The Influence of Customer Satisfaction and Switching Costs on Customer Retention: A Survey of Retail Internet Banking Users in Hong Kong

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SUMMARY

The exponential growth of the Internet is changing the way corporations conduct business with customers. The banking industry is no exception. In order to sustain competitiveness, banks have been introducing more Internet banking services. However, this change undermines the ability of business to retain their customers since certain characteristics of the Internet can cause a reduction in customers' search costs, reduce barrier to entry, and diminish distinctiveness of a firm (Kalakota and Whinston, 1996).

Managing effective customer retention strategies is increasingly important in the banking industry since the length in years of customer relationships is one of the most important factors that contributes to the bank's profitability. Reichheld (1996) found that a five percent increase in customer loyalty produces an eighty-five percent increase in profitability in the banking industry.

In the past, the key to understanding the power of a corporation to retain customers was thought to lie in the measurement of customer satisfaction. Clarke (2001) argued that long-term customer retention in competitive markets requires firms to go beyond mere basic satisfaction and to look for ways of establishing ties of loyalty that will help ward off competitive attack.

While customer satisfaction may be one important driver of customer retention, switching costs are also likely to influence customer retention, both independently and in tandem. For example, the presence of switching costs can mean that some seemingly retained customers are actually dissatisfied but do not defect because of high switching costs. Thus the level of switching costs has a moderating effect on the relationship between customer satisfaction and customer retention. While the moderating role of switching costs on the relationship between customer satisfaction and customer retention has been supported in literature for existing non-Internet contexts (Lee et al., 2001; Ranaweera and Prabhu, 2003), little research has been published within the Internet context and particularly Internet banking.

Based on a review of the literature, a theoretical model linking customer satisfaction and switching costs to customer retention was developed. The model has two main features. First, it examines the main direct effects of customer satisfaction and switching costs on customer retention. Second, the model examines the moderating role of switching costs on the relationship between customer satisfaction and customer retention.

The empirical research was based on data collected by an Internet survey of adoptors of Internet banking service in Hong Kong. Results from statistical analyses show that both customer satisfaction and switching costs have strong positive direct effects on customer retention. These analyses also confirm the moderating role of switching costs on the relationship between customer satisfaction and customer retention. However, when Internet banking adoptors are categorized into two segments according to their usage of Internet banking service (basic and advanced users), results show that switching costs play a significant moderating role on the relationship between customer satisfaction and customer retention only for the basic Internet banking users.

DECLARATION

"I declare that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university and that to the best of knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text."



WONG Chi Bo

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Originating in the U.S. Defence Department during 1960s, the Internet is a collection of interlinked computer networks or a network of networks, that was used as a communication technology among the military community (DOC, 1999). The World Wide Web (WWW), on the other hand, is an application that sits on top of the Internet. The WWW was invented by Tim Bernes Lee, a physicist at the CERN research institute for particle physics in Switzerland. He developed a method for encoding, displaying and transmitting text and graphics over the Internet using what is known as the Hypertext Markup Language (HTML) in the late 1980s (Berners-Lee et al., 1994; Hill and Jones, 1998). Since the emergence of the Internet, it has experienced exponential growth and popularity in terms of numbers of users, servers, web pages, host and domain names as well as its geographical distribution (DOC, 1999; Hoffman et al., 1995; Merit, 1995). Increasingly, the use of the Internet is not limited to the simple search for information and for entertainment but in doing business in terms of sales and purchase.

Compared to conventional business, the fact that the Internet can enable an easy-to-use, inexpensive, speedy and round-the-clock global access to an almost unlimited space of information, holds great potential to business as well as great convenience to consumers (DOC, 1999; KPMG, 1997; Rowley, 1996). These unique characteristics also enable a re-invention of the commercial environment into what is collectively and broadly termed Internet commerce. Internet commerce offers a different business-customer relationship (Steinfield et al., 1995), an efficient and frictionless

distribution channel (Li et al., 1999), a different form of intermediation between banks and consumers (Sarkar, 1998) as well as a new set of the business models (Rappa, 2000), with which firms make their profits and conduct businesses.

The introduction of the Internet has allowed firms to empower end users with the delivery of information and processing power to their desktops (Kappleman and Guynes, 1995). Similarly, the proliferation of the Internet has enabled firms to extend the delivery of information, services, and power directly to end consumers (Shneideman, 2000). Consumers can now perform a variety of tasks on the Internet. As a result, Internet is no longer confined to business firms (Kraut et al., 1999). In fact, Internet has turned a large number of traditional consumers into Internet users (Riecken, 2000).

The growth in the use of and interest in the Internet has lead to the belief that it will have profound impacts on the way service firms will do business in the future (Dannenberg and Kellner, 1998). Furthermore, the Internet is believed to change the way firms interact with their customers and thus the way they initiate, develop and terminate relationships with them. One of the service sectors which seems to be most affected by the Internet is retail banking (Barnatt, 1998; Dannenberg and Kellner, 1998).

Banking industry has traditionally operated in a relatively stable environment for decades. Many retail banks have a dense branch network, close relationships with their customers, and are mostly local businesses operating in one country or part of a country. Advances in Information Technology (IT) have caused a downsizing in traditional bank branch networks. As the core banking services are perfectly

digitalizable, it is possible for banks to provide their services via electronic channels (Karjaluoto et al., 2002)

Electronic banking consists of several distribution channels. In a very simple form, electronic banking refers to the provision of information or services by a bank to its customers, via an automated teller machine (ATM), a computer, television, telephone, or mobile phone (Daniel, 1999). Rayport and Sviokla (1994) argued that ATM networks, telephone banking and Internet banking became the primary interface between the bank and the customer. As customers can access the bank wherever ATM, telephone or Internet are located, the location of the nearest bank branch became less important to customers. As a result, electronic banking has changed the rules of competition, entry barriers and the industry's structure.

Today, the main electronic banking channel is Internet banking. As computer literacy and the availability of computers increase while the cost of using the Internet decrease, the segment of consumers preferring Internet banking is growing considerably. At the same time the customer segment preferring branch and telephone banking is shrinking (Mols, 2000). This will further cement the success of Internet banking and change the optimal distribution channel structure for most retail banks. This change undermines the ability of firms to retain their customer (Kalakota and Whinston, 1996) since certain characteristics of the Internet causes a reduction in customer's search costs, reduces barriers of entry, and diminishes distinctiveness of banks. In order to sustain their competitiveness in the marketplace, a number of traditional brick-and-mortar banks have also been moving to the Internet (Gerlach, 2000). Nowadays, a small bank will be able to interact with and sell its services to the whole world without having to maintain a global network of branches (Barnatt, 1998; Paul, 1996).

Internet banking is gathering momentum in many parts of the world (Aladwani, 2001). In the USA, for example, the majority of banks offered Internet services by 2003 (eMarketer, 2000). In the European Union countries, the banks are quickly introducing Internet banking as an essential component of their business portfolio (Irish Times, 1999). Considering the number of Internet banking customers, Western Europe represents the major market for Internet banking services, followed by the USA and Japan (Gurău 2002). In Hong Kong, ACNielsen (2002) found that there were about 600,000 Internet banking users in Hong Kong. Furthermore, Internet banking is now more popular than Internet shopping in Hong Kong. There were over 100,000 more Internet banking users than there are Internet shoppers in 2002.

The consumer movement from traditional branch banking to Internet banking has meant that new strategies to attract customers and retain existing ones became more critical (Karjaluoto, 2002). Moreover, Reichheld (1996) found that a five percent increase in customer loyalty produces an eighty-five percent increase in profitability in the banking industry. Viewing in this light, it is postulated that managing effective customer retention strategies can be regarded as a vitally important issue in the banking industry since the length in years of customer relationships is one of the most important factors that contribute to the bank's profitability (Reichheld, 1996).

To survive in the highly competitive Internet banking industry, it is evident that the banks need to provide customers with high quality services (Mefford, 1993). The importance of customer retention is mostly due to the fact that "acquiring new customers is much more expensive than keeping them" (Stone et al., 1996, p. 676). Thus, understanding how or why a sense of customer retention develops in customers remains one of the crucial management issues (Pritchard et al., 1999) since the nature

of a bank's interaction with customers is transforming from traditional channels such as telephone and mail to electronic mail and web-based forms, from full-service to self-service, and from mass marketing to personalized marketing. Until banks have a clear understanding of these drivers and implement a corresponding action plan, customer relationship programs initiated by banks will only yield limited returns.

In the past, the key to understanding the power of a corporation to retain customers was thought to lie in the measurement of customer satisfaction. Ranaweera and Prabhu (2003) argued that ideally, firms should aim at a combined strategy that makes switching barriers act as a complement to satisfaction. While customer satisfaction may be one important driver of customer retention, switching costs are also likely to influence customer retention, both independently and in tandem (Lee et al., 2001; Ranaweera and Prabhu, 2003). For example, the presence of switching costs can mean that some seemingly satisfied customers that are retained are actually dissatisfied but do not defect because of high switching costs. Thus the level of switching costs may have a moderating effect on the relationship between customer satisfaction and customer retention.

1.2 Research Objectives

The new paradigm, the consumer shift from traditional branch banking to more stand-alone banking delivery channels, was the motivation for studying consumers and their behaviors. In spite of the rapid adoption of electronic commerce (Hof et al., 1998) and the importance of customer retention to business (Fornell and Wernerfelt, 1987 and 1988; Page et al., 1996; Reichheld and Sasser, 1990), little empirical investigation or real understanding of the retention of Internet customers has been presented in the

literature. This research intends to develop a more complete model that incorporates the main effects of customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs in the customer satisfaction - retention link. Moreover, this research also attempts to identify customer segments and examine the heterogeneity of the moderating effect of switching costs in the customer satisfaction - retention link in different customer segments. Such an approach uncovers hitherto neglected effect on customer retention. Specifically, the main objectives of this research are to:

(1) examine the main effects of customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs in the customer satisfaction - retention link;

(2) identify customer segments and then examine heterogeneity of the moderating effect of switching costs in the customer satisfaction - retention link in different customer segments.

This empirical research was conducted within the context of the retail Internet banking industry in Hong Kong. The retail Internet banking setting is regarded as being in a continuous purchasing setting which is particularly suited to the objectives of this research since all two main effects of customer satisfaction and switching costs are likely to have a strong impact on customer retention in this setting (Ranaweera and Prabhu, 2003). Such setting is qualitatively distinct from discrete purchasing patterns. First, relationships between banks and Internet banking users are generally of a long-term nature, which is a suitable context to study the effects of overall customer satisfaction and perceived switching costs on customer retention. Second, in a continuous purchasing setting, switching main Internet bank is not as simple as walking to another bank. Due to the presence of switching costs, switching to another main Internet bank requires considerable time and effort (Ranaweera and Prabhu,

2003). As a result, the switching decision is made subsequent to considerable thought.

1.3 Significance of this Research

This research extends previous research in many ways. First, much Information System (IS) research has been focused on factors that encourage technological adoption (Bretschneider and Wittmer, 1993; Brancheau and Wetherbe, 1990; Cooper and Zmud, 1990; Chau et al., 1997; Igbaria et al., 1997) and increases in computer usage (Thompson et al., 1991; Igbaria et al., 1996; Igbaria and livari, 1995). However, little attention has been paid to the direct use of IT to maintain a long-lasting relationship with the customer. Though factors leading to technological adoption are important and deserve serious considerations from IS researchers, they may be different from factors leading to customer retention.

Second, much marketing literature has visited the issues of customer retention and loyalty in traditional business settings (Anderson and Sullivan, 1990; Bowen and Shoemaker, 1998; File and Prince, 1994; Hellier, 1995; Lian, 1994; Hennig-Thurau and Klee, 1997; Jacoby and Chestnut, 1978; Reichheld and Sasser, 1990; Reichheld and Aspinwall, 1993; Reichheld, 1994; Rust and Zahorik, 1993; Sirohi et al., 1998). However, despite the rapid adoption of the Internet, few existing retention studies have extended beyond traditional settings into the context of Internet commerce.

Based on previous research findings of the influence of customer satisfaction and switching costs on customer retention in non-Internet based settings (Lee et al., 2001; Ranaweera and Prabhu, 2003), this research is one of the earliest attempts to examine a theoretical model of the influence of customer satisfaction and switching costs on

customer retention in the Internet-based setting and test it empirically. The findings of this research will not only enhance the understanding of the influence of customer satisfaction and switching costs on customer retention, but also provide some parameters to guide the future development of theory and allow the results of this research to be generalized to other Internet-based services readily.

Furthermore, considering the rapid adoption of electronic commerce, the new technologies present an immense challenge. It is, therefore, important for banks to compete in acquiring new customers and maintaining lasting relationships with customers. In an increasingly competitive environment, banks may be forced to quickly adopt and implement these technologies while there is little empirical evidence concerning, and insufficient understanding of the management of this new commercial medium. An established principle of marketing dictates that marketers must understand their customers' behaviors before they can effectively respond to their demands (Butler and Peppard, 1998). This research will help banks to better understand the Internet customers' behaviors and the rationale behind their retention.

1.4 Structure of the Thesis

The remainder of this thesis is organized in the following way. Chapter 2, which consists of the literature review, contains two main parts. The first part (section 2.2-2.5) examines previous research findings relating to the influence of customer satisfaction and switching costs on customer retention. The second part (section 2.6-2.9) examines the impact of the Internet on the banking industry.

Chapter 3 first outlines the research objectives of this study (section 3.2). Next the

research model of this research is presented linking customer satisfaction and switching costs to customer retention (section 3.3). Then, the three research hypotheses are discussed (section 3.4).

Chapter 4 discusses the research methodology, showing how various considerations shape the research methodology adopted in this study, and outlines some of the implications which this had for the results of this study. This chapter contains eight main parts. The first part (section 4.2) relates the design of the research. The second part (section 4.3) presents the sample design and data collection. The third part (section 4.4) presents the design of measures of research factors and variables. The fourth part (section 4.5) explains the data analysis methodologies. The fifth part (section 4.6) presents the objectives in questionnaire design. The sixth part (section 4.7) presents the pilot study of the survey Internet questionnaire. The seventh part (section 4.8) outlines the structure of the questionnaire. The final part (section 4.9) discusses the reliability and validity of this research.

Chapter 5 presents the research findings and contains five main parts. The first part discusses the demographic and Internet banking usage issues which include discussion of non-response bias of this study (section 5.2), representativeness of survey respondents (section 5.3), comparison of early respondents and late respondents (section 5.4), demographic profiles of respondents (section 5.5) and Internet banking usage of respondents (section 5.6). The second part analyses the construct validity (section 5.7) and reliability of research results (section 5.8). The third part (section 5.9) presents descriptive statistics and correlation matrix for constructs. The fourth part (section 5.10-5.11) presents the results of the research hypotheses. The final part (section 5.12) analyses the profile of basic and advanced Internet banking users.

