of ‘high touch’ products.

#### *Strategies to other success factors other than barriers*

In addition to the barriers to the implementation of e-commerce discussed above, other variables also need to be addressed. These further factors have emerged from the literature (Chapter 2) and research findings (Chapter 4). Managers need to implement appropriate strategies and tactics to address these factors. This section provides strategies and recommendations for managers for the practical application of these e-tailing factors.

#### **E-commerce return considerations**

This research found that organisations are more focused on the short-term tangible benefits of their business rather than the long-term benefits. The research suggests that the management team should learn more about E-commerce and understand the both tangible and intangible benefit from it. Thus, the group would willing to wait for the return of E-commerce in a long-term period.

#### **Centralisation**

All e-commerce activities are implemented independently by the Shanghai Brilliance Group subsidiaries. As a result, integration of the subsidiary companies is difficult, and they lack sufficient investment, including human resources and funding. Also, decentralisation results in a lack of competitive advantage in terms of size and bargaining power of the companies. Therefore, the Group needs to form a dedicated team or company to manage and operate a centralised, subsidiary-wide e-commerce project. This structure would utilise subsidiary resources effectively, and the subsidiaries could focus on their own businesses. Costs and cross-company conflict would also be reduced, more products could be offered online, trust would be enhanced in terms of the size of the online operation, productivity would be enhanced, and other benefits would also accrue to the Group and the subsidiaries.

#### **Strategic alliances**

Strategic alliances are extremely useful for a new organisational e-commerce website, especially in the early stages. Through strategic alliances, the quality of an e-



commerce system can be enhanced, and customers can gain easy access to the new website through allied e-commerce partners. Therefore, the Group could set up cooperative e-commerce ventures with some of China's famous websites such as TaoBao, Sina and Yahoo.

### **Brand name and brand reputation**

Famous brand names and well-known brand reputations will enhance the trust of consumers in an e-commerce website. Therefore, marketers should use their own existing brand names to build and promote new websites. Currently, it is difficult for customers to connect the website names used by the Group subsidiaries to the physical subsidiaries, which they know well. Moreover, 'Brilliance Group' is a relatively new brand name compared to the names of its subsidiaries. Therefore, the Group should integrate the existing famous brand names of its subsidiaries and the name of the Brilliance Group. This would allow the Group to build a new brand and still take advantage of the existing famous brands, such as Shanghai No.1 Department Store.

### **E-commerce cost considerations**

The low cost of e-commerce equipment is one of the advantages of e-commerce and for a click-and-mortar enterprise, cost should not be a problem. However, the relative costs of the development and implementation of an e-commerce arm need to be considered carefully. These costs would include delivery costs, after-sales service, and advertising costs. Forming strategic alliances is one of the possible ways to contain costs in the early stages of an e-commerce enterprise, as co-operation with a third party delivery company would also reduce the delivery and product return costs, and co-operation with other websites is useful to reduce advertising costs.

### **E-commerce promotional campaigns**

E-commerce may not be successful without promotional campaigns. Firstly, marketers need to establish the objective of their e-commerce venture, including the target market, content, style, function and schedule. The way in which customers will be attracted to the website should also be considered. Such effective e-commerce campaigns should be organised by professional e-commerce specialists and dedicated e-commerce teams. An effective marketing plan for e-commerce is necessary.

### **Size of organisation**

Size is another issue of advantage to marketers in achieving successful e-tailing. The cost of e-commerce allows the SME (small and medium enterprise) to compete with large enterprises in the same area, however, undoubtedly, the larger enterprises have more advantages and resources than the smaller enterprises, including funds, human resources, merchandising skills, procedural capabilities, supply chains and after-sales service. As the biggest retailer in China, size is not a problem for the Shanghai Brilliance Group. However, the Group subsidiaries were recently merged and they all have very strong organisational cultures, different business processes and different information systems. Thus, to take advantage of the size of the Group, careful and effective integration is important.

### **First mover advantage**

First mover advantage can result in the investment of less time and money to gain high a volume market share and a good brand reputation. Therefore, it's important to enter the market early. However, if the new e-commerce system is low quality, the first mover advantage may be lost and the brand name may be damaged. Therefore, before trading, marketers need to ensure that their e-commerce system and support systems are market-ready.

### **Competitive pressure**

Competitive pressure could be a force to push an organisation into conducting e-commerce. The force of this pressure is closely related to the knowledge of e-commerce of the decision makers, as the more knowledgeable about e-commerce the decision makers are, the more competitive pressure they will feel.

### **Credit history system**

An effective and real credit history system with full databases of personal and business credit is important to build consumer trust in e-commerce. Therefore, to facilitate national e-commerce development, the Chinese government needs to take responsibility for building an effective and trustworthy credit history system. Before the system will be built by government, organization should pay attention some other tactics to enhance the trust, such as brand name, online review, and feedback system, etc.

### **Consumer factors**

Consumer factors are one of the categories affecting the diffusion of e-tailing, and include age, gender, income, experience, innovativeness, work and lifestyle, and membership. Companies should carefully design their e-commerce enterprises to meet their customers' characteristics. For example, an e-commerce website could offer premium service for members, product prices could be customer-specific, and an e-commerce system could be made easy to use for those customers who lead busy lives.

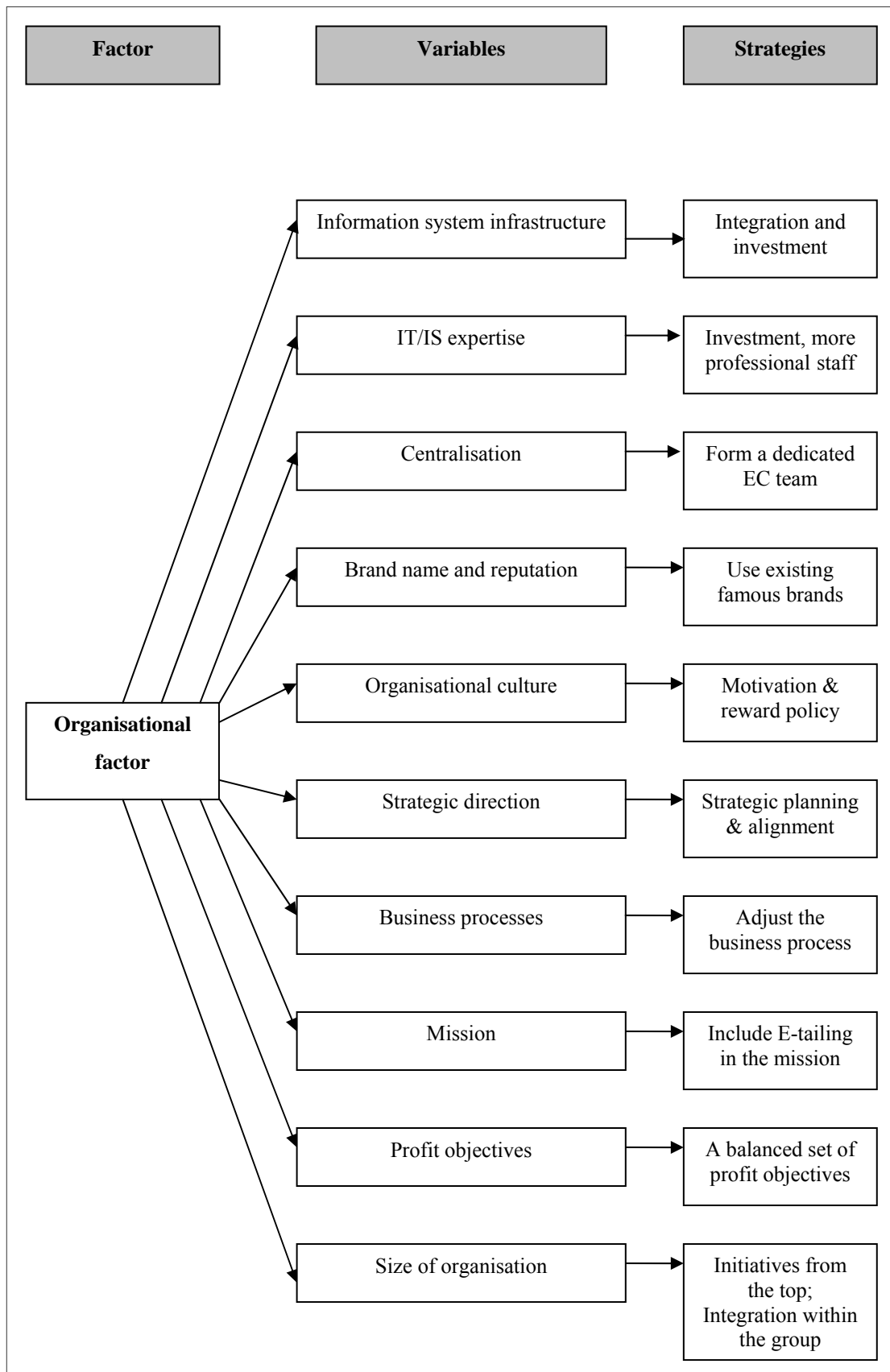
### **E-commerce system measurements**

System quality and content quality are important to all e-commerce systems. Low system quality could result in system unreliability, and difficulty of use. On the other hand, high content quality allows the customer to view a greater amount of accurate information. These two variables could attract more customers to an e-commerce website and motivate them to spend more time on the site. To achieve this, companies should have professional IT and e-commerce designers and technicians to planning, managing and operating their e-commerce systems.

Trust in an e-commerce site could be increased by both technical and non-technical means. Technical tools include firewalls and encryption. Non-technical means include brand name and reputation, effective customer support, insurance facility and escrow services.

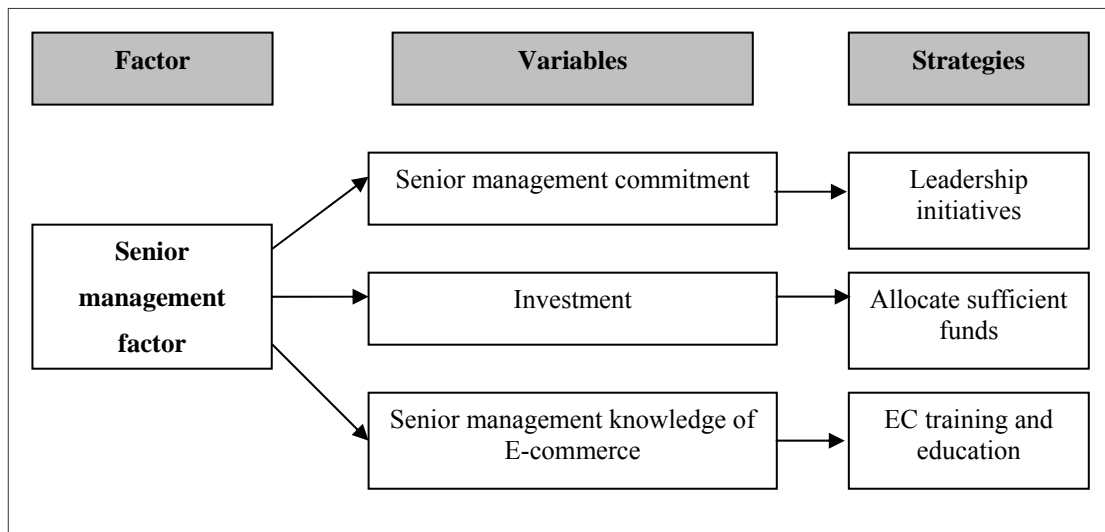
Support and service is one of the important functions of an e-commerce system, and is extremely useful for increasing customer trust, as noted above. To achieve effective support and service, professional e-commerce staff and professional training programs are essential.

**Figure 5.2: organisational factor of e-tailing and its relevant strategies**



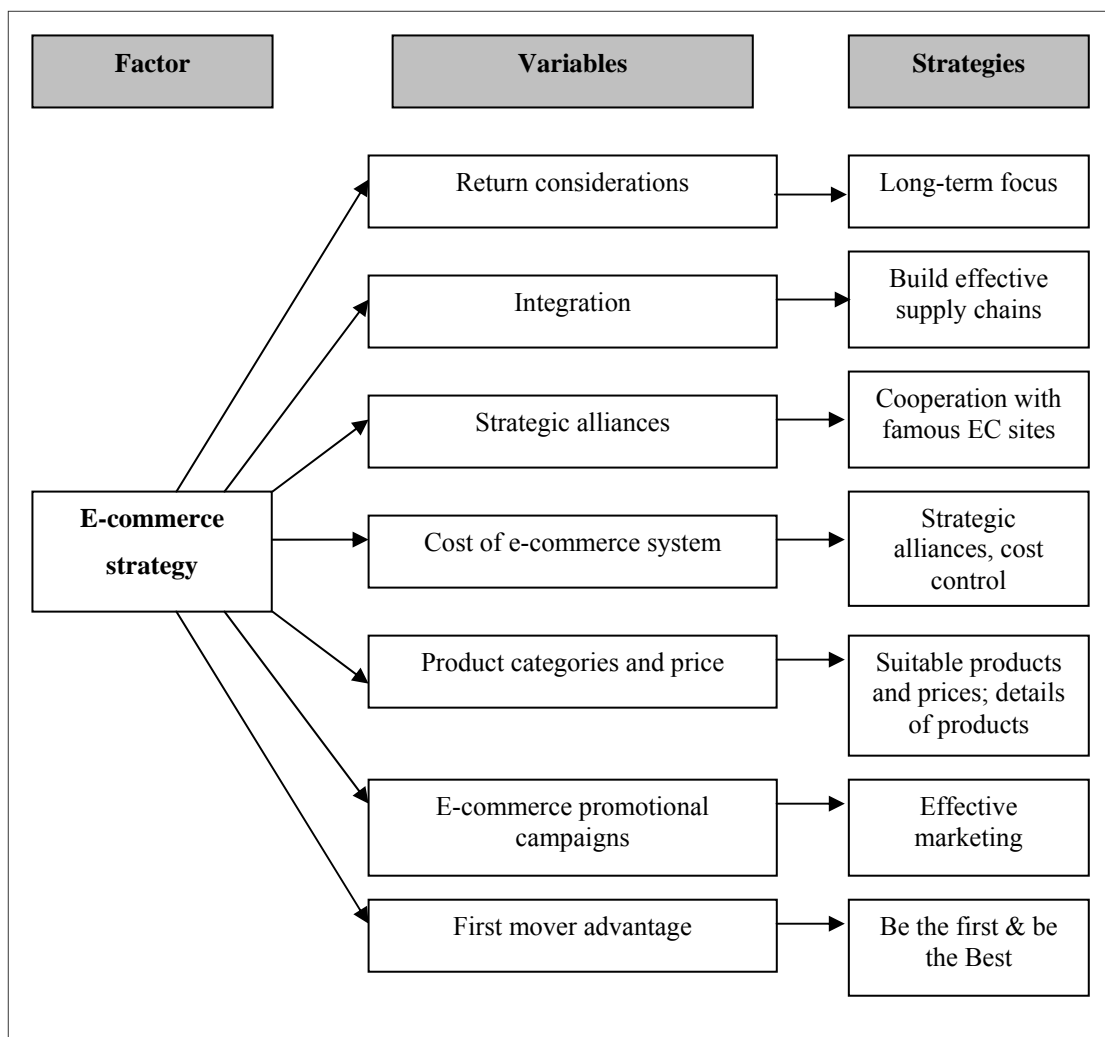
Source: developed for this research

**Figure 5.3: senior management factor of e-tailing and its relevant strategies**



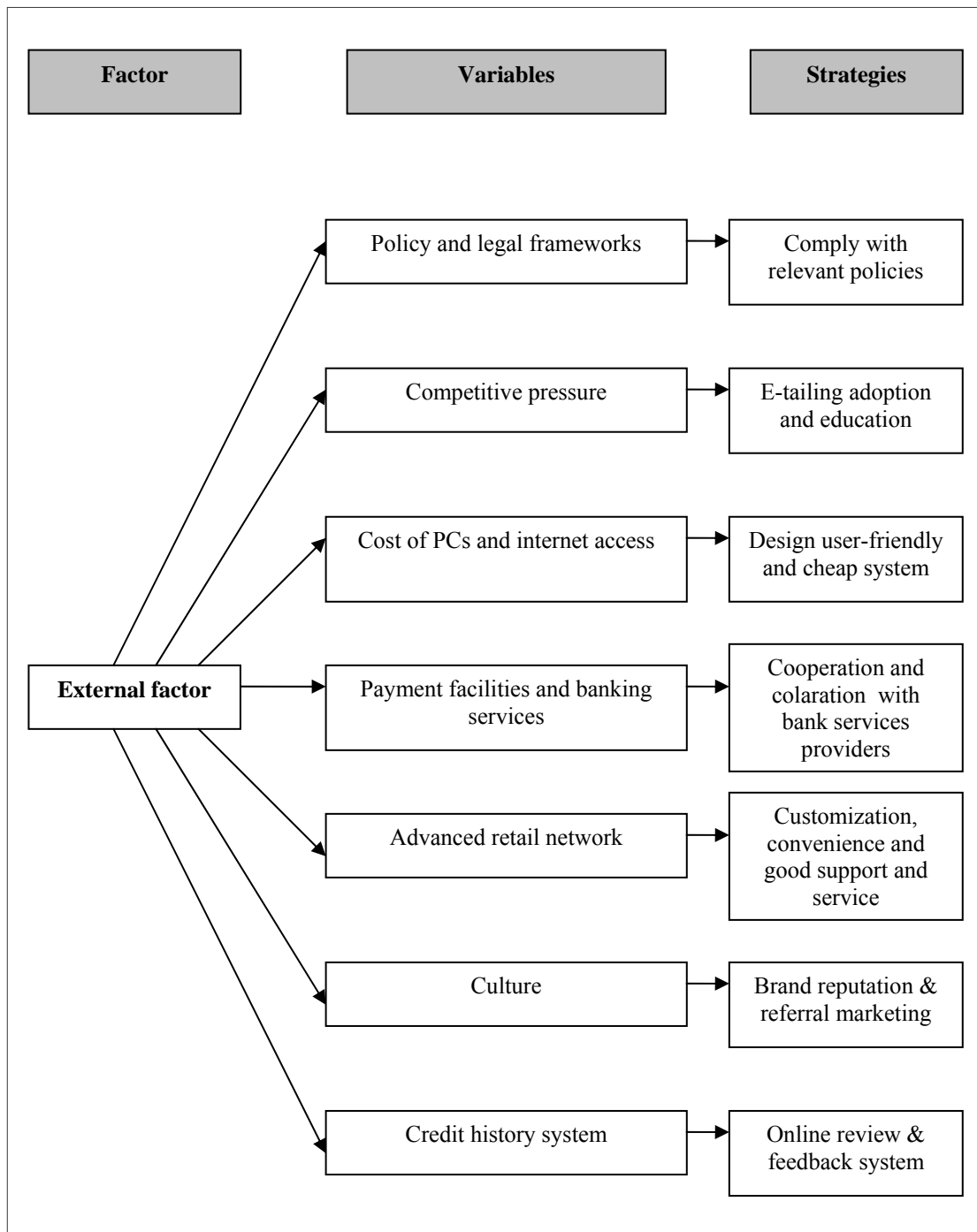
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**Figure 5.4: E-commerce strategy of e-tailing and its relevant strategies**