Chapter 6 concludes this thesis with a discussion of findings (section 6.2), implications of this research (section 6.3), limitations of this research (section 6.4), opportunities of future research (section 6.5), and contributions of this research. (section 6.6).

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In an increasingly competitive environment, companies must be customer oriented (Kotler, 1997). As the Internet banking market becomes more competitive, banks are more likely to attempt to maintain their market share by focusing on retaining existing customers. Customer retention has a powerful impact on the performance of service firms and is considered by many service firms as an important source of competitive advantage (Athanassopoulos, 2000; Colgate et al., 1996; Fornell and Wernerfelt, 1987; Heskett et al., 1997; Jones et al., 2000; Mols, 1998; Paulin et al., 1998; Peters, 1988; Reichheld and Sasser, 1990; Rusts et al., 2000; Thomas, 2001; Woodruff, 1997). However, Internet users are now more easy to switch among a large number of service providers on the Internet. This has caused a lower level of customer retention (Kalakota and Winston, 1996).

In order to improve customer retention, firms develop a variety of activities, including programs for customer satisfaction (Anderson and Sullivan, 1993; Anderson et al., 1994; Jones and Sasser, 1995; Rust and Zahorik, 1993), complaint management (Fornell and Wernerfelt, 1987; Hirschman, 1970), and loyalty (Reichheld, 1996). In explaining the relationship between customer satisfaction and customer retention, only a few previous researchers have examined the moderating role of switching costs on the customer satisfaction - retention link, particularly in an Internet banking setting (Lee et al., 2001; Ranaweera and Prabhu, 2003).

This review of the literature is divided into main two parts. The first part (2.2-2.5)

reviews the concepts of customer retention, customer satisfaction, and switching costs. The second part (2.6-2.10) reviews the impact of the Internet on the banking industry. This review concludes with the identification of a research gap in the literature.

2.2 Customer Retention

In an era of mature markets and intensive competitive pressures, more and more organizations do realize that their most important asset is their existing customers (Athanassopoulos, 2000; Colgate et al., 1996; Heskett et al., 1997; Jones et al., 2000; Mols, 1998; Paulin et al., 1998; Thomas, 2001; Woodruff 1997). If an organization has to constantly capture new customers to replace those defecting it is unlikely that an organization can grow and gain market share. Developing long-term relationships based on delivering superior value is now considered as a more effective method of growing an organization and improving its profitability. As organizations have reached this conclusion they are increasingly adapting customer retention techniques including loyalty schemes in a search for improved performance (Reichheld, 1996).

As organizations become increasingly customer focused and driven by customer demands, the need to meet customers' expectations and retain their loyalty becomes more critical (Disney, 1999). Therefore, developing and maintaining long-term customer retention with customers is the key to the survival and growth of service firms (Duffy, 1998; Griffin, 1995; Kandampully, 1998; Reichheld, 1996; Wak, 1999). However, Allred and Addams (2000) indicated that the number of service providers who understand their customers' expectations and consistently provide a quality process is small. Even smaller is the number of service providers who have a strategy for retaining customers.

2.2.1 Conceptualization of Customer Retention

Customer retention has often been conceptualized and operationalized as a dimension of the customer loyalty construct (Boulding et al., 1993; Zeithamel et al., 1996). However, the customer retention construct itself has rarely been studied. Some exceptions are Crosby and Stephens (1987), Reichheld and Sasser (1990), and Rust and Zahorik (1993). Indeed, it is not uncommon in the extant literature to use customer loyalty and customer retention interchangeably. However, this is incorrect. Specifically, where researchers have in the past referred to customer loyalty, when what they in fact meant was customer retention, it is necessary to make that point explicit. This lack of clarity in the use of the term 'customer loyalty' and the term 'customer retention' is a weakness in the extant literature. Hennig-Thurau and Klee (1997) stated that the conceptualization of customer retention still needs further clarification. Because customer retention is concerned with repeated patronage, it is closely related to the repeat-purchasing behavior and brand-loyalty constructs. However, customer retention is different from these two constructs at the conceptual level. First, in contrast to most contemporary understanding of customer loyalty construct, which contain both behavioral and attitudinal aspects, customer retention does clearly not contain any attitudinal aspects (Jacoby and Chestnut, 1978). Second, customer retention emphasizes the activities of marketers in retaining customers, while the behavioristic repeat-purchase concept pays no attention to the factors underlying the displayed behavior. Therefore, customer retention focuses on developing marketing activities that lead to repeat-purchase behavior by focusing on the managerial aspects of the marketer-customer dyad (Hennig-Thurau and Klee, 1997). Ranaweera and Prabhu (2003) defined customer retention as future propensity of a customer to stay with service provider.

2.2.2 Importance of Customer Retention

Companies today must work to develop stronger bonds with and loyalties from their ultimate customers (Kotler, 1996). In the past, many companies took their customers for granted. Customers often did not have many alternative suppliers, or other suppliers were just as poor in quality and services, or the market was growing so fast that the company did not worry about satisfying its customers. A company could lose 1000 customers a week but gain another 1000 customers and consider its sale performance to be acceptable. Such a company believes that there will be enough customers to replace the defecting ones. However, this high customer churn involves higher costs than if a company retained all 1000 customers and required no new ones (Kotler, 1996).

Many companies focus on strategies that overemphasize new sales, seriously neglecting vital strategies related to customer retention. If service providers knew how much it actually costs to lose a customer, they would make greater effort to retain them. Unfortunately, as Reichheld and Sasser (1990) pointed out, today's accounting systems do not capture the value of a loyal customer. Their study analyzed more than 100 companies in two dozen industries and found that the longer a company keeps a loyal customer the more the customer purchases each year. Also, year by year, loyal customers purchase more expensive items and are willing to pay more for existing products. As purchases rise, operating costs decline. Loyal customers also provide very persuasive free advertising (Reichheld and Sasser, 1990).

Several authors have also noted that customers generally vary in terms of profitability. This has been demonstrated through a large number of studies conducted, among others, by Cooper and Kaplan (1991), Peppers and Rogers (1993), Petro (1990),

Shapiro et al., (1987), Slywotzky and Shapiro (1993), Wang and Splegel (1994) as well as Wayland and Cole (1997). That is to say, one particular customer does not generate the same costs and revenues over time as another customer. Much of the existing research is that long-term relationships are desirable because they are more profitable for the firm as compared to short-term relationships (Fornell, 1992; Buchanan and Gilles, 1990; Reichheld and Sasser, 1990). Following this line of reasoning, it is obvious that there is a positive correlation between the duration of a customer - firm relationship and a firm's profits derived thereof.

Moreover, not all customers generate acceptable cost and revenue streams. For example, in retail banking, some 50-60 percent of customers may be unprofitable (Storbacka et al., 1994). It has been suggested, therefore, that the firm should actively encourage relationships with profitable customers and attempt to terminate relationships with unprofitable customers (Jones and Sasser, 1995; Shapiro et al., 1987; Slywotzky and Shapiro, 1993).

2.2.3 The Impact of Customer Retention on Profitability

The correlation between customer retention and customer profitability has been studied far more frequently than the correlation between customer satisfaction and customer retention (Zeithaml, 2000). Previous research has recommended that enterprises have to implement strategies to retain customers (Fornell, 1992; Rust and Zahorik, 1993). The reason for this is that profitability in a customer relationship is not constant over time, but rather customers generally generate increasing profits during the relationship with a supplier. That is why a basic tenet of relationship marketing is that firms benefit more from maintaining long-term customer relationships as compared to short-term

customer relationships. Convincing conceptual evidence for this argument has been advanced by a number of authors (Morgan and Hunt, 1994; Sheth and Parvatiyar, 1995). Likewise, Bendapudi and Berry (1997) argued that the relationship marketing payoff to the firm only when relationship endure. Reichheld and Sasser (1999) stated that customer defection have a surprisingly powerful impact on the bottom line. As a customer's relationship with the company lengthens, profits rise.

Contrary to the anecdotal evidence that long-life customers are most profitable to the firm, Dowling and Uncles (1997) argued that the contention that loyal customers are always more profitable is a gross oversimplification. In particular, Dowling and Uncles questioned the existing contentions that costs of serving loyal customers are presumably lower, that loyal customers presumably pay higher prices, and that loyal customer presumably spend more money than disloyal customers with the firm Obviously, Dowling and Uncles are concerned with the widespread assumption of a clear-cut positive lifetime-profitability relationship and underline the importance of differentiated analysis. Consequently, there seems to be a need for more rigorous empirical evidence on the lifetime-profitability relationship. In fact, Mohs (1999) stated that long-life consumers expect value-added relationships in order to buy more products. Otherwise, their expenditure can be lower. In contrast, short-term consumers might not form any expectations of value-added relationships and therefore will have no inhibitions about buying products from the vendor. Reinartz and Kumar (2000) argued that long-life customers are not necessary profitable customers. For example, AT&T has at least 20 million residential customers in USA who do not make a single long-distance telephone call in one year. However, the customers get their monthly bill. These customers spend the least, irrespective of whether they are long- or short-life customers for a firm. Therefore, there may not be any difference in spending between

long-life and short-life customers (Reinartz and Kumar, 2000).

While anecdotal evidence on life-profitability relationship seems to be plentiful, Reichheld's and Teal's (1996) study seems to be the only published empirical evidence to substantiate the hypothesized positive lifetime-profitability relationship. In particular, Reichheld and Teal found that increased customer retention can be as a result of higher additional sales, lower costs, recommendations and higher prices. Given the scarce empirical evidence of negative lifetime-profitability relationship and the cautionary notes by Dowling and Uncles (1997), Reinartz and Kumar (2000) argued that the majority of relationship outcomes would be expected to fall along the diagonal, as shown in Figure 2.1. Since Reichheld (1996) found that there is a positive life-time-profitability relationship in the general banking context, it is reasonably concluded that it is important for banks to retain Internet banking customers. The next section presents the relationship between customer retention and profitability in different industries.

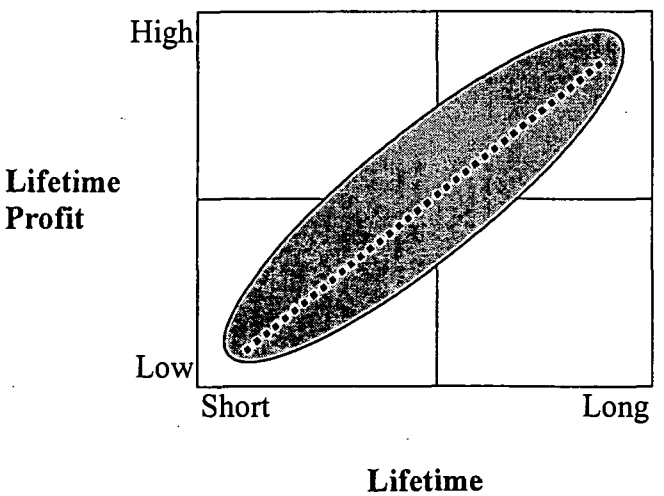


Figure 2.1: Lifetime-Profitability Association
Source: Reinartz and Kumar (2000)

2.2.4 The Relationship between Customer Retention and Profitability in Different Industries

Although it is an established fact that customers vary considerably with regard to the profit they generate, a survey conducted by Reichheld (1996) showed that there are significant differences in the relative increase of profitability in different industries. An improvement in customer retention (in this case equal to the number of years of duration of the customer relationship) of five percent produces an increase of between 35 percent and 95 percent in the lifetime value of the customer (Figure 2.2). The increase is particularly marked in the financial sector, including life insurance (90 percent), banking (85 percent) and general insurance (84 percent), whereas the increase in the lifetime value in the industrial insurance (45 percent), industrial cleaning (45 percent) and software industry (35 percent) is somewhat smaller. The magnitude of the increase depends on, among other factors, as to whether it is an industry in which the initial costs are high and sales per customer increase sharply after a couple of years (e.g. banking) or it is an industry with relatively low initial costs and constant sales during the period of the customer relationship, such as life and general insurance (Reichheld, 1996).

Reichheld argues that an existing customer cannot be directly replaced by a new customer. First of all, it is expensive to generate a new customer. Nauman and Giel (1995) refer to practical experience showing that an average enterprise spends 2 to 25 times as much on attracting a new customer in relation to retaining an existing customer. Bhote (1996) claims five to seven times, depending on the industry. In any case, this means that the cost of attracting new customers is considerably larger than the cost of retaining existing customers.

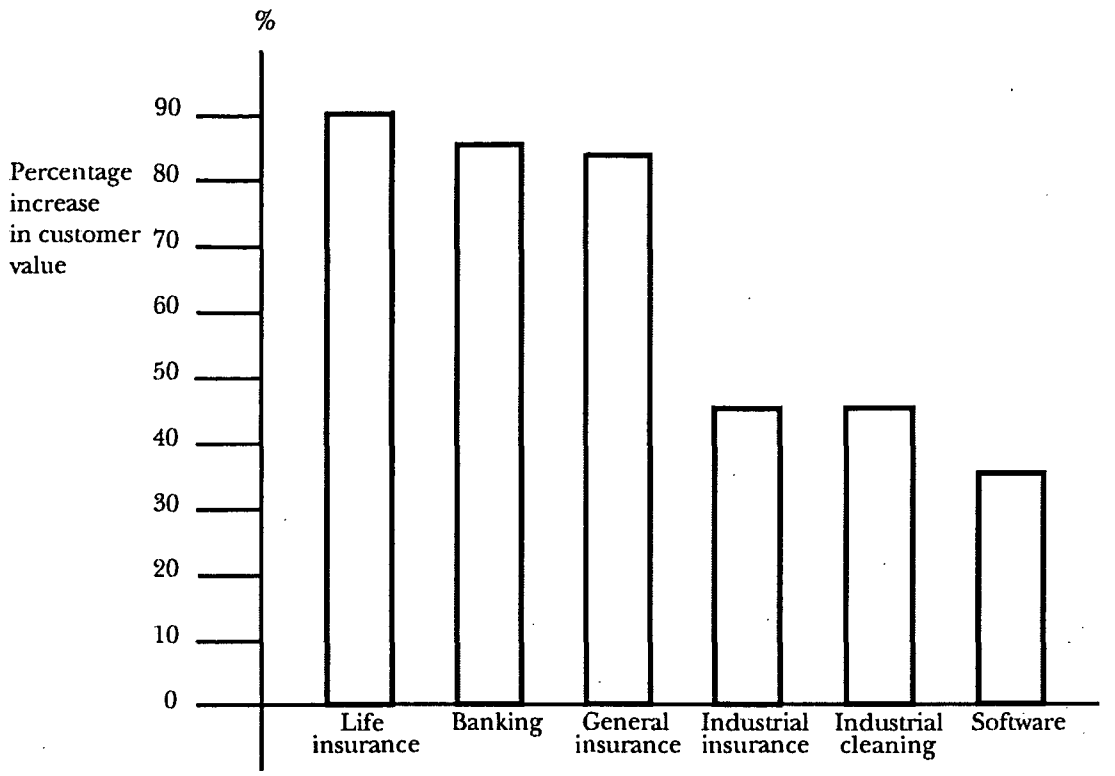


Figure 2.2: The Effect of a Five Percent Retention Increase on Customer Value
Source: Reichheld (1996)

2.2.5 Factors Affecting Customer Retention

Previous research has identified a diverse set of factors affecting customer retention. Examples include involvement (Silos, 1999); client expectation, perceived risk, and need for control (File and Prince, 1994); first service encounter (Bitner, 1995); market orientation (Narver and Slater, 1990); transaction, social and structural bonds (Berry, 1995); trust and commitment (Garbarino and Johnson, 1999); product and service quality perception (Hennig-Thurau and Klee, 1997; Oliver et al., 1992; Reichheld and Sasser, 1990; Sirohi et al., 1998); customer satisfaction (Kotler, 1994; Lee at el., 2001; Ranaweera Prabhu, 2003; Rust and Zahorik, 1993); and switching costs (Lee et al., 2001; Ranaweera and Prabhu, 2003).