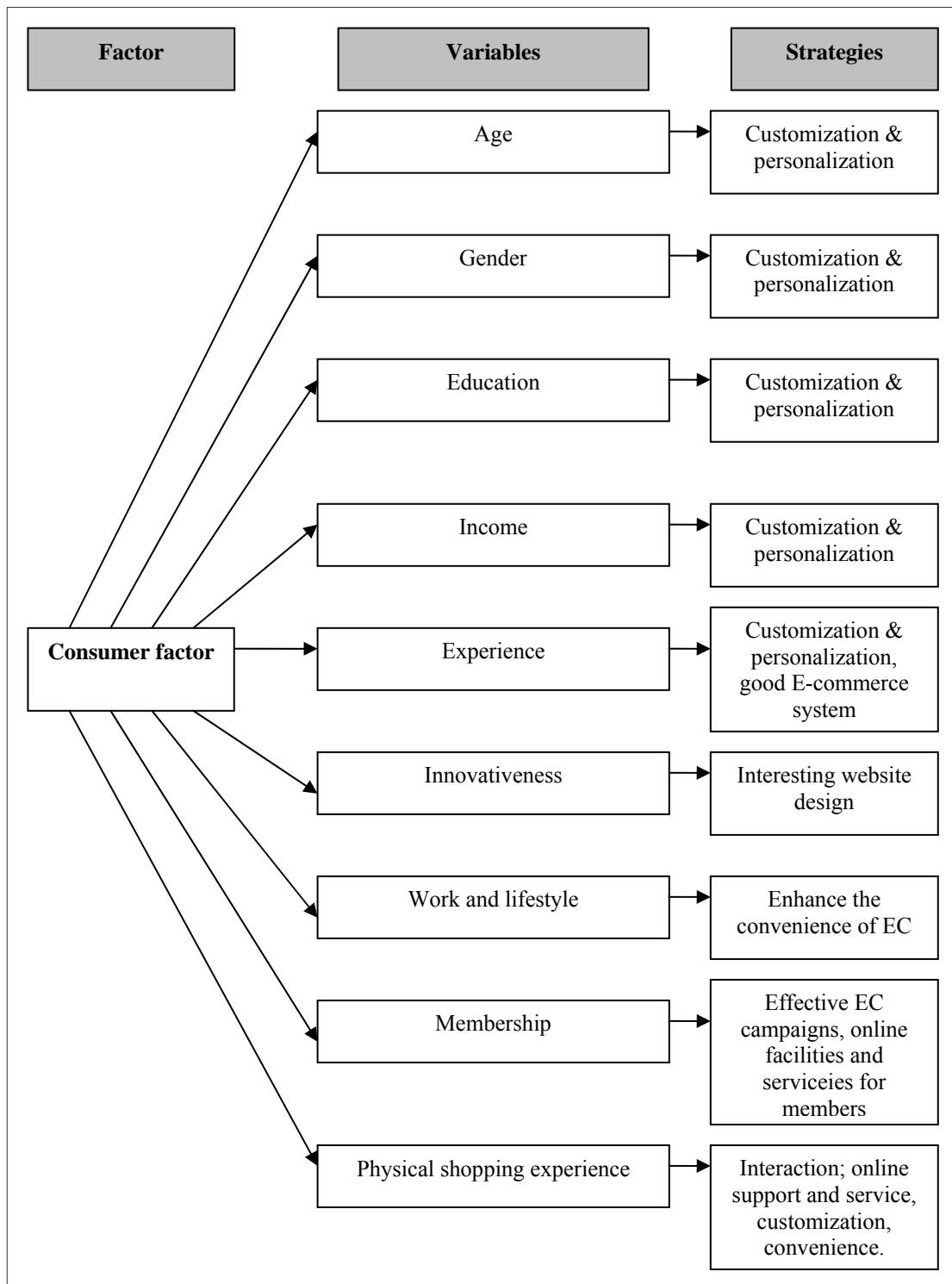
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**Figure 5.5: external factor of e-tailing and its relevant strategies**



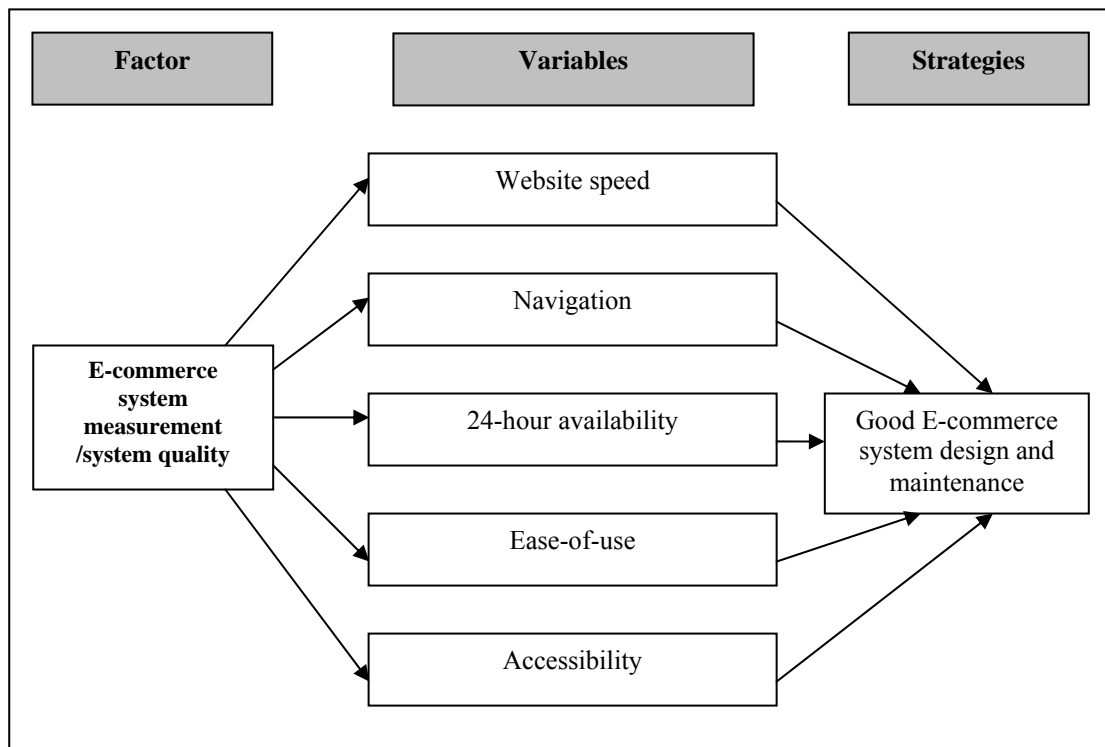
Source: developed for this research

**Figure 5.6: consumer factor of e-tailing and its relevant strategies**



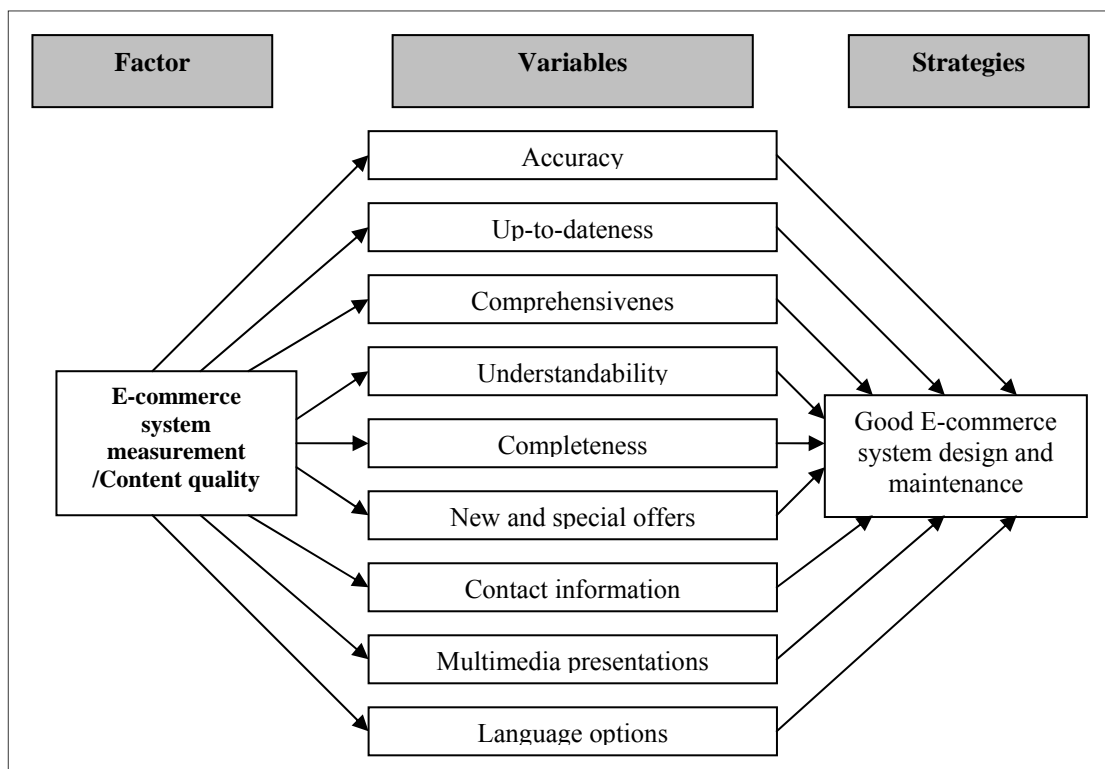
Source: developed for this research

**Figure 5.7 (a): system quality of system measurement and its relevant strategies**



Source: developed for this research

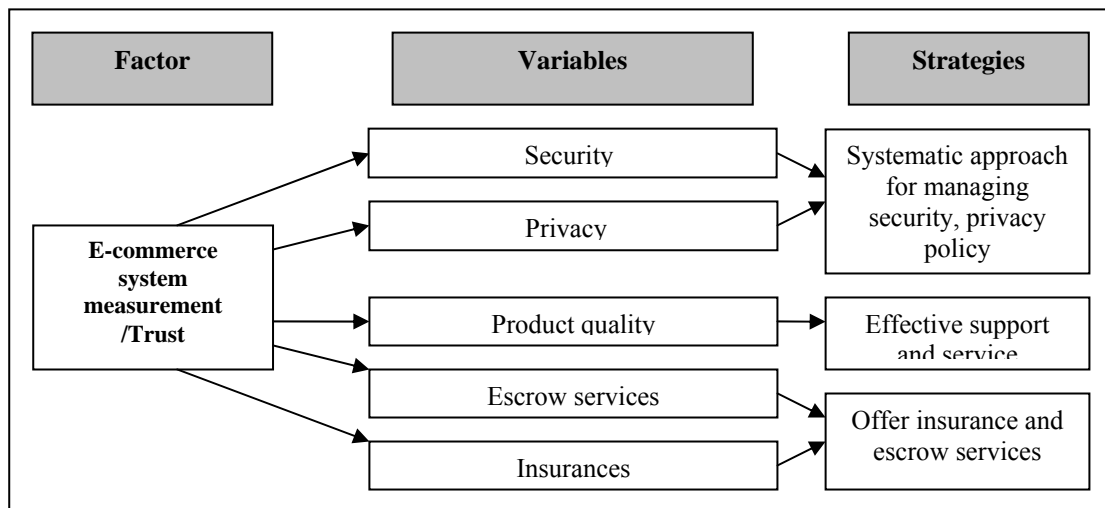
**Figure 5.7 (b): content quality of system measurement and its relevant strategies**



Source: developed for this research

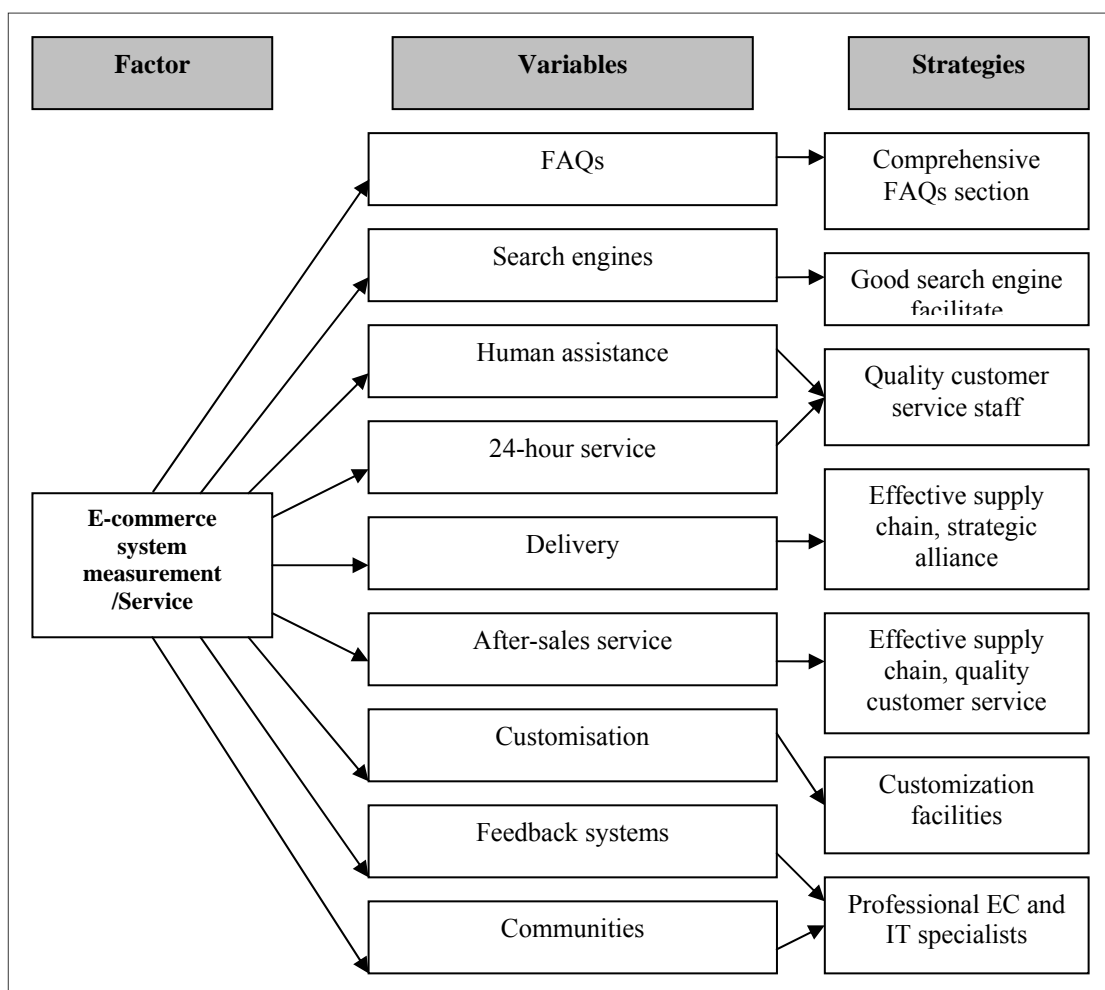


**Figure 5.7 (c): trust of system measurement and its relevant strategies**



Source: developed for this research

**Figure 5.7 (d): support services of system measurement and its relevant strategies**



Source: Developed from this research

#### **5.4 Limitations of the research**

This research incorporates some limitations which affect the overall validity and reliability of the research findings. These limitations are discussed below.

Firstly, the research investigated the factors affecting the achievement of success in e-tailing in China's retail industry. Thus, the research findings are more suited to the Chinese e-commerce market than to that of other countries in terms of economy, culture and technological issues. As these fundamentals may differ between countries, the barriers and e-tailing success factors may also differ between countries.

Secondly, click-and-mortar B2C e-commerce was the type of e-commerce investigated in this research, and includes many specific variables and barriers which do not exist for the pure-player e-commerce enterprise, such as existing business processes. Therefore, the research findings may need to be adapted for application to the pure-player environment.

The primary limitation in this research may be the use of a single case study, due to the fact that the research findings from a single case may not generalisable to other cases. This limitation can be overcome by selecting the case(s) based on the criteria suggest by Yin (2002). Moreover, the new theory or model needs to be tested in further research and other cases, to measure its replicability.

The final limitation to this research is that the content of the interviews could be seen as business secrets. Therefore, the interviewees may have concealed some information from the interviewers, especially during the focus group interviews, as the group members may have been reticent to share their comments and understandings with colleagues from other subsidiaries. This research overcame this limitation by carefully organising the interviews and triangulating the data from different sources.

Overall, the limitations of this research were generally overcome and others have provided opportunities for further research by both academics and industry practitioners.

### **5.5 Recommendations for further research**

This research has three major implications for further research. Firstly, a single case study method was used to investigate e-tailing in China. Thus, the research was primarily qualitative. Future research could be conducted using a purely quantitative method, as it would be useful to test the emergent model and achieve generalisability of the findings of this research by using other research methods and investigating other Chinese retail firms. Furthermore, this research focused on click-and-mortar firms and future research could investigate successful e-tailing in pure-player based e-commerce.

Secondly, this research focused on the Shanghai Brilliance Group, whereas future research could focus more directly on one specific retail format, such as the supermarket or the shopping centre. As different retail formats have specific product categories and prices and business processes, the contributions made by this research may be expanded by exploring specific retail formats in more detail.

Thirdly, this research was undertaken in the specific context of China's retail industry. Future similar research could be conducted in other developing Asian countries, such as Vietnam, India or Thailand, as different macro-environments and customer behaviours may influence the success of e-tailing. The influence of the macro-environment is important for e-tailers to understand, in order to design appropriate e-commerce business strategies.