Despite this diversity, there is a stream of research that consistently advocates customer satisfaction as an important antecedent of customer retention (Rust and Zahorik, 1993). Kotler (1994) stated that the key to customer retention is customer satisfaction. Consequently, customer satisfaction has been regarded as a basic construct for monitoring and controlling activities in the concept of relationship marketing. This is exemplified through the development and publication of a large number of company, industry-wide, and even national satisfaction indices (Anderson et al., 1994; Fornell, 1992; Fornell et al., 1996). After all, the underpinning of the marketing concept is that identification and satisfaction of customer needs leads to improved customer retention (Ranaweera and Prabhu, 2003). Since customer satisfaction is viewed as an important driver of customer retention, next section examines the concepts of customer satisfaction.

2.3 Customer Satisfaction

For more than two decades, people have been intensively discussing customer satisfaction in the area of customer and marketing research. As from the mid-1970s, researchers have been holding annual conferences on customer satisfaction (Hunt, 1977), and proceedings are being published from 1981 in the Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior.

Customer satisfaction has long been recognized in marketing thought and practice as a central concept as well as important goal of all business activities (Anderson et al., 1994; Yi, 1990). Consumer satisfaction is important to the marketer because it is generally assumed to be a significant determinant of repeat sales, positive word-of-mouth, and consumer loyalty. Satisfaction is important to the consumer

because it reflects a positive outcome from the outlay of scarce resources and/or the fulfillment of unmet needs (Day and Landon 1977). Previous research has demonstrated that unsatisfactory purchases, though varying by product class or service category, appear to be prevalent. For example, Andreasen and Best (1977) reported that as many as one in five purchase experiences resulted in some dissatisfaction. Thus, minimizing dissatisfaction and maximizing satisfaction are seen as important goals for both the firm and the consumer.

2.3.1 Levels of Customer Satisfaction

Considerable research has been conducted on what customer satisfaction means to customers and developing instruments that measure customer satisfaction. One of the most controversial issues within the literature concerns the question of the nature of customer satisfaction. In an early paper in the consumer satisfaction literature, Czepiel et al., (1974) identified three levels at which the study of consumer satisfaction can take place: (1) satisfaction with the marketing system, (2) with the enterprises in the system such as retail stores, and (3) with specific products or services. According to these authors, the levels of satisfaction are interrelated. While system satisfaction is a function of the combination of enterprise satisfaction and product or service satisfaction, its character simultaneously determines the other two levels of satisfaction. Product or service satisfaction and enterprise satisfaction closely affect each other as the consumer purchases and consumes products (Czepiel et al., 1974). Since this research concerns with the retail Internet banking service, the satisfaction with marketing system and enterprises in the system are not directly relevant to the present research and is therefore not examined in this research. Thus, next section examines conceptualizations of customer satisfaction with product or service.

2.3.2 Conceptualizations of Customer Satisfaction with Product or Service

Consumer satisfaction with a service or product refers to the favorability of the individual's subjective evaluation of the various outcomes and experiences associated with using or consuming the product or service (Hunt, 1977). There are at least two different conceptualizations of customer satisfaction that exist in the literature, the first one is transaction-specific or service encounter satisfaction, while the second one is overall or cumulative satisfaction. Although these two types of satisfaction are related, it is important to recognize them as distinct constructs because some of the factors influencing them may be different (Anderson et al., 1994; Bolton and Drew 1991; Boulding et al., 1993; Cronin and Taylor 1994; Johnson et al., 1995). For example, service encounter satisfaction is more likely to depend on performance on specific attributes of the service encounter, whereas overall satisfaction is more likely to depend on factors that occur across transactions.

From the transaction-specific perspective, customer satisfaction is viewed as the assessment made by a choice after a specific purchase occasion, in other words, how satisfied the customer is with a product or service after the purchase was made. This concept provides knowledge of the customer's satisfaction with products or services in the short term (Anderson et al., 1994; Hunt, 1977; Oliver, 1977, 1980 and 1993). In contrast, overall customer satisfaction is defined as the sum of the customer's total purchase and consumption experience with the product or service over time, which is more fundamental and useful than transaction-specific customer satisfaction in predicting a consumer's subsequent behaviors and a firm's past, present and future performance (Anderson et al., 1994; Fornell, 1992; Johnson and Fornell, 1991). According to this definition, customer satisfaction will consist partly in experience and perception of the product or service, including, among other factors, the customer's

experience of quality of the product or service. Hence, this definition may be understood as a basic indication of how the enterprise has preformed previously, how it performs at present and how it is expected to perform in the longer term.

Since the objective of this research concerns the overall customer satisfaction experienced by retail Internet banking adopters during the process of receiving Internet banking services from their main Internet bank, the transaction-specific customer satisfaction is not directly relevant to the present research and is therefore not examined in this research. Thus next section reviews the conceptualization of overall customer satisfaction relevant to the product or service.

2.3.3 Conceptualization of Overall Customer Satisfaction with Product or Service

Overall customer satisfaction is relationship-specific, that is, overall satisfaction is the cumulative effect of a set of discrete service encounters or transactions with the service provider over a period of time (Bitner and Hubbert 1994; Oliver, 1997; Rust and Oliver, 1994). Expectation-confirmation theory (ECT) is widely used in the customer behavior literature to study consumer satisfaction, post-purchase behavior (e.g., repurchase intention, complaining behavior), and service marketing in general (Anderson and Sullivan, 1993; Dabolkar at al., 2000; Oliver, 1980 and 1993; Patterson et al., 1997; Tse and Wilton, 1988). The predictive ability of this theory has been demonstrated over a wide range of product and service, including automobile repurchase (Oliver, 1993), camcorder repurchase (Spreng et al., 1996), institutional repurchase of photographic products (Dabholkar et al., 2000), restaurant service (Swan and Trawick, 1981), and business professional services (Patterson et al., 1997). Figure 2.3 illustrates key constructs and relationships in ECT.

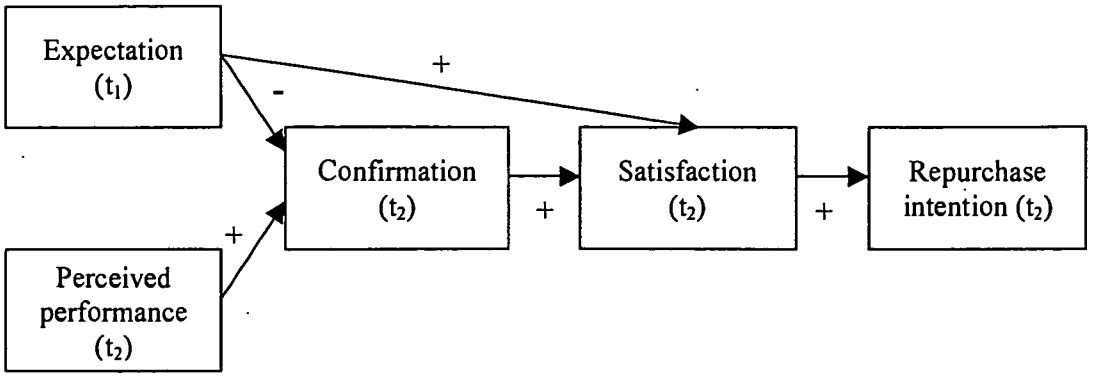


Figure 2.3: Expectation-Confirmation Theory
Source: Oliver (1980)
Note: t_1 = pre-consumption variable; t_2 = post-consumption variables

The process by which customers reach repurchase intentions in an ECT framework is as follows (Oliver, 1980). First, customers form an initial expectation of a specific product or service prior to purchase. Second, they accept and use that product or service. Following a period of initial consumption, they form perceptions about its performance. Third, they assess its perceived performance vis-à-vis their original expectation and determine the extent to which their expectation is confirmed. Fourth, they form a satisfaction of that product or service according to their confirmation level and expectation on which that confirmation was based. Finally, satisfied customers form a repurchase intention, while dissatisfied customers discontinue its subsequent use.

2.3.4 Types of Customer Satisfaction Construct

Previous researchers have adopted one of three positions concerning the nature of the customer satisfaction construct, including evaluative judgment, emotional state, or combination of the evaluative judgment and emotional state.

Evaluative Judgment

The first definitions of customer satisfaction asserted that it was an evaluative judgment. In a seminal paper in the customer satisfaction literature, Czepiel et al. (1974) proposed that customer satisfaction can be thought of as an overall evaluative response. This view was widely adopted and many later authors subscribed to this view. Engel and Blackwell (1982) defined satisfaction as an evaluation that the chosen alternative is consistent with prior beliefs with respect to that alternative. Hunt (1977) stated that satisfaction is the evaluation rendered that the experience was at least as good as it was supposed to be. So customer satisfaction is not an emotion, it is the evaluation of an emotion.

Emotional State

The view that customer satisfaction is an emotional response to the experiences provided by, or associated with, particular products or services purchased. This emotional response results from an evaluation of various consumption experiences, and have emphasized that the construct of customer satisfaction should only encompass the emotional state felt by a customer in response to a product or service experience (Day, 1983; Swan, 1983 and 1988; Woodruff et al., 1983).

Combination of Evaluative Judgment and Emotional State

The notion of a customer satisfaction construct incorporating both an evaluative and an emotional component was first suggested by Miller (1977), who contended customer satisfaction could be described conceptually as a cognitive and affective state. This view was reiterated by Westbrook and Oliver (1981) where customer satisfaction refers to an evaluative response concerning the perceived outcomes of experience in the customer domain, comprising acquisition, consumption, and disposition activity. In

connection with their evaluations of outcomes, customers may experience varying degrees of feeling or emotion. Having considered the type of customer satisfaction construct, the next section reviews the consequences of customer satisfaction.

2.3.5 Consequences of Customer Satisfaction

Many studies have attempted to identify factors that predict different types of customer responses to satisfaction or dissatisfaction. The main consequences of customer satisfaction include reduced price elasticities, lower transaction costs, reduced failure costs, new customer, increase reputation and customer retention.

Reduced Price Elasticities

An increase in customer satisfaction should reduce price elasticities for existing customers (Garvin, 1988). Satisfied customers are more likely to be tolerant of increases in price. This implies high profit margins and increase in customer retention. In contrast, low customer satisfaction causes greater turnover of the customer base, higher replacement costs, and higher customer acquisition costs. Decreased price elasticities lead to increased profits for a firm providing superior customer satisfaction (Reichheld and Sasser, 1990).

Lower Transaction Costs

An increase in high customer satisfaction should lower the costs of transactions in the future. If a firm has a high customer retention rate, it does not need to spend as much to acquire new customers each period. Satisfied customers are likely to buy more frequently and in greater volume as well as purchase other goods and services offered by the firm (Reichheld and Sasser, 1990).

Reduced Failure Costs

An increase in customer satisfaction should also increase a firm's profitability by reducing failure costs. A firm that consistently provides high customer satisfaction requires fewer resources devoted to handling returns, reworking defective items, and handling and managing complaints (Crosby, 1979; Garvin, 1988; TARP, 1979 and 1981).

New Customers

The costs of attracting new customers should be lower for firms that achieve a high level of customer satisfaction (Fornell, 1992). For example, satisfied customers are reputedly more likely to engage in positive word of mouth and less likely to engage in damaging negative word of mouth for the firm (Howard and Sheth, 1969; Reichheld and Sasser, 1990; TARP, 1979 and 1981). Media sources are also more likely to convey positive information to prospective buyers and make advertising more effective.

Increased Reputation

An increase in customer satisfaction should also improve the overall reputation of the firm. An improved reputation can help firms to introduce new products by providing instant awareness and lowering the buyer's risk of trial (Robertson and Gatignon, 1986; Schmalansee, 1978). Reputation can provide a halo effect for the firm that positively influences customer evaluations. Customer satisfaction should play an important role in building brand equity for the firm (Aaker, 1992).

Customer Retention

One of the important principal behavioral objectives of customer satisfaction programs is to increase customer retention rates (Fornell, 1992). In general, high customer

satisfaction should indicate increased retention for existing customers. This means more customers will repurchase (be retained) in the future (Anderson and Sullivan, 1993; Fornell, 1992). Further, the importance of customer satisfaction on customer retention is so well recognized that some major economies now measure satisfaction to predict customer retention and future financial performance (Fornell, 1992; Fornell et al., 1995; Reichheld and Sasser, 1990). As this research intends to examine the relationship between customer satisfaction and customer retention, it is important to examine previous research findings relevant to this relationship.

2.4 Relationship between Customer Satisfaction and Customer Retention

Satisfaction is viewed as the key to retaining existing customers and building long-term relationship with customers; "Investing in customer satisfaction is like taking out an insurance policy. If some temporary hardship befalls the firm, customers will be more likely to remain loyal" (Anderson and Sullivan 1993, p.160). Among the many articles published, satisfaction has been taken as the required premise for the retention of customers; thus satisfaction is placed at the forefront of relational marketing approaches (Rust and Zahorik, 1993). In numerous publications, customer satisfaction has traditionally been treated as a fundamental determinant of long-term customer behavior and retention of customers (Oliver, 1980; Yi, 1990). Fornell, (1992) stated that a fundamental aim of firms is to seek to manage and increase customer satisfaction in order to increase customer retention rates. Cronin and Taylor (1992) and Patterson et al., (1997) found that customer satisfaction has a significant impact on repurchase intentions in a range of services. Day et al. (1988) concluded that client satisfaction is unquestionably the key determinant in retaining current clients in professional services. Kotler (1994) summarizes this by stating: "The key to customer

retention is customer satisfaction" (p.20).

Although customer satisfaction has evolved extensively into a basic construct for monitoring and controlling activities in the relationship marketing concept (Anderson et al., 1994; Fornell, 1992; Fornell et al., 1996), the literature about the relationship between overall satisfaction and repurchase intentions or loyalty has been conflicting (Brown et al., 1993; LaTour and Peat, 1979; Mitall et al., 1998; Oliva et al., 1995; Oliva et al., 1992). Some literature assumed that the relationships between customer satisfaction and repurchase intentions are symmetrical and linear (LaTour and Peat, 1979). That is, customer satisfaction has a direct impact on repurchase intentions (Brown et al., 1993; Mitall et al., 1998). In contrast, other literature assumes the relationships between customer satisfaction and repurchase intentions are asymmetrical and nonlinear (Oliver and Bearden, 1995). The reason could be that repurchase intention does not move in the same direction as satisfaction does (Oliver, 1993). As a consequence, the probability of repurchase was not isomorphic with either positive or negative service experience (Feinberg et al., 1990).

Customer satisfaction and customer retention are not surrogates for each other (Bloemer and Kasper, 1995; Oliver, 1999). It is possible for a customer to be loyal without being highly satisfied. (e.g., when there are few other choices) and highly satisfied and yet not be loyal (e.g., when many alternatives are available). Clearly, firms need to gain a better understanding of the relationship between satisfaction and customer retention. Bolton (1995), in her experimental study, found that overall satisfaction takes up 7 percent of the variance of the length of the company - customer relationship. She even found that there was no important relationship between the transaction-specific satisfaction appraisal and the length of the retention (Bolton, 1995).

Moreover, in studies that compared the satisfaction level of customers that had left firms with loyal customers, showed similar results. For example, in Kordick's report on a study of car buyers, there were only 40 percent of the surveyed buyers who said, in their repeat purchase behavior, they were satisfied with the brand and the service engaged (Kordick, 1988). Furthermore, Kordick noted that despite the dissatisfaction of car dealers in a previous deal, 15 percent of unsatisfied customers patronize the same dealer again. Based on the results of the above studies, it seems that the conceptual view of a strong satisfaction - retention relationship is under well-founded skepticism. Thus, it is important to examine the sweeping assumption of a close relation between customer satisfaction and customer retention.

On conducting a literature survey, Oliver (1999) identified six diverging ways of perceiving a correlation between customer satisfaction and customer loyalty (Figure 2.4). It is reasonably to assume that loyal customers are ones who are committed to stay with a supplier and more likely to continue to purchase the service of their preferred supplier.

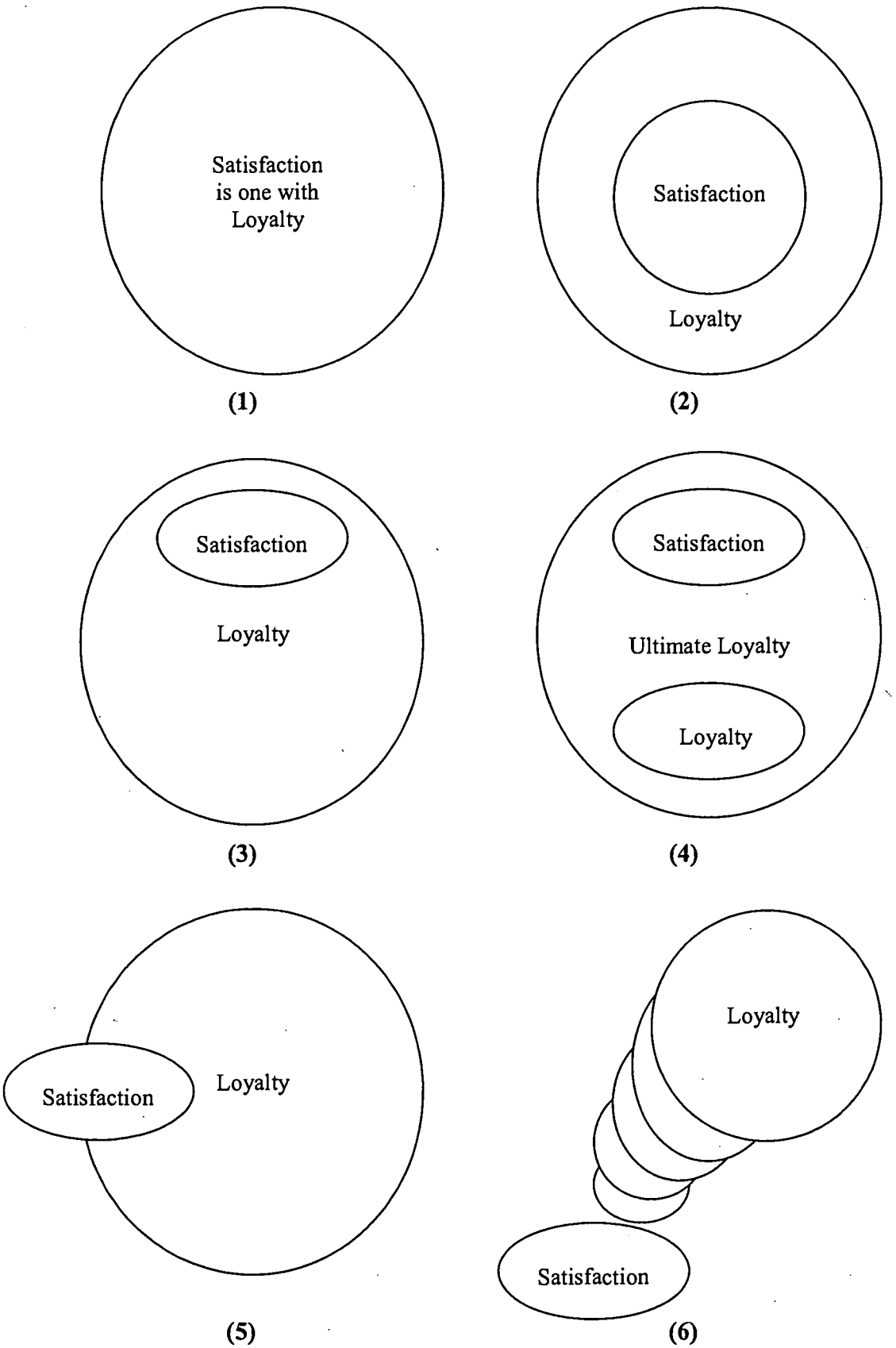


Figure 2.4: Six Perception of Customer Loyalty
Source: Oliver (1999)

As shown in Figure 2.4, (1) indicates that customer satisfaction and customer loyalty represent two sides to the same question – one coin, two faces. (2) illustrates that customer satisfaction is the very core of customer loyalty, without which customer loyalty cannot exist and that customer satisfaction anchors customer loyalty. According to (3), customer loyalty should not be viewed as the very core of customer satisfaction, but merely as an element. (4) indicates that both customer loyalty and customer satisfaction are elements of an overall loyalty concept. (5) describes that parts of customer satisfaction are included in customer loyalty, but customer satisfaction is not the key to the very concept of customer loyalty. Finally, (6) illustrates the assumption that customer satisfaction forms the basis of a development sequence, which leads to customer loyalty. However, numerous previous empirical research findings seem to support the causal relationship upon which (6) is based, including LaBarbera and Mazursky (1983), Anderson and Sullivan (1993), Bitner (1990), Biong (1993), Bloemer and Kasper (1994), Jones and Sasser (1995), Macintosh and Lockshin (1997), Soderlund (1998), as well as Taylor and Baker (1994).

In the mid-nineties the Xerox organization conducted a large study of customer satisfaction and found that there is a relationship between customer satisfaction and customer retention (Heskett and Schlesinger, 1994). Figure 2.5 displays the relationship.

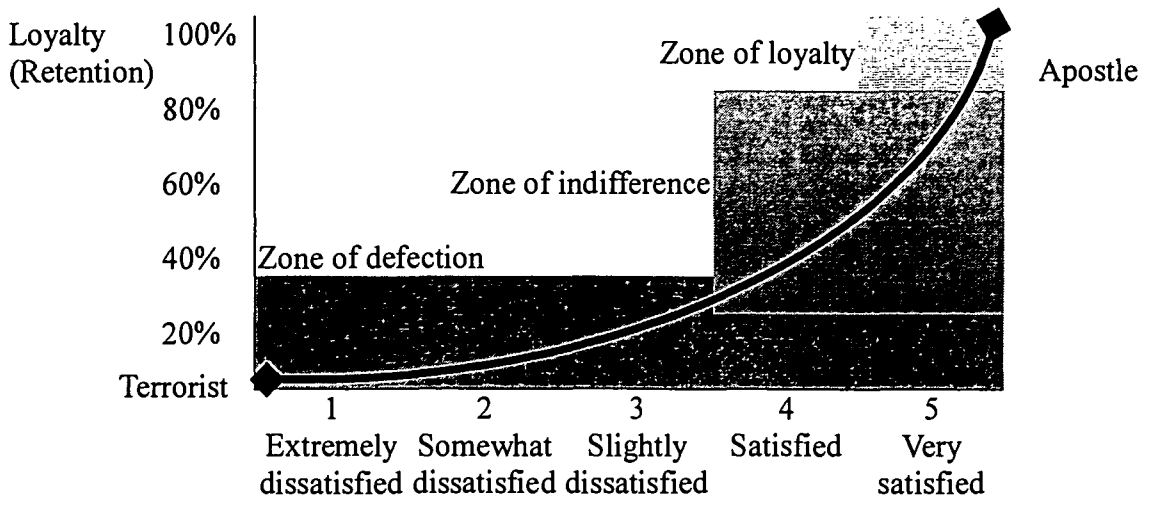


Figure 2.5: Relationship between Customer Satisfaction and Customer Retention
Source: Heskett and Schlesinger (1994)

As shown in Figure 2.5, there are three zones in the relationship. The first zone is called defection zone. This zone includes not only those customers who are dissatisfied, but also those customers who are neutral. It also includes customers who were loyal but who have had a negative experience that was not handled properly. The second zone is called indifference zone. Indifferent customers may be satisfied but exhibit no loyalty. They are often expensive to acquire and quick to depart. Typically, they chase low price. The third zone is called loyalty zone. Customers falling into the loyalty zone have confidence and are likely to repurchase whenever the opportunity arises. They often become loyal when companies make good of bad situations (Heskett and Schlesinger, 1994).

Essentially, Figure 2.5 illustrates that when customers rate their satisfaction level as 'very satisfied', their loyalty is very high. The graph highlights a 'zone of affection' where customers become 'apostles' of the product or service provided by a company. However, the figure also illustrates that even when customers rate their satisfaction at '4' or 'satisfied', there is a high degree of indifference or even defection. It is clear that

to achieve a satisfaction level of '4' (80 percent) with customers is not enough even when customers report that they are satisfied, they are indifferent and are likely to defect if provided with a reasonable alternative (Heskett and Schlesinger, 1994).

Although numerous studies have shown that customer satisfaction is related to repurchase intentions and attitudinal loyalty (Anderson and Sullivan, 1990; Boulding et al., 1993; Cronin and Taylor, 1992; De Ruyter et al., 1996; Fornell, 1992; Magi and Julander 1996; Taylor and Braker 1994; Zeithamel et al., 1996), satisfaction alone does not ensure continued customer patronage (Jones and Sasser, 1995) since customers are seldom completely free to choose suppliers. In fact, different types of constraints, together with customer satisfaction, determine customers' choice of supplier (Bendapudi and Berry 1997). While accumulated evidence points to satisfaction influencing repeat purchase behavior, it typically explains only a quarter of the variance in behavioral intentions (Szymanski and Henard, 2001), and the relationship between customer satisfaction and loyalty is now recognized as more complex than originally proposed (Garbarino and Johnson, 1999; Mittal and Kamakura, 2001; Oliver, 1999). Yet firms appear to be stuck in a satisfaction trap, a myopic belief that customer satisfaction and service quality are the only tools for managing customer retention (Reichheld, 1996). In order to break out of this trap, marketers must develop themselves to more fully understanding of various customer retention drivers.

A business that focuses exclusively on customer satisfaction runs the risk of becoming an undifferentiated brand whose customers believe only that it meets the minimum performance criteria for the category. Long-term customer retention in competitive markets requires a supplier to go beyond mere basic satisfaction and to look for ways of establishing ties of retaining customers that will help ward off competitor attack

(Bendapudi and Berry 1997). In this research such constraints are termed switching costs. Accordingly, it is necessary to introduce the concept of switching costs, relationship between switching costs and customer retention as well as the moderating role of switching costs on the relationship between customer satisfaction and customer retention.

2.5 Switching Costs

Switching costs are a category of switching barriers that emerge from an analysis of the literature (Colgate and Lang, 2001). Switching costs have been examined in the context of micro-economics (Farrell and Shapiro, 1988; Klemperer, 1987), interfirm relationships (Caves and Porter, 1977; Porter, 1980 and 1985), and distribution channel relationships (Weiss and Anderson, 1992). Switching costs can also create a dependence of the customer on the provider (Morgan and Hunt, 1994). Switching costs have been identified as a factor contributing to maintaining a relationship (Morgan and Hunt, 1994). Essential to this switching cost strategy is that customers experience some form of "lock-in" or switching costs to prevent them from defecting to another provider.

2.5.1 Conceptualization of Switching Costs

Switching costs arise from a variety of factors including the general nature of the product, the characteristics of customers that firms attract, or deliberate strategies and investments by product and service providers. By creating or exploiting switching costs, firms can soften price competition, building a first mover advantage, and earn supernormal profits from advertising or other investments (Klemperer, 1995).

Switching cost is conceptualized as the perception of the magnitude of the additional costs required to terminate the current relationship and secure an alternative (Porter, 1980). Porter suggested that switching costs are one time costs, as opposed to the on-going costs associated with using a product or provider once a repeat-purchase relationship is established. Switching costs need not be incurred immediately upon switching; they must merely be associated with the one-time switching process. Furthermore, a switch needs not consume economic resources to be perceived as costly. When customers simplistically state that it is just not worth it to switch providers, they may perceive impediments ranging from search costs, transaction costs, learning costs, loyal customer discounts, customer habit, emotional cost and cognitive effort, coupled with financial, social, and psychological risk on the part of the buyer" (Fornell 1992). However, Kumar et al., (1992) pointed out that examining a single facet of a multifaceted switching cost construct is unlikely to produce an adequate assessment of the construct or its relationships with other constructs. Employing a global measure, on the other hand, increases measurement error as it forces respondents to mentally combine multi-dimensional ratings. In order to effectively manage switching costs, firms must consider all switching costs and be able to distinguish between different types of switching costs that are perceived by customers (Kumar et al., 1992).