Overall, the findings of this research can be seen as a starting point in the development of the body of knowledge in the field of e-tailing. Further related research can be developed with both more general and more specific foci, such as cross-national research, specific retail formats, other retail firms and alternative e-commerce structures.

## **5.6 Chapter summary**

This chapter has summarised the final conclusions and implications of this research. Firstly, the three research issues were discussed, followed by a discussion of the central research problem (Section 5.2). Secondly, the implications for theory (Section 5.3.1), and policy and practice (Section 5.3.2) were addressed. Finally, the limitations of the research (Section 5.4) were considered and the recommendations for further research (Section 5.5) were proposed.

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## **Appendices**

### **Appendix 3.1: Cover letter and interview questions**



## SCU Letterhead

### Information Sheet

**Title: An exploratory study into the factors affecting the achievement of success in e-tailing in China: the case of the Shanghai Brilliance Group**

My name is Weibing Xuan. I am a Doctor of Business Administration candidate at the Graduate College of Management of Southern Cross University in Australia. My research focuses on the field of e-tailing, and examines the achievement of the success of e-tailing in the Shanghai Brilliance Group.

This research is being conducted through a series of interviews within the Shanghai Brilliance Group. Since you have a good knowledge of e-commerce activities in the Shanghai Brilliance Group, the Human Resource Department suggested that you might be a good person to approach. Would it be possible to make an appointment to come and see you? The interview will be conducted by myself, and will be around one hour. The interview will be recorded on audiotape with your permission.

However, you are free to request that the interview not be taped, and in this case I will request your permission to take notes during the interview. In addition, tapes and transcripts from your interview will be destroyed if you decide to withdraw from the study. The information from the interview will be kept strictly confidential. The information will only be used for research purposes. The personal and company information involved will be kept anonymous in my thesis. Therefore, only my research supervisor and I will have access to the data.

I understand your time is limited. Your participation would be helpful not only to my research, would also make an important contribution to the knowledge and practice of e-commerce in the Shanghai Brilliance Group. If you are interested in the findings, I would be pleased to send you a brief report.

Thank you for your attention and participation. If you have any questions, please do not hesitate to contact me. My contact details are provided below or you may contact my supervisor, Dr Jun Xu at [jxu@scu.edu.au](mailto:jxu@scu.edu.au).

Weibing, Xuan  
DBA candidate  
Graduate College of Management  
Phone: 0401381185  
Email: [xuanweibing@hotmail.com](mailto:xuanweibing@hotmail.com)

Jun Xu, PhD  
DBA supervisor  
Graduate College of Management  
Phone: (07) 5506 9320  
Email: [jxu@scu.edu.au](mailto:jxu@scu.edu.au)

**The ethical aspects of this study have been approved by the Southern Cross University Human Research Ethics Committee. The approval number is ECN-06-28.**

**If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Ethics Complaints Officer, Ms S. Kelly, (telephone (02) 6620 9139, fax (02) 6626 9145, email: [skelly@scu.edu.au](mailto:skelly@scu.edu.au)).**

**Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.**

## **Interview questions**

### **Primary questions:**

1. How is e-commerce being used in the Shanghai Brilliance Group?
2. How can EC give a competitive advantage to the Shanghai Brilliance Group?
3. How should e-commerce be used in the Shanghai Brilliance Group?
4. How do the organisational factors, individual factors, and external environmental factors influence the implementation of e-commerce?
5. How does EC change your organisational business processes, and how were these changes managed?
6. Why your customers would/would not like to use EC.

### **Sub-questions for research question 1:**

1. What are the IT-based services in the company, and why does your company choose these particular IT-based services, over others?
2. What is the role of EC in the company?
3. What made your company embark on e-commerce?
4. Who initiated the e-commerce in your organisation, and how did they start?
5. In comparison with other retailers, is your organisation lagging behind or leading in e-commerce activities.
6. Why is EC still in the preliminary stages in China's retailing industry?
7. How do you ensure that your e-commerce system reaches your customers?
8. What is your prediction of the future of EC? (global and organisational)

### **Sub-questions for research question 2:**

1. What benefits have been gained by implementing an e-commerce system in the Shanghai Brilliance Group?
2. How can these benefits help your company compete with your competitors?
3. What other benefits could e-commerce give your company?

### **Sub-questions for research question 3:**

1. Do you think there are still opportunities to improve the e-commerce practices in your company?
2. What additional EC activities could be used or developed in your company?

3. Have sufficient fund/resources been allocated for e-commerce in your company?  
If not, is your company going to invest more in next the 3-5 years?
4. What were some issues involved in the implementation of e-commerce and what were some solutions?

**Sub-questions for research question 4:**

1. How do external factors (such as customer demand, competitive pressure, commercial trends, cost of IT equipment, government policies, etc) influence the implementation of e-commerce in your company?
2. How do organisational factors (such as business growth, organisational structure, organisational culture, IT infrastructure, business processes, business size, and ITS department) influence the implementation of e-commerce in your company?
3. How do individual factors (such as experience/skill, knowledge, responsibilities, innovativeness, attitude toward e-commerce) influence the implementation of e-commerce in your company?
4. Do you believe that any other factors influence the implementation of e-commerce in the Shanghai Brilliance Group?

**Sub-questions for research question 5:**

1. How do you think e-commerce affects your organisation's business processes?
2. Do you think that such changes make business processes better or worse and why or why not?
3. How are those changes are managed?
4. Do you think you have difficulty in dealing with the new working style, in terms of the e-commerce system? Did your company provide any training or some other ways to help you adapt to the new environment?

## **Appendix 3.2: Cover letter and survey questionnaire**



## SCU Letterhead

### Covering letter

**Title: An exploratory study into the factors affecting the achievement of success in e-tailing in China: the case of the Shanghai Brilliance Group**

#### Dear Survey Participant

My name is Weibing Xuan. I am a Doctor of Business Administration candidate at the Graduate College of Management of the Southern Cross University in Australia. My research focuses on the field of e-tailing, and examines methods for the achievement of success in e-tailing within the Shanghai Brilliance Group. It is important for retailers to understand your perceptions of e-commerce systems so that they can improve the quality of their system and their service to you.

This research will be conducted by both interview and survey questionnaire. You are invited to participate in this survey. Completion of the survey is voluntary and should take approximately 20 minutes to complete. If you are willing to participate, please fill out the survey to the best of your knowledge. The research findings will be only used in my DBA thesis, and no information given in this survey will be used for any other purpose. Only my supervisor and I will have access to the data. My research supervisor is Dr Jun Xu, a lecturer at Southern Cross University. You can contact him at [jxu@scu.edu.au](mailto:jxu@scu.edu.au) for any questions about this survey.

I understand your time is limited, and your participation would be helpful not only to my research, but will also make an important contribution to the knowledge and practice of e-commerce in the Shanghai Brilliance Group. If you are interested in the findings, I will be pleased to send you a brief report.

If you have any questions about this study, please do not hesitate to contact me using the details provided below:



Mr Weibing Xuan, DBA Candidate

Graduate college of management, Southern Cross University

Telephone:13681615688 or email: xuanweibing@hotmail.com

The ethical aspects of this study have been approved by the Southern Cross University Human Research Ethics Committee. The approval number is ECN-06-28. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Ethics Complaints Officer, Ms S. Kelly, (telephone (02) 6620 9139, fax (02) 6626 9145, email: [skelly@scu.edu.au](mailto:skelly@scu.edu.au)). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Thank you for your cooperation.

Best Wishes!

Mr Weibing Xuan

## Survey Interview

Thank you for agreeing to participate in this research project. This survey includes four sections: (1) your background information; (2) your current internet usage; (3) your current online shopping activities; (4) your opinions regarding online shopping. Please follow the instructions and feel free to answer all questions.

### **General instructions**

1. Please answer the questions to the best of your knowledge. There is no right or wrong answer. I am only interested in your opinion on these issues.
2. Your answer to all questions will be kept strictly confidential. Completed questionnaires will be seen only by yourself and the researcher.
3. If the completed questionnaire has not been collected on time, please return to the following address:

Weibing Xuan  
75 Guo Quan Road  
200433

**Your co-operation in carefully completing this questionnaire is greatly appreciated.**

## Section A: Participant background information

Please answer the questions below by circling the most appropriate response.

1. What is your gender?

Male.....1

Female.....2

2. How old are you?

15 to 20.....1

21 to 29.....2

30 to 39.....3

40 to 49.....4

50 to 59.....5

Over 60.....6

Refused.....7

3. Please indicate the highest level of education you have achieved.

Attended high school.....1

Completed high school.....2

Diploma.....3

Bachelor Degree.....4

Graduate Diploma.....5

Master's Degree.....6

Doctorate.....7

4. In what field was your major academic training? Please check the most applicable.

Arts/Literature/Languages.....1

Business.....2

Computer sciences.....3

Engineering.....4

Maths.....5

Physical Sciences.....6

Social Sciences.....7

Other.....8

5. What is your total annual household income before tax?

Less than RMB15,000.....1

RMB15,000 to 30,000.....2

RMB30,001 to 60,000.....3

RMB60,001 to 90,000.....4

More than RMB90,000.....5

### Section B: Current internet usage

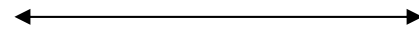
Have you ever used the internet? YES / NO

(If yes, proceed below; if no, proceed to section 3)

1. Please indicate your current usage of the internet, where 1 indicates very infrequent and 7 indicates very frequent.

*Very infrequent*

*Very Frequent*



<i>Your current usage of the internet</i>	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

## Section C: Current online shopping activities

Please answer the questions below by circling the most appropriate response.