Non-empirical research suggests a variety of ways to differentiate switching costs. Porter (1980) further suggested that industrial purchasers may perceive switching costs are associated with product and process integration, with the learning needed for product use and with the psychological bonds formed between providers. Jackson (1985) argued that switching costs should be broken into two categories: those created by risk (or exposure) and those created by investments.

Klemperer (1987) distinguished between three types of switching costs. The first type of switching costs is transaction costs incurred when the customer changes supplier. For example, if a customer changes stockbroker, he/she has to close one account and open another with the new supplier, entailing some effort. The second type of switching costs is learning costs. Suppose the new stockbroker introduces new routines or contractual rules, then customers have to learn these new rules, which can be seen as incurring switching cost in terms of time to learn. The third type of switching costs is artificial switching costs and concerns what the firm does to retain customers - for example frequent flyer programs or discount coupons valid for the next purchase. Artificial switching costs are entirely at the firm's discretion.

Switching costs also relate to perceived risk, which is defined as the customer's perception of the uncertainty and adverse consequences of buying a product or service (Dowling and Staelin, 1994). This is conceptualized as the likelihood of negative consequences. Perceived risk represents consumers' uncertainties about loss or gain in a particular transaction and has six components: financial, performance, social, psychological, safety, and time/convenience loss (Murray, 1991).

Although previous research has dealt with different types of switching costs, the basic idea that inspired this research is essentially similar. That is, once a transaction relationship is established, one party becomes more dependent on the other. Customers often become 'locked into' their current service provider due to high switching costs. As switching costs is related to customer retention, it is importance to examine the relationship between switching costs and customer retention.

2.5.2 Relationship between Switching Costs and Customer Retention

As the primary tool for managing customer retention, customer satisfaction has received unflagging attention in the marketing literature (Anderson and Sullivan, 1993; Fornell, 1992; Szymanski and Henard, 2001). Firms around the world have adopted customer satisfaction measures as a de facto standard for monitoring progress and believed that customer retention and profitability will follow. However, the literature in channel relationships suggests that, in a troubled retailing scenario, switching cost is positively associated with customer retention (Ping, 1993 and 1994). Literature in industrial marketing and distribution channels also suggests that a relationship may continue to exist due to a buyer's perception of high switching costs (Ping, 1994; Porter, 1980). There is evidence that switching costs have a significant impact on repeat choice behavior. Ping (1993) examined the relationship between switching costs and customer retention, and discovered that when customers perceive switching costs associated with leaving the current relationship and establishing the alternative to be high, they tend to be 'loyal'.

Aside from improving customer satisfaction, increasing switching cost is a common strategy advocated to increase customer retention as monetary costs, time and psychological effort influence customers' decisions on choosing new service providers (Gronhaug and Gilly, 1991; Jackson, 1985; Lee et al., 2001; Ranaweera Prabhu, 2003). Customers may also stay loyal to a company if they feel that they are receiving greater value than they would from their supplier's competitors (Bitner and Hubbert, 1994; Bolton and Drew, 1991; Zeithaml et al., 1996). Switching costs also create a dependence of customer on a provider (Morgan and Hunt, 1994). Switching costs may come in the form of termination costs from the current service to joining costs with an alternative service provider (Colgate and Lang, 2001). Gronhaug and Gilly (1991)

argued that a dissatisfied customer may remain loyal because of high switching costs. For example, moving to a new service provider requires investing effort, time and money, which act as a significant barrier to a customer taking action when dissatisfied with the current service provider. Ping (1993) examined the relationship between switching costs and customer retention, and discovered that when customers perceive the switching costs associated with leaving the current relationship and establishing an alternative to be high they tend to be loyal. Lee and Cunningham (2001) argued that switching costs are the costs incurred in the future and customer retention is formed based on future anticipations as well as past experiences; therefore, switching costs should be an important determinant of customer retention. DeRuyter et al. (1998) investigated customer retention in terms of the cost, to them, of switching from one service provider to another. They found that when switching costs were low, customers were less loyal than when they were high.

Firms regularly make marketing choices that affect customers' perceived switching costs. Consider an example from the U.S. long distance telephone industry (Julander and Söderlund, 2003). In 1991, MCI launched the "Friends and Family" program. This marketing program asked customers to invest time and effort building "circles" or databases of friends and family members, in order to receive a discounted calling rate. As a result, MCI gained almost five share points in the long distance market between 1991 and 1997. In 1995, AT&T scrapped its long-standing use of time-varying prices and began offering 10 cents a minute plan for all long distance calls. Between 1991 and 1997, AT&T lost 18% of the market it had dominated. While additional factors are likely to have influenced these share changes, Julander and Söderlund (2003) suggested that the AT&T pricing change reduced the costs its customers faced in comparing among alternatives, and thus weakened AT&T's customer retention. The

MCI "Friends & Family" program, on the other hand, increased the time and effort investments its customers would lose upon switching, and thus strengthened MCI's customer retention. Having examined the positive relationship between switching costs and customer retention, the next section examines the moderating role of switching costs on the relationship between customer satisfaction and customer retention.

2.5.3 The Moderating Role of Switching Costs on the Relationship between Customer Satisfaction and Customer Retention

Correlation between customer satisfaction and customer retention as described in section 2.4 is not universal, because the market situation of a provider is an important determinant. In other words, the impact of switching costs on the relationship between customer satisfaction and customer retention is affected by market structure. If the market has a single or overwhelmingly dominant provider (for example, a monopoly provider of a local telephone service), there should be little effect of switching costs on the relationship between satisfaction and brand loyalty. That is, a dissatisfied customer with high switching costs will not switch; nor, however, will a dissatisfied customer with low switching costs, since there is no alternative. Switching costs become important when there are at least a few viable alternative providers in a market.

Only a few empirical studies, however, have investigated how switching costs affect the relationship between customer satisfaction and customer retention (Lee et al., 2001; Ranaweera and Prabhu, 2003). It has been pointed out that customers remain loyal to suppliers either because they want to or they have to (Hirschman, 1970; Johnson, 1982; Levinger, 1979; Ping, 1993). High switching costs mean that customers have to stay (or perceive that they have to) with suppliers, irrespective of the satisfaction created in the relationship. Gronhaug and Gilly (1991) argued that a dissatisfied customer may

remain loyal because of high switching costs. In other words, while client satisfaction with a relationship may be less than satisfactory, the client may stay in the relationship because the psychological and economic costs (search effort, financial penalties, risk in choosing a new supplier) of switching are considered too high. Thus, switching cost is thought to influence the nature of the link between customer satisfaction and customer retention. Jackson (1985) also highlighted the influence of switching cost in holding a buyer and a supplier together in a less than ideal relationship. Consequently, observed customer retention may be due to customer satisfaction or it may be due to dissatisfaction in a product category in which relatively high switching costs make it difficult for customers to change providers. Similarly, observed customer disloyalty can be due to dissatisfaction or linked to satisfaction in a market in which low switching costs make it easy to change providers.

The moderating role of switching costs on the relationship between customer satisfaction and customer retention has been supported by Lee et al., (2001) who examined the moderating role of switching costs in the customer satisfaction - loyalty link by identifying customer segments and then analyzing the heterogeneity in the satisfaction - loyalty link among different segments of mobile phone service market in France. The results were interesting. First, switching costs play a significant moderating role in the satisfaction – loyalty link only for the economy and standard groups. For mobile lovers, switching costs do not affect loyalty. Thus, it seems that, as the number of calling hours exceeds a certain level, switching becomes difficult and users accept whatever the company has to offer. Customer in this group can be thought of either as true loyalists or as hostages, depending on their satisfaction level.

Recently, Ranaweera and Prabhu's (2003) examined the effect of satisfaction and

switching barriers on customer retention in a continuous purchasing setting of fixed line telephone users in the UK. The results also found that switching barriers have both a significant positive effect on customer retention as well as a moderating effect on the relationship between satisfaction and retention. Ranaweera and Prabhu's (2003) argued that while service providers may be able to retain even dissatisfied customers who perceive high switching barriers, firms should aim at a combined strategy that makes switching barriers act as a complement to satisfaction.

2.5.4 Impacts of Moderating Role of Switching Costs on Customer Satisfaction and Customer Retention in Different Industries

Jones and Sasser (1995) have studied the interrelationship between customer satisfaction and customer loyalty in the automobile industry, the personal computer business, the hospital sector, the airline industry and local telephone companies (Figure 2.6). Jones and Sasser found that, in situations in which the customer has several alternatives and relatively modest costs of switching from one product or service to another. The graph will begin to look increasing like the graph representing automobile industry. If competition or the supply of alternative products or service is reduced, or switching costs are increased, the graph will begin to look increasingly like the graph representing telephone companies.

Jones and Sasser (1995) classified customers into four different groups. "Apostles" (high satisfaction - high loyalty) are those who are not only loyal, but so satisfied that they recommend the product or service to others. "Hostages" (low satisfaction - high loyalty) are strongly dissatisfied, but have few or no alternatives. "Mercenaries" (high satisfaction - low loyalty) are those who want to change supplier in order to obtain lower prices although they experience high customer satisfaction, while "terrorists"

(low satisfaction - low loyalty) have alternatives and use them, and furthermore do not miss an opportunity to express their dissatisfaction with their former supplier. Thus, if switching costs are low, it would be expected to find very few false loyal customers (hostages), since dissatisfaction should result in changing providers. But it is likely to find many mercenary customers who are satisfied but disloyal because low switching costs make change so easy. In contrast, if switching costs are high, it is likely to see many false loyal customers; even though they are dissatisfied, switching costs make them less likely to change. But it is unlikely to see mercenaries, since the high switching costs make them less likely to change providers when they are satisfied.

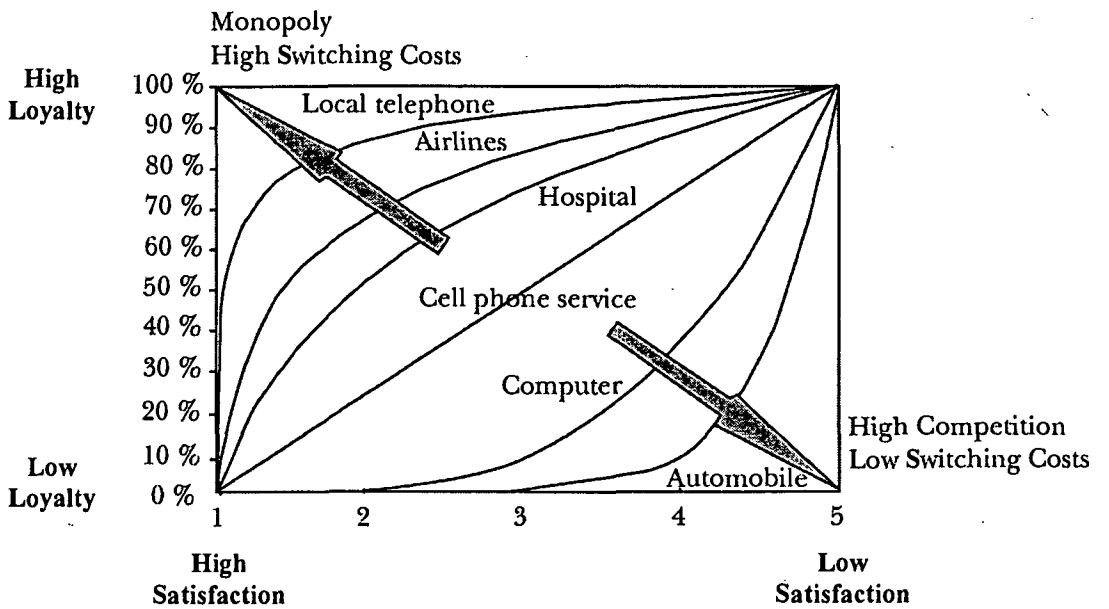


Figure 2.6: The Influence of the Competitive Surroundings on the Customer Satisfaction-loyalty Relationship
Source: Jones and Sasser (1995)

The first part of literature review (section 2.2-2.5) has examined the influence of customer satisfaction and switching costs on customer retention. As retail Internet banking is the context of this research, it is important to examine the change in retail banking industry due to the presence of Internet.

2.6 Changes in Banking Industry

Banking industry has traditionally operated in a relatively stable environment for decades. However, today the industry is facing dramatically aggressive competition in a new electronic banking environment. Not only is there increasing competition and change, but globalization and industry convergence are among the significant changes. In addition, the demand side is also changing rapidly: customers are not any more behaving like they did in the last decade – the 1990s.

It is commonly accepted in the banking industry that the 2000s is probably the most exciting time in history to be studying banking markets and institutions (Karjaluoto et al., 2002). Over the past two decades, changes in the retail banking industry caused what some call "the most serious bank crisis since the Great Depression" (Furash, 1993). The period is frequently described as the "decline of banking" (Berger et al., 1995; Edwards and Mishkin, 1995; Holland et al., 1996). As Furash (1993, p. 20) put it: "Banking is essential to a modern economy. Banks are not. If some other entity performs the functions of banking faster, smarter, or cheaper, it will replace banks." In fact, if Furash is correct, these changes may mean the end of traditional banking. While the overall banking market continues to grow, retail banking in the USA and other countries continue to lose considerable market share (Berger et al., 1995; Bird, 1997; Holland, 1996; Spiegel et al., 1996; Wendel, 1993). The customer movement from traditional branch banking to Internet banking has meant that new strategies to attract customers and retain existing ones have to be considered carefully. The remainder of this section reviews the major changes in retail banking industry due to the presence of Internet banking.

2.6.1 From Traditional Branch Banking to Electronic Banking

Traditional banking is characterized by physical decentralization, with branches scattered around populated areas providing an ubiquitous presence. The rationale behind such branch investment is the need to distribute banking services. High street presence encourages usage and maintains contact. A large branch network gives customers easier geographic access and the reassurance that the bank has substantial resources and hence offers security for their savings (Lockett and Littler, 1997). The extensive branch network has enabled banks to capture market share. Therefore the spatial element is central to delivery strategies. Such a structure allows these banks to provide homogeneous products and services at the cost of a large number of staff with high fixed and variable costs. In order to cope with fluctuations in demand on each location, more resources are employed, resulting in sub-optimal capacity utilization and excess staff. The vast cost and effort to develop such a network has often proved to be an entry-barrier to prospective competitors, and it has helped to maintain the concentration rates and the oligopolistic nature of banking in the UK (Henderson, 1995). However, technological development particular IT in the banking industry has caused a downsizing in traditional bank branch networks (Mols, 2000).

IT was primarily employed to automate the back-office of banks in the 1960s. This situation had been changed by a move of IT into the front office and thus the beginning of management information systems. Technology was deployed to extend the back-office (core process and support process) to the front office and beyond the branch (Legg, 1994; Llwellyn, 1995). This extension has made the banking industry enter a new era, where an explosion of IT applications has been seen throughout banking services, and the division between front and back-offices has become less relevant as integrated systems increasingly blur the line.

The phrase 'banking without boundaries' has been extensively used to describe electronic banking. Electronic banking is a high-order construct, which consists of several distribution channels. In a very simple form, it can mean the provision of information or services by a bank to its customers, via a computer, television, telephone, or mobile phone (Daniel, 1999). The radical impact which electronic distribution channels have had on competitive strategies in the banking industry is the introduction of automated teller machines (ATMs) networks, telephone banking and Internet banking. These three distribution channels became the primary interface between a bank and its customers, leading to declining customer brand loyalty (Rayport and Sviokla, 1994) and giving customers access to the bank wherever ATM, telephone or Internet was located. Naturally, the location of the nearest bank branch became less important to customers, radically changing the rules of competition, entry barriers and the industry structure. Daniel (1999) introduced six different channels for electronic banking: PC banking, Internet banking, managed network, TV banking, telephone banking, and mobile phone banking. The different delivery means for electronic banking are presented in Table 2.1.

Table 2.1: Delivery Platforms for Electronic Banking

Type of Service	Description
PC banking (Private dial up)	Propriety software, distributed by the bank, is installed by the customer on their PC. Access to bank via modem linked directly on the bank
Internet Banking	Customers access their bank via Internet
Managed network	The bank makes use of an online service provided by another party
TV banking	The use of satellite or cable to deliver account information to the TV screens of customers (Internet based)
Telephone banking	Customers access their bank via telephone (Own personal ID and password required)
Mobile phone banking (SMS, WAP, 3rd generation)	Customers access with text message (SMS), Internet connection (WAP), or high speed 3rd generation mobile connection (also Internet based)

Source: Daniel (1999)

Telephone banking, PC banking, TV banking, and managed network do not play such a big role in banking today. However, in the future the delivery platform is expected to shift from wired Internet connections to wireless mobile technologies. Thus, as Wah (1999) pointed out, electronic banking does not necessarily have to be on a computer screen. It can, for example, be on the tiny screen of a mobile phone or any other wireless device. With these wireless applications, customers can, for example, consult their bank account balances and transaction histories, view pie charts of their holdings in a portfolio, initiate payments or orders to buy and sell securities, and also send e-mails to their banks.

Today, large banks have many branches, small banks have few branches and most bank customers communicate with their bank by visits to the bank branches. Thus, the

present distribution channel structure is aimed at serving the branch banking segment and Internet banking is at an embryonic stage (Daniel and Storey, 1997). Internet banking poses a number of threats to banks. Before the widespread acceptance of home banking, retail banks gained competitive advantage by adding new branches. These branches were expensive and no bank could afford to establish branches in every town. This resulted in huge differences in coverage and usually those banks which were the first to provide a large branch network in an area gained a strong and lasting lead (Coyne and Dye, 1998). As computer literacy and the availability of computers increased and costs decreases, the segment of customers preferring Internet banking has grown considerably. At the same time the customer segment preferring branch and telephone banking is shrinking (Mols, 2000). This will further cement the success of Internet banking and change the optimal distribution channel structure for most retail banks.

2.6.2 The Adoption of Multiple Distribution Channels

Although the banking sector is one of the most transformed industries due to the digitalization, the industry itself has not changed dramatically. Moutinho et al. (1997) suggested that contrary to all the predictions that the branch-based distribution network is "doomed" and would become obsolete in a computerised society, the full-service branch office has survived, but it has seen its role and image changing to meet the requirements of the changing banking environment. Along the same line, Wah (1999), for example, argued that traditional banks will not disappear in the future. Instead, the new technology will put them on a new level in banking services. Greenland (1994) stated that for the foreseeable future bank branches will remain the main channel for retail banks. Wah (1999) concluded that even traditional banks will benefit from this

new technology, and staff at branches will be able to care for their customers in a more efficient, more productive and even more fun way. Burns (2000) indicated that the Internet will not replace other delivery channels, but it will offer increased flexibility and the opportunity for improved service. As a result, Internet banking should be viewed as a complimentary rather than replacement channel.

In fact, customers may prefer to use more than one distribution channel (Mols, 1998; Prendergast and Marr, 1994). So, besides the pure banking segments there will be customers who may use different distribution channels for different purposes. They may use the branch for obtaining financial advice in connection with major decisions such as buying a new house, whereas for bill payment and retrieval of up-to-date balance information on deposit and loan accounts, they might use telephone or Internet banking. This customer segment may be labelled the 'multiple-channel' segment. Mocanu and Filip (2001) argued that the multi-channel strategy has become the prevalent business model in Europe. It is estimated that, by 2005, 65 percent of banks' clients will use a multi-channel banking procedure (Figure 2.7).

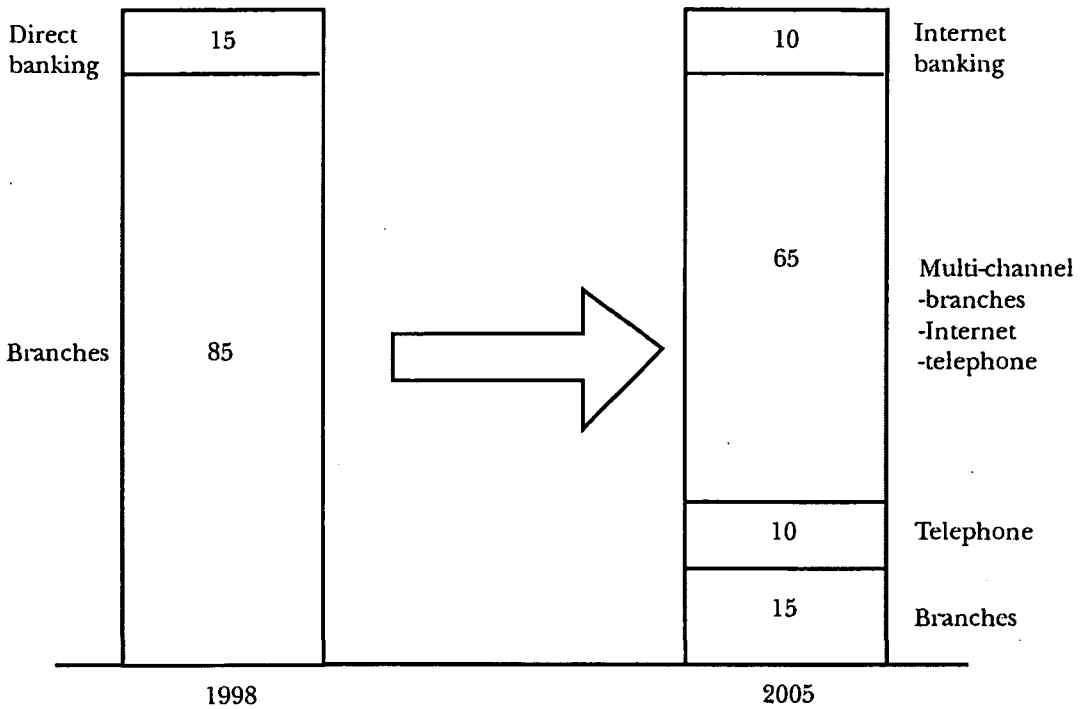


Figure 2.7: Adoption of Multiple Distribution Banking Channels
Source: Mocanu and Filip (2001)

Banks may try to find other uses for their branches and their employees or they may start reducing the number of branches. Furthermore, the protection they were given earlier by the huge entry barrier of having a branch network may disappear (Birch and Young, 1997). For example, Heinen (1996) and Evans and Wurster (1997) noted that the geographic protection of their customer base may disappear with the increase in Internet usage. The entry into new markets, especially geographically remote markets, may become easier, and the less differentiated products are, the more competition will increase, putting pressure on margins and reducing profits (Heinen, 1996). Others argue that customers will only need a few Internet-based companies for each product category and that they will prefer the convenience of using only one or a few of these Internet companies (Ghosh, 1998). Therefore it has been predicted that a retail bank's competitive advantage may be determined by its ability to be amongst the first to master the Internet-based distribution and communication channel (Ghorab, 1997).

2.6.3 Internet Banking as a Main Electronic Banking Channel

The Internet has taken the banking industry by storm. Given that the industry is informational, thus amenable to digitization, the Internet seems to be an inexpensive communication, transaction and delivery channel (Furash, 1999; Mols, 1999; Peterson et al., 1997). The Internet also represents an extremely efficient medium for accessing, organizing, and communicating information (Peterson et al., 1997). These characteristics, in part, have led to ever greater use of this medium by individuals and banks (Quelch and Klein, 1996). Karjaluoto et al. (2002) suggested that the main electronic delivery channel in banking is the Internet. If the Internet banking segment continues to grow and the branch banking segment shrinks, more customers will be using Internet banks and fewer customers using branch banks (Heffernan, 1996). With fewer customers for branches and more customers for Internet banking, the recent growth in the number of Internet banks (Crede, 1997) and the decline in number of bank branches (Heffernan, 1996; Howcroft and Kiely, 1995) will continue. Thus, Mols et al. (1999) predicted that the future retail banking structure will consist of a few banks with a dense branch network. In other words, only a fraction of the branches existing today are likely to remain. Many banks will rely on the Internet as their main distribution channel.

For the last few decades or so, theorists and analysts have been predicting deep changes in the banking industry. Today, because of the Internet's advantages compared to the traditional bricks-and-mortar branch infrastructure, it is suggested that the changes this time are even more significant, and radically different from previous ones. The main argument is that the Internet is not just another marketing channel; it is not just another advertising medium; it is not just a way to speed up transactions. The Internet is a foundation for a new industrial order (Furash, 1999), posed to dramatically

change the distribution channel structure of retail banks (Tilden, 1996), and to shake banking's medieval foundations (Nehmzow, 1997).

The role and the content of banks' web sites are evolving in time (Tuchila, 2000). Most banks initially created a simple web site providing general information about the bank and its services, gradually introducing Internet communication facilities with customers and then a full range of Internet banking services (Figure 2.8).

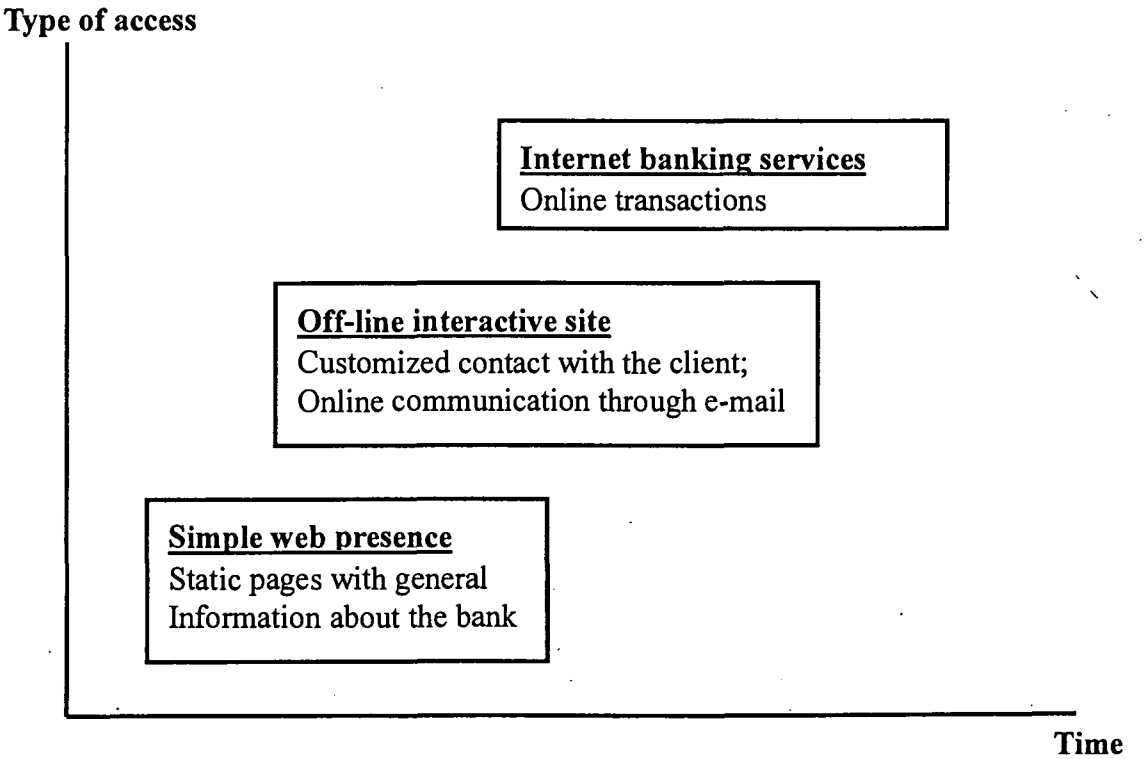


Figure 2.8: The Evolution of the Banks' Web Presence
Source: Tuchila (2000)

New technologies create new markets and opportunities for the banking sector. Managing and satisfying a customer with different delivery channels has become a key issue for banks. As a result of the high cost of developing and introducing new technologies, many banks are copying competitors' products and making minor improvements in features and style. As a result, Internet banking services do not differ

very much between different service providers (Gurău, 2002)).

As argued by Mols (1998), the diffusion of Internet banking is determined by technological developments, customers, and managers in banks. If the technology becomes cheaper and more user friendly, more customers are likely to be attracted to and develop a preference for Internet banking. In this case the interrelationship between technological development and customers' behavior is likely to promote Internet banking. Equally important are bank managers' perceptions of and expectations towards Internet banking. If they primarily regard Internet banking as a self-service channel, fewer resources will be allocated to its development than if it is viewed as an important medium for communication between the bank and their customers with the possibility for building close relationships and practicing one-to-one marketing. However, if key managers in retail banking perceive Internet banking as a threat to the bank's close relationships with their customers, then they will be likely to try to keep customers in branches by charging fees on Internet banking while being reluctant to promote it. In this case the spread of Internet banking will be slower (Mols, 1998). Having examined the Internet banking as a main contemporary electronic banking channel, the next section identifies and analyses the competitive banking environment in Internet era.

2.6.4 Banking Sector's Competitive Environment in Internet Era

The slogan "the customer is king" has never been truer for the banking sector than it is today. Legislation has increased customers' rights, technology and competition have increased their choice of products and providers. The Internet will bring about changes in the working environment, living conditions and patterns of banking use (Hagel et al.,

1997). These changes will inevitably place users under a different set of conditions resulting in changes in their behavior. One of the outcomes of these changes will be growth in users with more sophisticated needs. Customers will become more discerning as information becomes more accessible over the Internet. Switching between financial institutions and products will continue to grow as customers' traditional inertia declines. For instance, Internet banking customers will be able to change banks at the press of a button, in the comfort of their homes. Internet also allows Internet banking customers to have an ability to compare products and services for the best terms and conditions (Rogerson et al., 1999).