For some questions, you can circle more than one answer.

Were you ever engaged in online shopping? YES / NO

(If yes, proceed to question 1; if no, indicate what are the reasons and proceed to section 5)

- Lack of trust.....1
- Concerns about the quality of product.....2
- Doubt about the security issue of the the internet.....3
- Concerns about the after-sale service.....4
- Online shopping system is too complicated and not easy to use.....5
- Concerns about the payment process.....6
- Concerns about the delivery issue.....7
- Not familiar with the online shopping system.....8
- The price of products is too high.....9
- Not enough products.....10
- Just do not want / not necessary.....11
- Other.....12

1. What other websites have you visited or conducted online shopping on, besides the Shanghai Brilliance Group websites?

- www.sohu.com.....1
- www.sina.com.....2
- www.TaoBao.com.....3
- www.Alibaba.com.....4
- www.Chinaren.com.....5
- Other (please specify)\_\_\_\_\_.....6

2. Please indicate the number of purchases you made done so far through online shopping: \_\_\_\_\_



Music & Instruments.....	12
PC & Video Games.....	13
Phones.....	14
Pottery & Glass.....	15
Sporting Goods.....	16
Toys, Hobbies & Crafts.....	17
Others.....	18

6. The reasons you conduct online shopping are?

Convenience.....	1
Cheaper prices.....	2
Buying something difficult to find in your local area.....	3
Saves time and energy.....	4
More products available.....	5
More interesting than traditional shopping styles.....	6
More efficient than traditional shopping styles.....	7

## Section D:

Please give your opinion on the following statements regarding online retailing, by circling a number from 1 to 7.

**(Please provide your objective opinion even if you have never engaged in online retailing)**

### Part 1:

System quality	Strongly Disagree $\longrightarrow$ Strongly Agree						
	1	2	3	4	5	6	7
Web page loading speeds should be acceptable	1	2	3	4	5	6	7
The navigation of an online shopping website is important	1	2	3	4	5	6	7
24/7/365 availability is a basic condition for an online shopping website	1	2	3	4	5	6	7
Ease-of-use is an important standard in system quality	1	2	3	4	5	6	7
An online shopping website should be easily accessible	1	2	3	4	5	6	7

### Part 2:

Content quality	Strongly Disagree $\longrightarrow$ Strongly Agree						
	1	2	3	4	5	6	7
In an online shopping website, products should be described very well, with pictures, sound, videos etc	1	2	3	4	5	6	7
Information should be updated	1	2	3	4	5	6	7
An online shopping website should have more products than traditional retailers	1	2	3	4	5	6	7
The content of a website should be easy to understand	1	2	3	4	5	6	7
The website and the information should be complete	1	2	3	4	5	6	7
Some new products or promotional offers should be put in an obvious place on the website	1	2	3	4	5	6	7
The company details should be provided on the website, such as e-mail address, mail address, telephone, fax	1	2	3	4	5	6	7
I would like to visit an online shopping website with multimedia presentation, such as text,	1	2	3	4	5	6	7



images, sound, and video							
A good website should have different language options	1	2	3	4	5	6	7

**Part 3:**

Trust	Strongly Disagree $\longrightarrow$ Strongly Agree						
	1	2	3	4	5	6	7
A secure online environment is important to me	1	2	3	4	5	6	7
An online shopping website should keep customers' personal information confidential	1	2	3	4	5	6	7
A satisfactory product quality enhances the my trust of the website	1	2	3	4	5	6	7
An escrow service, such as a trusted third party, should be available to observe the transaction process	1	2	3	4	5	6	7
Insurance is useful for me to trust the website	1	2	3	4	5	6	7

**Part 4:**

Support and service	Strongly Disagree $\longrightarrow$ Strongly Agree						
	1	2	3	4	5	6	7
An FAQs function is very useful to enhance online customer service	1	2	3	4	5	6	7
An effective and efficient search engine should be available to assist customers	1	2	3	4	5	6	7
24-hours call centre or effective human assistance is important to me	1	2	3	4	5	6	7
E-commerce customer service should be available 24/7/365	1	2	3	4	5	6	7
The delivery method should be the same as the delivery terms and conditions I selected. Different delivery options should be available.	1	2	3	4	5	6	7
After-sales service is important to e-commerce	1	2	3	4	5	6	7
A personalised service is important to me	1	2	3	4	5	6	7
A feedback and rating system is useful to the customer to make their purchase decisions	1	2	3	4	5	6	7
Online communities are useful and interesting	1	2	3	4	5	6	7

Other Comments:

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If you would like to receive a brief summary of the key findings of this study, please provide your contact details, either e-mail address or postal address:

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**Thank you for assisting in this research project.  
Your contribution to this study is greatly appreciated.**

### **Appendix 3.3: Ethical approval**

# SOUTHERN CROSS UNIVERSITY

## ~ HREC NOTIFICATION ~

**To:** Dr Jun Xu/Xuan Weibing  
Graduate College of Management  
[jxu@scu.edu.au](mailto:jxu@scu.edu.au), [xuanweibing@hotmail.com](mailto:xuanweibing@hotmail.com)

**From:** Secretary, Human Research Ethics Committee  
Graduate Research College

**Date:** 3 April 2006

**Project:** **An exploratory study into the factors affecting the achievement of success in e-tailing in China: the case of the Shanghai Brilliance Group**

**Status:** **Approved subject to the standard conditions.**  
**Approval Number** **ECN-06-28**

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### HUMAN RESEARCH ETHICS COMMITTEE (HREC) HUMAN RESEARCH ETHICS SUB-COMMITTEE (HRESC)

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Your resubmitted application to the HRESC has now been approved by the sub-committee. This approval is subject to the usual standard conditions of approval and ratification by the full HREC at the May meeting.

You may commence your research. However, when the full HREC ratifies this approval, if they have any queries about your research, you would be expected to satisfactorily respond to their queries.

**Standard Conditions** (in accordance with the Guidelines of the NHMRC National Statement on Ethical Conduct in Research Involving Humans) referred to as The National Statement (NS).

#### 1. **Monitoring**

##### *NS 2.33*

*An institution or organisation and its HREC have the responsibility to ensure that the conduct of all research approved by the HREC is monitored by procedures and/or by utilising existing mechanisms within the institution or organisation which will ensure the achievement of the goals for monitoring as determined by the institution or organisation and the HREC.*

##### *NS 2.36*

*An HREC may recommend and/or adopt any additional appropriate mechanism for monitoring including random inspections of research sites, data and signed*

*consent forms, and/or interview, with their prior consent, of research participants.*

- (a) Generally, that the principal investigator/person responsible (usually the Supervisor) **provide a report every 6 months** on the progress to date or outcome in the case of completed research specifically including:
- The maintenance and security of the records.
  - Compliance with the approved consent protocols and documentation.
  - Compliance with any conditions of approval.
  - Any changes of protocol to the research.

Note: Compliance to the reporting is **mandatory** to the approval of this research.

- (b) Specifically, that the principal investigator/person responsible and/or associates **report immediately** and present to the Committee for approval **any change in protocol.** (NS 2.37)
- (c) That a report is sent to HREC when the **project has been completed.**
- (d) That the principal investigator/person responsible and/or associates **report immediately** anything that might affect ethical acceptance of the research protocol. (NS 2.37)
- (e) That the principal investigator/person responsible and/or associates **report immediately any serious adverse events/effects** on participants. (NS 2.37)
- (f) That the principal investigator/person responsible and/or associates **report immediately any unforeseen events** that might affect continued ethical acceptability of the project. (NS 2.37)
- (g) That, if this research is conducted in a country other than Australia, **all research protocols for that country** are followed ethically and with appropriate cultural sensitivity.