Today, implementing a competitive Internet banking strategy is one of the top priorities for national financial institutions as well as community banks and credit unions. Creating an Internet presence provides uncertainties along with opportunities, as there is little historical precedent upon which to build effective Internet strategies. For example, a recent survey of 1,000 banks found that the initial reason behind implementing Internet banking was largely defensive - setting up web sites just because competitors were doing so (Sheshunoff, 2000).

Figure 2.9 illustrates the competitive and rapidly changing electronic banking environment (Jayawardhena and Foley, 2000). The figure shows that the Internet banking environment is subject to both internal and external forces. According to Jayawardhena and Foley, the external forces in the banking environment will have greatest impact on the Internet banking industry.

External Forces

The external forces consist of four forces (changing technological environment,

changing political environment, changing economic environment, and changing social environment (Jayawardhena and Foley 2000; Nellis 1998). It has been claimed that the changes in the external environment, especially globalization, convergence, deregulation and technological changes are the key drivers of the transformation of the banking sector (Jayawardhena and Foley, 2000; Karjaluoto et al., 2002; Kotler, 2000).

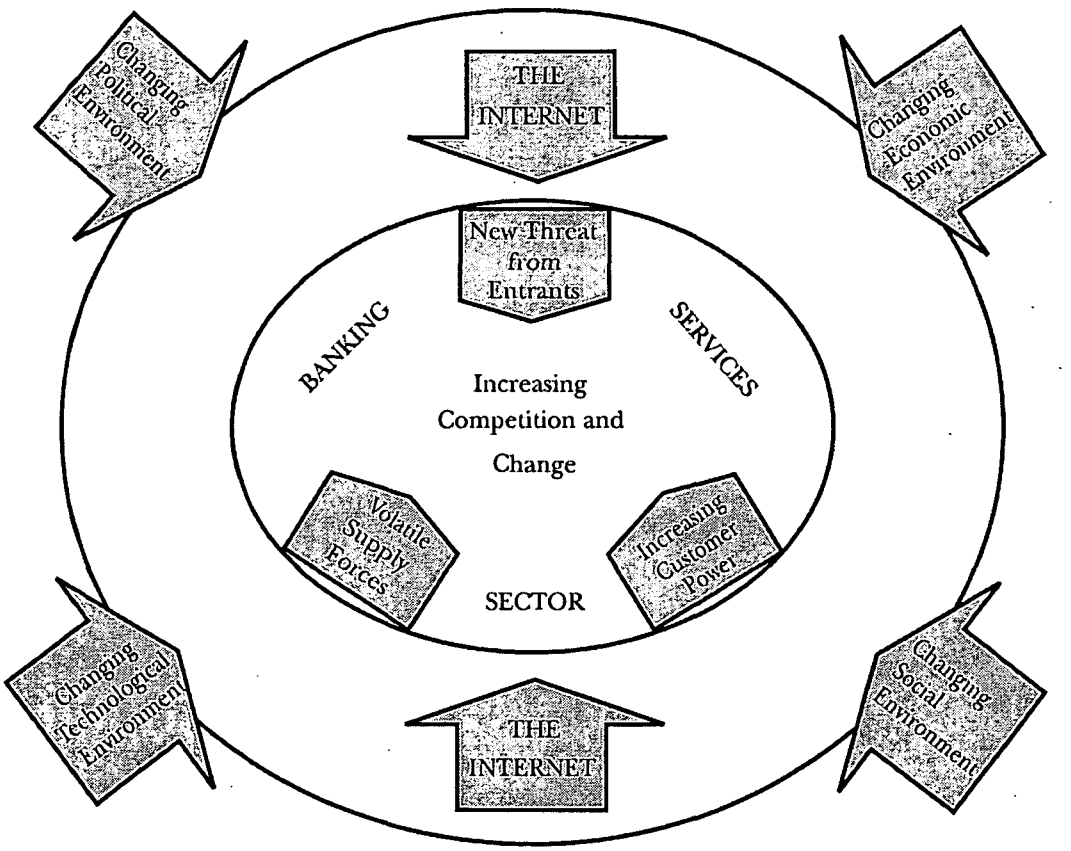


Figure 2.9: The Competitive Environments of Banking Industry in Internet Age
Source: Jayawardhena and Foley (2000)

Economic-demographic and political-legal changes have increased customer power and rights whereas liberalization and deregulation in the banking sector mean increasing competition amongst banks and other financial institutions (Noulas, 2001; Trethowan and Sucullion, 1997; Waite, 2001). Customers are now facing a plethora of financial products and providers ranging from full-service financial department stores

to small pure Internet banks. As a result, banks are no longer the only players in the financial service sector. It is expected that, for example, telecommunication companies will offer similar transaction services, selling financial services via the Internet.

The changing demographic environment includes the emergence of mature bank customer segments, which are forecasted to be important, wealthy segments with high purchasing power of financial products and services (Bone, 1991; Kennett et al., 1995). New demographic trends point to changes in the customer base. According to Seipp (2000), two primary demographic trends are influencing the financial markets: (1) the increase in the number of elderly people, and (2) the decrease in the size of the active population. In addition, enhanced mobility is having a greater impact on customer behavior. Mature customers provide new challenges for financial service providers. Social changes have also taken place in cultural values and beliefs and in attitudes toward technology and society. In general, older customers are considered as typical branch customers, whereas the younger customer segment with high education and a professional occupation are considered as typical users of electronic banking services (Jayawardhena and Foley, 2000; Karjaluoto et al., 2002; Mattila, 2001; Sathye, 1999).

Developments in technology have dominated the revolution in the banking sector (Gandy, 1998). The world-wide expansion in technologies for connection has supported increased globalization of capital flows and financial organizations. Technology has also facilitated the proliferation of new banking products and services supporting new customer demands. Competitive pressures will intensify as banks seek ever greater productivity and efficiency improvements to sustain profitability. With the possible exception of regulatory reform, technological change is likely to have the greatest impact on the banking sector over the next decade (Bednar et al., 1995).

Technology is frequently touted as a key element in the formula for productivity and profitability in the 1990s and beyond (Dannenberg and Kellner, 1998). It is likely to be the key external factor driving change within the banking sector for the foreseeable future (Jayawardhena and Foley, 2000). Having considered the external drivers of the competitive environments of banking industry in Internet age, it is also necessary to look at the internal factors identified in the literature, which can also have great impacts on the competitive Internet banking environment.

Internal Forces

Jayawardhena and Foley (2000) categorized the internal forces of banking industry into three classes: threat from new entrants, increasing customer power, and volatile supply forces. Internal change has been greatly amplified by the Internet (Figure 2.9). The Internet is causing major delivery changes. The synergies of these forces will bring about a major transformation of the banking sector.

One of the disadvantages for traditional banks presented by the Internet is the threat from new entrants. The banking sector will be a very competitive market in the future and the main question for banks is how they can increase their number of loyal customers. An answer to this may lie in good Internet services through the Internet.

Increasing customer power means that the power has shifted from banks to their customers (i.e. customers are able to control almost all of their financial transactions and even loans via the Internet). With the help of the Internet, barriers to switching from one bank or financial institution to another will disappear, as customers are able to change banks at the press of a button in the comfort of their homes or offices.

Similarly, Howcroft and Kiely (1995) found that electronic distribution channels, specifically Internet banking, are reducing the entry barriers into retail banking for competitors. According to Wah (1999) the success of banks operating via the Internet will lie in their ability to attract and keep customers. She believes that the buzzword for this banking industry will be 'portal'. Basically this means the bank's own web site that is a gateway (portal) to many of its products and services. With effective portals, banks will be better able to fend off competition. In the future portals will be tailored for market segments based on factors such as life cycles and lifestyles.

Volatile supply forces have an impact on the delivery chain of banks. Within the supply chain of the industry, banks are faced with the challenge of achieving the right balance between staffing levels and skills, as well as investment in technology versus branch networks (Gentle, 1993).

Bank customers are in a sense constrained to use electronic delivery channels in their banking instead of having an extensive traditional branch network complete with many employees around them. Further changes can be expected with the implementation of Internet-enabled delivery mechanisms. However, banks are investing heavily in Internet customer services in order to provide fast and easy-to-use electronic delivery channels with personalized service. As banks seek new sources of revenues and profits outside traditional banking disciplines, banks will demand different skills and aptitudes from their staff. This demand, coupled with cost cutting and the impact of new technology, has already led to a significant reduction in overall staffing levels within the banking industry. Further changes can be expected with the implementation of Internet-enabled delivery mechanisms (Jayawardhena and Foley, 2000). In fact, the external and internal change caused by the presence of Internet in banking industry has

also created benefits for customers and banks.

2.7 Benefits of Internet Banking for Banks and Customers

A large number of articles and books have discussed and analyzed what cyberspace means for the financial services industry (Barnatt, 1998; Birch and Young, 1997; Cronin, 1997; Dannenberg and Kellner, 1998). There seems to be general agreement that Internet banking offers advantages for both banks and customers

2.7.1 Benefits for Banks

The main benefits for banks are cost savings, reaching new segments of the population, efficiency, enhancement of the bank's reputation, and better customer service and satisfaction (Brogdon, 1999; Jayawardhena and Foley, 2000). The more transactions that can be converted via the Internet, the more money will be saved. According to Robinson (2000) the cost of an electronic transaction is dramatically less when completed via the Internet than in a branch. The cost of Internet applications increases with the complexity of the site (Figure 2.10). On the other hand, the increased complexity of Internet applications permits a better targeting and servicing of customers (implementing customer relationship management functions), which in turn increases the competitive advantage of the bank.

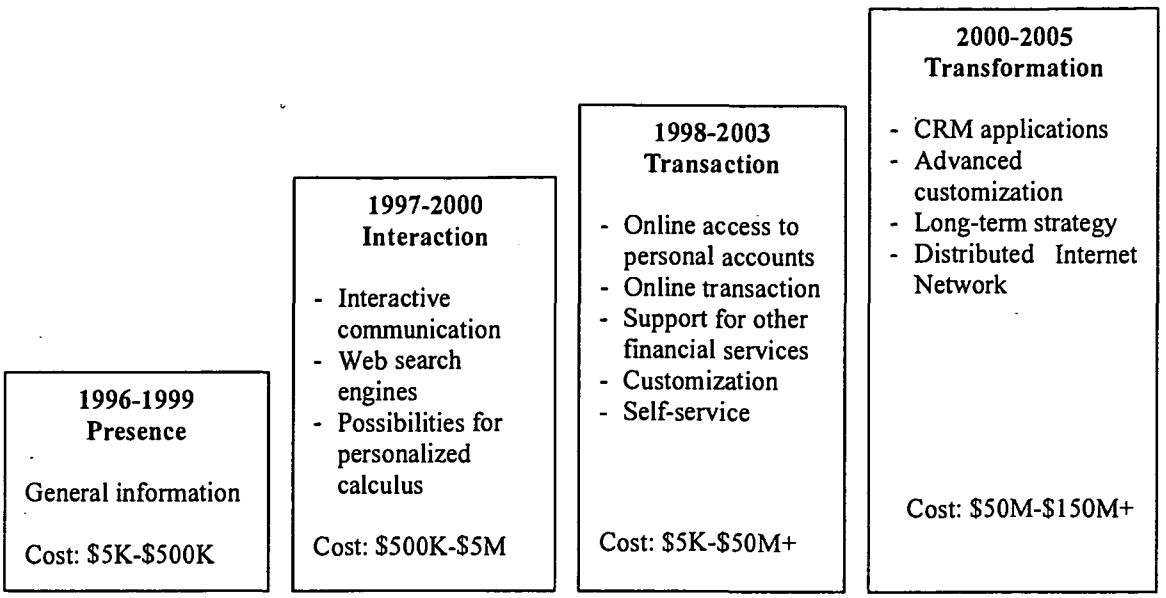


Figure 2.10: The Relation between Cost and Web Site Complexity in Internet Banking
Source: Gartner Group, cited in Tuchila (2000)

Robinson (2000) stated that Internet banking strengthens the relationship between a bank and their customers, because it brings banking services directly to a customer's home or office, or to the mobile phone. This creates customer retention. The last point he made was that Internet services are a must for banks that have to compete with a growing number of services from other financial institutions, investment concerns and insurance companies. Furthermore, banking is no longer tied to time and place. On the other hand, due to the explosive development of the digital environment, banks have now an opportunity to expand their market penetration internationally. A study completed by Datamonitor estimated that, at the end of the year 2003, 10 percent of the world population (approximately 545 million people) had Internet access (Tuchila, 2000). Taking advantage of this favorable situation, many financial institutions have launched corporate web sites, offering personalized Internet services.

2.7.2 Benefits for Customers

As described by Jeon and Rice (1997), Internet banking makes it possible for banks to offer customers a variety of services 24 hours a day. For example, customers can get up-to-date balance information on deposit and loan accounts, transfer funds between accounts, and communicate with the bank by e-mail. (Dannenberg and Kellner, 1998). Internet banking offers also new value to customers. It makes available to customers a full range of services including some services not offered at branches. The greatest benefit of Internet banking is that it is cheap or even free to customers. Electronic banking in general is not tied to time or place. It has also been argued that electronic banks are more likely to change in response to customers' demands (Brogdon, 1999). Internet banking has the advantage that a customer avoids traveling to and from a bank branch and queuing time. In this way, Internet banking saves time and money, provides convenience and accessibility, and has a positive impact on customer satisfaction. Customers can manage their banking affairs when they want, and they can enjoy more privacy while interacting with their bank. It has been claimed that Internet banking offers a customer more benefits at lower costs (Mols, 1998).

Owing to the benefits of Internet banking to banks and customers, it is expected that banks would not only be quick to provide Internet banking service but would also encourage retail customers to adopt Internet banking. Since adoption of Internet banking by retail customers is an important factor that determines the success of Internet banking, it is important to analyze the adoption of Internet banking in different parts of the world.

2.8 Adoption of Internet Banking

The future commercial success of the Internet depends, to some extent, on whether current users of the Internet (e.g. those who access information and/or communicate electronically) also use this medium for product purchases. Following the commercialization of the Internet in the USA, many Asian countries have since begun promoting the use of the Internet by setting up state-run Internet service providers (ISP) and implementing policies to encourage educational institutions and business to go online.

2.8.1 Global Perspective

Internet banking is gathering momentum in many parts of the world (Aladwani, 2001). In the USA, for example, majority of banks offered Internet services by 2003 (eMarketer, 2000). In the European Union countries, banks are quickly introducing Internet banking as an essential component of their business portfolio (Irish Times, 1999). Considering the number of Internet banking customers, Western Europe represents the major market for Internet banking services, followed by the USA and Japan (Table 2.2).