## **2. Complaints**

*NS 2.39*

*An institution or organisation with an HREC shall establish mechanisms for receiving and promptly handling complaints or concerns about the conduct of an approved research project.*

All Participants MUST be advised in writing that:

*The ethical aspects of this study have been approved by the Southern Cross University Human Research Ethics Committee. The Approval Number is ECN-06-28. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Ethics Complaints Officer:*

Ms Sue Kelly  
Ethics Complaints Officer and Secretary

HREC  
Southern Cross University  
PO Box 157  
Lismore, NSW, 2480  
Telephone (02) 6626-9139 or fax (02) 6626-9145  
Email: [sue.kelly@scu.edu.au](mailto:sue.kelly@scu.edu.au)

*All complaints, in the first instance, should be in writing to the above address.  
All complaints are investigated fully and according to due process under the  
National Statement and this University. Any complaint you make will be treated  
in confidence and you will be informed of the outcome.*

Sue Kelly  
Secretary & Ethics Complaints Officer  
HREC  
Ph: (02) 6626 9139  
[sue.kelly@scu.edu.au](mailto:sue.kelly@scu.edu.au)

Associate Professor Baden Offord  
Chair, HREC  
Ph: (02) 6620 3162  
[baden.offord@scu.edu.au](mailto:baden.offord@scu.edu.au)

### Appendix 3.4: Case study interview protocol

Elements	Essential requirements
<b>Overview</b>	<p>This research is an exploratory case study. It aims to address the success factors of e-commerce in China's retail industry. With permission from the Shanghai Brilliance Group and its customers, primary data will be collected from both the company and the customers to research their perceptions.</p> <p>Only one case will be used in this research to answer the research question: 'How can successful e-tailing in China's retail industry be achieved?'. In observance of ethical considerations, no privacy questions will be asked, the participants can withdraw from the research at anytime, and all collected data will be strictly confidential.</p>
<b>Field procedures</b>	<p>Both in-depth and focus group interviews will be conducted within the organisation. All interviews will be recorded on tape. Normally, each interview will be around 1 hour.</p> <p>Survey questionnaires will be used to investigate factors relating to consumers. The reasonable respondent sample size for survey interviews is between 100 and 200 (Hoelter 1983), as survey response rates may vary from between 15% and 20% (Zikmund 2003). Therefore the questionnaires will be sent to 1000 potential respondents.</p>
<b>Interview questions</b>	<p>Several interview questions have been developed based on the theoretical model. Such as:</p> <ol style="list-style-type: none"> <li>7. How is e-commerce being used in the Shanghai Brilliance Group?</li> <li>8. How does EC give a competitive advantage to the Shanghai Brilliance Group?</li> <li>9. How should e-commerce be used in the Shanghai Brilliance Group?</li> <li>10. How do the organisational factors, consumer factors, and external environmental factors impact on the implementation of e-commerce?</li> <li>11. How has EC change your organisational business processes, and how can these changes be managed?</li> <li>12. Why customers would / would not like to use EC.</li> </ol>

### Appendix 4.1: One way ANOVA test

#### Descriptives

Current internet usage

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
male	75	5.05	1.635	.189	4.68	5.43	1	7
female	103	5.09	1.669	.164	4.76	5.41	1	7
Total	178	5.07	1.650	.124	4.83	5.32	1	7

#### Test of Homogeneity of Variances

Current internet usage

Levene Statistic	df1	df2	Sig.
.020	1	176	.889

#### ANOVA

Current internet usage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.050	1	.050	.018	.892
Within Groups	482.000	176	2.739		
Total	482.051	177			



### Descriptives

Current internet usage

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
15-20	42	5.29	1.597	.246	4.79	5.78	1	7
21-29	83	5.33	1.563	.172	4.98	5.67	1	7
30-39	35	4.71	1.824	.308	4.09	5.34	1	7
40-49	10	3.80	1.398	.442	2.80	4.80	2	7
50-59	5	3.80	1.095	.490	2.44	5.16	3	5
unknown	2	5.00	1.414	1.000	-7.71	17.71	4	6
Total	177	5.06	1.649	.124	4.82	5.31	1	7

### Test of Homogeneity of Variances

Current internet usage

Levene Statistic	df1	df2	Sig.
.845	5	171	.520

### ANOVA

Current internet usage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35.985	5	7.197	2.782	.019
Within Groups	442.331	171	2.587		

Total	478.316	176		
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## Post Hoc Tests

### Multiple Comparisons

Dependent Variable: current internet usage  
Tukey HSD

(I) AGE	(J) AGE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
15-20	21-29	-.04	.305	1.000	-.92	.84
	30-39	.57	.368	.631	-.49	1.63
	40-49	1.49	.566	.097	-.15	3.12
	50-59	1.49	.761	.374	-.71	3.68
	unknown	.29	1.164	1.000	-3.07	3.64
21-29	15-20	.04	.305	1.000	-.84	.92
	30-39	.61	.324	.415	-.32	1.55
	40-49	1.53	.538	.057	-.03	3.08
	50-59	1.53	.741	.314	-.61	3.66
	unknown	.33	1.151	1.000	-2.99	3.64
30-39	15-20	-.57	.368	.631	-1.63	.49
	21-29	-.61	.324	.415	-1.55	.32
	40-49	.91	.577	.609	-.75	2.58
	50-59	.91	.769	.842	-1.30	3.13
	unknown	-.29	1.169	1.000	-3.66	3.08
40-49	15-20	-1.49	.566	.097	-3.12	.15
	21-29	-1.53	.538	.057	-3.08	.03
	30-39	-.91	.577	.609	-2.58	.75
	50-59	.00	.881	1.000	-2.54	2.54

50-59	unknown	-1.20	1.246	.929	-4.79	2.39
	15-20	-1.49	.761	.374	-3.68	.71
	21-29	-1.53	.741	.314	-3.66	.61
	30-39	-.91	.769	.842	-3.13	1.30
	40-49	.00	.881	1.000	-2.54	2.54
unknown	unknown	-1.20	1.346	.948	-5.08	2.68
	15-20	-.29	1.164	1.000	-3.64	3.07
	21-29	-.33	1.151	1.000	-3.64	2.99
	30-39	.29	1.169	1.000	-3.08	3.66
	40-49	1.20	1.246	.929	-2.39	4.79
	50-59	1.20	1.346	.948	-2.68	5.08

## Homogeneous Subsets

### Current internet usage

Tukey HSD

AGE	N	Subset for alpha = .05
		1
40-49	10	3.80
50-59	5	3.80
30-39	35	4.71
unknown	2	5.00
15-20	42	5.29
21-29	83	5.33
Sig.		.490

Means for groups in homogeneous subsets are displayed.  
a Uses Harmonic Mean Sample Size = 6.941.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

### Descriptives

Current internet usage

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
attended high school	35	5.49	1.560	.264	4.95	6.02	1	7
completed high school	26	4.38	1.768	.347	3.67	5.10	1	7
diploma	2	5.50	2.121	1.500	-13.56	24.56	4	7
graduate diploma	56	4.89	1.670	.223	4.45	5.34	1	7
bachelor degree	53	5.30	1.564	.215	4.87	5.73	2	7
master's degree	6	5.17	1.602	.654	3.49	6.85	3	7
Total	178	5.07	1.650	.124	4.83	5.32	1	7

### Test of Homogeneity of Variances

Current internet usage

Levene Statistic	df1	df2	Sig.
.126	5	172	.986

### ANOVA

Current internet usage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.294	5	4.659	1.747	.126

Within Groups	458.757	172	2.667		
Total	482.051	177			

## Post Hoc Tests

### Multiple Comparisons

Dependent Variable: Current internet usage  
Tukey HSD

(I) EDU	(J) EDU	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
attended high school	completed high school	1.10	.423	.102	-.12	2.32
	diploma	-.01	1.187	1.000	-3.44	3.41
	graduate diploma	.59	.352	.544	-.42	1.61
	bachelor degree	.18	.356	.995	-.84	1.21
	Master's degree	.32	.722	.998	-1.76	2.40
completed high school	attended high school	-1.10	.423	.102	-2.32	.12
	diploma	-1.12	1.198	.938	-4.57	2.34
	graduate diploma	-.51	.388	.778	-1.63	.61
	bachelor degree	-.92	.391	.182	-2.04	.21
	master's degree	-.78	.740	.897	-2.91	1.35
diploma	attended high school	.01	1.187	1.000	-3.41	3.44
	completed high school	1.12	1.198	.938	-2.34	4.57
	graduate diploma	.61	1.175	.995	-2.78	3.99
	bachelor degree	.20	1.176	1.000	-3.19	3.59
	master's degree	.33	1.333	1.000	-3.51	4.18
graduate diploma	attended high school	-.59	.352	.544	-1.61	.42
	completed high school	.51	.388	.778	-.61	1.63
	diploma	-.61	1.175	.995	-3.99	2.78

	bachelor degree	-.41	.313	.781	-1.31	.49
	master's degree	-.27	.702	.999	-2.30	1.75
bachelor degree	attended high school	-.18	.356	.995	-1.21	.84
	completed high school	.92	.391	.182	-.21	2.04
	diploma	-.20	1.176	1.000	-3.59	3.19
	graduate dipolma	.41	.313	.781	-.49	1.31
master's degree	master's degree	.14	.703	1.000	-1.89	2.16
	attended high school	-.32	.722	.998	-2.40	1.76
	completed high school	.78	.740	.897	-1.35	2.91
	diploma	-.33	1.333	1.000	-4.18	3.51
	graduate diploma	.27	.702	.999	-1.75	2.30
	bachelor degree	-.14	.703	1.000	-2.16	1.89

## Homogeneous Subsets

current the internet usage

Tukey HSD

	N	Subset for alpha = .05
EDU		1
completed high school	26	4.38
graduate dipolma	56	4.89
master's degree	6	5.17
bachelor degree	53	5.30
attended high school	35	5.49
diploma	2	5.50
Sig.		.758

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 7.788.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

### Descriptives

Current internet usage

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
arts/literature/language	15	5.80	1.424	.368	5.01	6.59	2	7
business	116	5.04	1.585	.147	4.75	5.33	1	7
computer	8	6.75	.707	.250	6.16	7.34	5	7
engineering	1	2.00	.	.	.	.	2	2
physical sciences	1	7.00	.	.	.	.	7	7
social sciences	4	3.75	1.500	.750	1.36	6.14	2	5
other	33	4.64	1.747	.304	4.02	5.26	1	7
Total	178	5.07	1.650	.124	4.83	5.32	1	7

### Test of Homogeneity of Variances

Current internet usage

Levene Statistic	df1	df2	Sig.
2.121(a)	4	171	.080

a Groups with only one case are ignored in computing the test of homogeneity of variance for current the internet usage.

### ANOVA

Current internet usage

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	56.980	6	9.497	3.820	.001
Within Groups	425.071	171	2.486		
Total	482.051	177			

### Descriptives

#### Current internet usage

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
less than RMB 15,000	41	4.54	1.704	.266	4.00	5.07	1	7
RMB15,000 to 30,000	54	5.04	1.693	.230	4.57	5.50	1	7
RMB 30,001 to 60,000	47	4.87	1.583	.231	4.41	5.34	1	7
RMB 60,001 to 90,000	16	6.00	1.095	.274	5.42	6.58	3	7
more than RMB 90,000	14	6.00	1.569	.419	5.09	6.91	3	7
Total	172	5.04	1.663	.127	4.79	5.29	1	7

### Test of Homogeneity of Variances

#### Current internet usage

Levene Statistic	df1	df2	Sig.
1.660	4	167	.162

### ANOVA

#### Current internet usage



	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39.360	4	9.840	3.792	.006
Within Groups	433.355	167	2.595		
Total	472.715	171			

## Post Hoc Tests

### Multiple Comparisons

Dependent Variable: current the internet usage  
Tukey HSD

(I) annual household income before tax	(J) annual household income before tax	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
less than RMB 15,000	RMB15,000 to 30,000	-.50	.334	.564	-1.42	.42
	RMB 30,001 to 60,000	-.34	.344	.866	-1.29	.61
	RMB 60,001 to 90,000	-1.46(*)	.475	.020	-2.77	-.15
	more than RMB 90,000	-1.46(*)	.499	.031	-2.84	-.09
RMB15,000 to 30,000	less than RMB 15,000	.50	.334	.564	-.42	1.42
	RMB 30,001 to 60,000	.16	.321	.986	-.72	1.05
	RMB 60,001 to 90,000	-.96	.459	.225	-2.23	.30
	more than RMB 90,000	-.96	.483	.274	-2.30	.37
RMB 30,001 to 60,000	less than RMB 15,000	.34	.344	.866	-.61	1.29
	RMB15,000 to 30,000	-.16	.321	.986	-1.05	.72
	RMB 60,001 to 90,000	-1.13	.466	.115	-2.41	.16
	more than RMB 90,000	-1.13	.490	.150	-2.48	.22
RMB 60,001 to 90,000	less than RMB 15,000	1.46(*)	.475	.020	.15	2.77
	RMB15,000 to 30,000	.96	.459	.225	-.30	2.23
	RMB 30,001 to 60,000	1.13	.466	.115	-.16	2.41

	more than RMB 90,000	.00	.590	1.000	-1.63	1.63
more than RMB 90,000	less than RMB 15,000	1.46(*)	.499	.031	.09	2.84
	RMB15,000 to 30,000	.96	.483	.274	-.37	2.30
	RMB 30,001 to 60,000	1.13	.490	.150	-.22	2.48
	RMB 60,001 to 90,000	.00	.590	1.000	-1.63	1.63

\* The mean difference is significant at the .05 level.

## Homogeneous Subsets

### current internet usage

Tukey HSD

annual household income before tax	N	Subset for alpha = .05	
		1	2
less than RMB 15,000	41	4.54	
RMB 30,001 to 60,000	47	4.87	4.87
RMB15,000 to 30,000	54	5.04	5.04
RMB 60,001 to 90,000	16		6.00
more than RMB 90,000	14		6.00
Sig.		.804	.099

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 25.238.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Appendix 4.2: Contingency table analysis

### Case Processing Summary

	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
GENDER * have you ever conducted online purchasing	200	100.0%	0	.0%	200	100.0%

### GENDER \* have you ever conducted online purchasing Crosstabulation

Count

		have you ever conducted online purchasing		Total
		yes	no	
GENDER	male	26	60	86
	female	39	75	114
Total		65	135	200

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.354(b)	1	.552		
Continuity Correction(a)	.196	1	.658		
Likelihood Ratio	.355	1	.551		
Fisher's Exact Test				.648	.330
Linear-by-Linear Association	.352	1	.553		
N of Valid Cases	200				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.95.

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AGE * have you ever conducted online purchasing	199	99.5%	1	.5%	200	100.0%

**AGE \* have you ever conducted online purchasing Crosstabulation**

Count

		have you ever conducted online purchasing		Total
		yes	no	
AGE	15-20	12	35	47
	21-29	37	50	87
	30-39	13	30	43
	40-49	1	14	15
	50-59	1	4	5
	unknown	1	1	2
Total		65	134	199

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.299(a)	5	.067
Likelihood Ratio	11.557	5	.041
Linear-by-Linear Association	.624	1	.429
N of Valid Cases	199		

a 5 cells (41.7%) have expected count less than 5. The minimum expected count is .65.

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
EDU * have you ever conducted online purchasing	199	99.5%	1	.5%	200	100.0%

**EDU \* have you ever conducted online purchasing Crosstabulation**

Count

		have you ever conducted online purchasing		Total
		yes	no	
EDU	attended high school	10	29	39
	completed high school diploma	10	24	34
	graduate diploma	0	3	3
	bachelor degree	15	47	62
	master's degree	26	29	55
		4	2	6
Total		65	134	199

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.007(a)	5	.023
Likelihood Ratio	13.517	5	.019
Linear-by-Linear Association	5.052	1	.025
N of Valid Cases	199		

a 4 cells (33.3%) have expected count less than 5. The minimum expected count is .98.

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
academic training * have you ever conducted online purchasing	200	100.0%	0	.0%	200	100.0%

**academic training \* have you ever conducted online purchasing Crosstabulation**

Count

		have you ever conducted online purchasing		Total
		yes	no	
academic training	arts/literature/language	6	10	16
	business	42	90	132
	computer	6	2	8
	engineering	0	1	1
	maths	0	1	1
	physical sciences	1	0	1
	social sciences	1	3	4
	other	9	28	37
Total		65	135	200

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.067(a)	7	.136
Likelihood Ratio	11.382	7	.123
Linear-by-Linear Association	.973	1	.324
N of Valid Cases	200		

a. 9 cells (56.3%) have expected count less than 5. The minimum expected count is .33.

### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
annual household income before tax * have you ever conducted online purchasing	194	97.0%	6	3.0%	200	100.0%

### annual household income before tax \* have you ever conducted online purchasing Crosstabulation

Count

		have you ever conducted online purchasing		Total
		yes	no	
annual household income before tax	less than RMB 15,000	14	34	48
	RMB15,000 to 30,000	18	43	61
	RMB 30,001 to 60,000	14	36	50
	RMB 60,001 to 90,000	4	15	19
	more than RMB 90,000	11	5	16
Total		61	133	194

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.778(a)	4	.019
Likelihood Ratio	10.883	4	.028
Linear-by-Linear Association	2.949	1	.086
N of Valid Cases	194		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.03.

### Appendix 4.3: frequency of product categories

#### Frequency Table

product category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	antiques & art	7	3.5	10.8	10.8
	no	58	29.0	89.2	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

product category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	book & magazine	22	11.0	33.8	33.8
	no	43	21.5	66.2	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

product category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	business (office and industrial)	7	3.5	10.8	10.8
	no	58	29.0	89.2	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

product category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	cameras and accessories	7	3.5	10.8	10.8
	no	58	29.0	89.2	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		



**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	car, bike or boat	1	.5	1.5	1.5
	no	64	32.0	98.5	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	clothes and accessories	23	11.5	35.4	35.4
	no	42	21.0	64.6	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	computer & IT	12	6.0	18.5	18.5
	no	53	26.5	81.5	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	consumer electronics	22	11.0	33.8	33.8
	no	43	21.5	66.2	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	home, lifestyle and baby	11	5.5	16.9	16.9
	no	54	27.0	83.1	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	jewellery, gems and watches	3	1.5	4.6	4.6
	no	62	31.0	95.4	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	movie	12	6.0	18.5	18.5
	no	53	26.5	81.5	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	music	10	5.0	15.4	15.4
	no	55	27.5	84.6	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	computer and game	8	4.0	12.3	12.3
	no	57	28.5	87.7	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	phone	1	.5	1.5	1.5
	no	64	32.0	98.5	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	65	32.5	100.0	100.0
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	sports products	10	5.0	15.4	15.4
	no	55	27.5	84.6	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	toy	6	3.0	9.2	9.2
	no	59	29.5	90.8	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**product category**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	other	16	8.0	24.6	24.6
	no	49	24.5	75.4	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

## Appendix 4.4: frequency of reason to conduct online shopping

### Frequency Table

**reason conduct online shopping**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	convenience	39	19.5	60.0	60.0
	no	26	13.0	40.0	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**reason conduct online shopping**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	cheap	28	14.0	43.1	43.1
	no	37	18.5	56.9	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**reason conduct online shopping**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	buy something that difficult to find	25	12.5	38.5	38.5
	no	40	20.0	61.5	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**reason conduct online shopping**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	save time	29	14.5	44.6	44.6
	no	36	18.0	55.4	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**reason conduct online shopping**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	more product	9	4.5	13.8	13.8
	no	56	28.0	86.2	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		

**reason conduct online shopping**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	more funny	10	5.0	15.4	15.4
	no	55	27.5	84.6	100.0
	Total	65	32.5	100.0	
Missing	System	135	67.5		
Total		200	100.0		