Table 2.2: The Use and the Evaluation of Internet Banking in Major Regions of the World (Millions of Users)

Region	2000	2001	2002	2003	2004
Western Europe	18.6	28.0	37.8	47.7	57.9
USA	9.9	14.7	17.1	20.4	22.8
Japan	2.5	6.5	11.9	19.6	21.8
Asia-Pacific (exe. Japan)	2.4	4.4	6.8	9.8	13.8

Source: Gurău (2002)

2.8.2 Asia Pacific

An ACNielsen (2002) study, based on the 4th Hong Kong Internet User Survey conducted between July and October 2001, found that South Korea had the largest number of active Internet banking users (5.3 million), followed by China (2.6 million) and Taiwan (1.7 million) (Table 2.3). Being much smaller in population size, Hong Kong and Singapore had smaller Internet banking populations (600,000 and 400,000 respectively). However when the proportion of Internet users who were Internet banking users are examined, a different picture emerges. Hong Kong and Singapore joined South Korea had over 50 percent of their Internet users banking via the Internet whereas South Korea had over 60 percent. By comparison, China and Taiwan had only around a quarter of their Internet user populations banking via the Internet. Moreover, ACNielsen found that levels of Internet banking activity were highest in Hong Kong and Singapore. While South Korea had more Internet users banking online, only about half of them were banking via the Internet monthly or more often (compared to 77 percent for Hong Kong and 74 percent for Singapore). Similarly, Hong Kong and Singapore had the highest percentages of Internet users who use Internet banking daily or weekly (30 percent for Hong Kong and 24 percent for Singapore, compared to 20 percent for South Korea, 8 percent for Taiwan and 3 percent for China).

Table 2.3: Penetration of Internet Banking – 2001

Countries or cities	Number of users	Proportion of Internet users	Frequency of usage
South Korean	5.3 million	Over 50%	About 50% banking online monthly 20% banking daily or weekly
China	2.6 million	Around 25%	3% banking daily or weekly
Taiwan	1.7 million	Around 25%	8% banking daily or weekly
Hong Kong	600,000	Over 50%	77% banking online monthly 30% banking daily or weekly
Singapore	400,000	Over 50%	74% banking online monthly 24% banking daily or weekly

Source: Adapted from ACNielsen (2002)

Although large population size gives countries such as China (with close to 1 billion people), South Korea (33 million) and Taiwan (15 million) the advantage in absolute numbers of Internet banking users, the picture that emerges was that while South Korea was the overall Internet banking leader, especially in terms of size, Hong Kong and Singapore had the highest activity levels in the region. China and Taiwan were waiting in the wings, with enormous reserves of untapped potential.

In terms of customer size, South Korean and Chinese Internet banks were the largest in the region. Of the top 20 Internet banks, South Korea had 12, China 5, and Taiwan, Hong Kong and Singapore each had 1 Internet bank. The biggest Internet bank was South Korea's Kookmin (H&CB), which had 2.4 million Internet banking customers. Next was China's China Merchant Bank, with 1.4 million customers. The largest Internet bank in Taiwan, China Trust Commercial Bank, had close to 900,000 Internet banking customers. In Hong Kong, Hong Kong and Shanghai Bank (HSBC) was the market leader with around 360,000 Internet banking customers, while in Singapore the

market leader was DBS/POSB with some 320,000.

The ACNielsen research also measured the number of active Internet bank users (regular Internet users with one or more active Internet banking relationships). Since, on average, over 40 percent of the active Internet bank users in the five countries have multiple banking relationships (over 50 percent in South Korea and Singapore) this would make the total number of Internet banking relationships for the five countries close to 17 million.

2.8.3 Hong Kong

On August 1, 2000, HSBC launched its first Internet based retail banking services to the public. It provides deposits, stock trading, bills payment, and foreign exchange service. HSBC also has decided to reduce Internet stock trading commissions from 0.5 percent to 0.25 percent for the Internet-based service in order to increase volume of transactions and profit. HSBC continued to extend the Internet banking services to its major depositors until the end of 2000. By the first half of year 2001, HSBC delivered and started a Chinese language Internet-based banking service for their customers. However, the bank's move towards Internet banking service did not result in closing existing local branches in Hong Kong.

The ACNielsen (2002) study conducted between July and October 2001 revealed that the Hong Kong Internet banking market is dominated by HSBC/Hang Seng Bank, which controls over 50 percent of the Internet banking market. The 'next tier' of Internet banks, which includes Standard Chartered Bank, Citibank, Bank of East Asia, Bank of China Group, and Dah Sing Bank, constitutes about 30 percent of the Internet

banking market.

The primary factor determining the level of demand for Internet banking services in Hong Kong is a function of the number of people connected to the Internet. According to the Hong Kong Census survey (http://www.info.gov.hk/censtatd/home.html), the installation of personal computers (PC) and Internet connections were becoming increasingly common among households in Hong Kong. Some 1,322,000 households, or 62% of all households in Hong Kong, had installed PC at home in 2002. Among those households with PC at home, some 1,118,100 (85 percent) had their PC connected to the Internet, representing 53 percent of all households in Hong Kong. The ACNielsen Study (2002) found that Internet banking was now more popular than Internet shopping in Hong Kong. ACNielsen found that there were over 100,000 more Internet banking users than there were Internet shoppers in Hong Kong in 2001.

2.9 Consumer Characteristics of Internet Banking Users

Recent research showed that observation based on overall Internet customer behaviour can lead to erroneous conclusion since behaviour can be substantially different among groups of individuals. The increasing prevalence of the Internet coupled with the efficiency and convenience of Internet transactions is likely to significantly change customer behavior and future business practices (Wolfinbarger and Gilly, 2003; Rush, 2004). Although the commercial potential of Internet has encouraged researchers to focus on studying Internet customer behavior, the field is still in an exploratory stage (Ranaweera et al., 2004). This section examines demographic profile of typical Internet Banking users, customer satisfaction, customer retention and switching costs in Internet banking environment, and consumer heterogeneity on Internet Buying.

2.9.1 Demographic Profile of Typical Internet Banking Users

Earlier studies suggested that a typical Internet banking user is highly educated, young, and relatively wealthy with good knowledge of computers and, especially, the Internet. Moreover, a typical electronic banking user has also been identified as a high-involvement person belonging to the conservative or liberal-intellectual upper class or a member of the career-orientated upper middle class (Jayawardhena and Foley 2000; Locarek-Junge and Swaiger, 1998; Spiegel, 1996).

Jayawardhena and Foley (2000) suggested that such a highly educated and wealthy segment represents a profitable and less risky customer for several reasons. First, they are more likely to deal with larger sums of money, both in borrowing and savings. The aggregate cash flow from such a group will lead to economies of scale with a large turnover and lower administrative workload for banks, since the number of high net worth accounts is relatively low. Second, this segment represents long lasting banking relationships, because the group is quite young. Third, this segment is likely to be highly mobile, and the Internet provides the most reliable method for maintaining these banking relationships irrespective of geographical boundaries.

Since there is little published study relating to the demographic profile of Hong Kong Internet banking users, the findings of this research provide valuable information about the demographic profile of Hong Kong Internet banking users, their Internet banking usage and perception of the three research variables.

2.9.2 Customer Satisfaction, Customer Retention and Switching Costs in Internet Banking Environment

This section examines the impact of customer satisfaction, customer retention and

switching costs in Internet banking environment, together with the consumer heterogeneity on Internet Buying

Customer Satisfaction in Internet Banking Environment

Internet banking allows customers to access banking services 24 hours a day, 7 days a week. Like ATMs, Internet banking empowers customers to choose when and where they conduct their banking. Empirical results indicate that the Internet banking customers are more satisfied with their bank than non-Internet banking customers (Mols, 1998). The ACNielsen (2002) research found that customer satisfaction with Internet banking was high across the Asia pacific. Only 4 percent of Internet bankers in Singapore, and 6 percent in Hong Kong, were dissatisfied with Internet banking, while in South Korea and China 8 percent were dissatisfied with Internet banking, and for Taiwan the figure was 12 percent.

Customer Retention in Internet Banking Environment

Improving customer retention may be more challenging in the Internet economy than in the traditional economy. Bank customers today are more demanding than ever before, are more information empowered to make their own decisions, and want their needs met immediately, perfectly, and for free. Additionally, customers have online and offline (e.g. branch, telephone and ATM) options to choose from, and unless there is a compelling reason for choosing one particular firm over another, they tend to experiment or rotate purchases among multiple banks (Mols, 1998). Moreover, Internet banking customers can more easily compare alternatives than non-Internet banking customers, especially for functional products and services. A competing offer is just a few clicks away on the Internet. Shankar et al., (2002) argued that because of this potential for "frictionless commerce," many managers fear that the Internet

environment might raise customers' expectations about the service, making them less satisfied and also more prone to switching to competing services (Shankar et al., 2002).

Switching Costs in Internet Banking Environment

The Internet may also make it easier for the consumers to search and compare the offerings of different firms. This means that the market will become more transparent, leading to increased price competition in businesses which offer easily comparable services and which are unable to build significant switching barriers or close relationships with the customers. This will increase competition, which will become fierce and profits will drop (e.g. Birch and Young, 1997; Evans and Wurster, 1997; Bakos, 1991). Sheshunoff (2000) noted that one advantage of Internet banking is that powerful barriers to customer exiting arise from the high cost of switching. However, Sheshunoff (2000) stated that the single most important driving force behind the implementation of full service Internet banking by banks is the need to create powerful switching barriers. Sheshunoff argued that once a customer moves to full-service Internet banking combined with electronic bill paying and automatic fund transfers, the likelihood of that customer moving to another financial institution is significantly diminished. The main reason for this is that switching always requires much time and effort on the part of the individual customer. Sheshunoff concluded that the competitive advantage of Internet banking for banks is very significant. It has been argued that electronic banking customers are more valuable to banks than other customers with similar demographics. Collectively, previous researches suggest that customer satisfaction, customer retention and switching costs for banking services may be different via Internet versus non-Internet.

2.9.3 Consumer Heterogeneity on Internet Buying

Previous researches on self-service technologies as well as technology adoption cycles indicated that the importance of consumer heterogeneity in determining their behaviour in technology settings (Dabholkar and Bagozzi, 2002; Meuter et al., 2003). Specifically, Lee et al. (2001) found that switching costs play a significant moderating role in the satisfaction – loyalty link only for the low mobile usage groups in France. For heavy mobile usage group, switching costs do not affect loyalty. Thus, it seems that the influence of customer satisfaction, switching costs on customer retention varies with different customer characteristics. The impact of such characteristics could be accentuated by the customers' lack of familiarity with the medium as well as low technology readiness (Parasuraman, 2000). Therefore, customer characteristics could have a significant impact on the adoption and use of the Internet as a medium for commercial transactions by household customers. Literature on the adoption of innovative information services in general (Atkin, et al., 1995), and Internet adoption in particular (Atkin, et al., 1998) supports such a proposition. If there are substantial differences in behaviour among individuals, or at least among groups of individuals, such differences could occur at least partly from consumers' different reactions to the medium.

Having examined the previous research findings relating to the influence of customer satisfaction and switching costs on customer retention, together with the impact of the Internet on the banking industry, it is clear that customer retention is vitally important in banking industry. However, little attention has been given to analyzing the factors that influence the customer retention in banking industry. The next section presents the research gap in existing literature.

2.10 Research Gap

Internet banking has been proliferating rapidly for the last few years. Banks are developing capabilities for providing Internet banking services for their customers either for competitive advantage or out of competitive necessity. The underlying assumption is that Internet banking services will enhance or improve customer retention (Mols, 1998). As it is cheaper to retain an existing customer than to acquire a new one, banks are putting more emphasis on customer relationship management to increase customer satisfaction (Reichheld, 1996).

Due to a changing macro environment with even more competition, the need to keep Internet bank customers becomes critical for banks to survive in the future (Karjaluoto et al., 2002). More importantly, retention of customers leads to profitability (Anderson and Sullivan 1990, Fornell and Wernerfelt 1987, 1988) and cost-effective expansion (Page, et al., 1996). Wah (1999) argued that the future success of Internet banking will lie in banks' ability to attract and retain customers.

Based on the literature review, a number of critical research gaps still exist in the domain of the relationship between customer satisfaction, retention and switching costs. Firstly, though much has been written about the main effects of customer satisfaction and switching costs on customer retention (Lee et al., 2001; Ranaweera and Prabhu, 2003), few studies have attempted to address the moderating role of switching costs in the customer satisfaction - retention link.

Second, while there are theoretical justification for the moderating effects of customer satisfaction and switching costs on customer retention in non-Internet services (Lee et al., 2001; Ranaweera and Prabhu, 2003), few previous research studies have addressed

such an effect in an Internet-based service.

Third, despite the Internet's impact on the competitive advantage of the banking industry (Jayawardhena and Foley, 2000) and the rapid expansion of customer adoption of Internet banking (ACNielsen, 2002), there is little published literature on how to successfully retain customers in the context of Internet banking (Gallaugher, 1999), particularly in the Hong Kong Internet banking industry where Internet banking users have grown by 78% from January 2001 to January 2003 (Nielsen/Rating, 2003).

Fourth, most previous research regarding the influence of customer satisfaction and switching costs on customer retention were conducted in U.S.A. and Europe, and little attention has been paid to Asian countries, particularly Hong Kong.

Finally, little research has attempted to identify customer segments and examine the heterogeneity of the moderating effect of switching costs in the customer satisfaction - retention link in different customer segments (Lee et al., 2001). From this review of the literature, the following research gap was identified:

> In review of the literature, a research gap pertaining to previous research into the influence of customer satisfaction and switching costs on customer retention was identified. While customer satisfaction is an important driver of customer retention, switching costs are also likely to influence customer retention. Furthermore, while the main effects of customer satisfaction and switching costs on customer retention are quite apparent, and have been empirically supported in the previous literature, the moderating role of switching costs on the relationship between customer satisfaction and customer retention have rarely been examined in the Internet service setting particularly in the Internet banking setting.

This research intended to fill the above gap in the literature. Specifically, the main objectives of this research were twofold. First, this study examined the main effects of

customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs on the customer satisfaction - retention link. Second, this study also identified different customer segments and then examined heterogeneity of the moderating effect of switching costs on the customer satisfaction - retention link in different customer segments. This empirical research was conducted within the context of the retail Internet banking industry in Hong Kong. The next chapter presents the research objective, model and hypotheses for this empirical study.

CHAPTER 3

RESEARCH MODEL AND HYPOTHESES

3.1 Introduction

Since research on factors associated with customer retention of Internet service is relatively sparse, past research on the direct effects of customer satisfaction and switching costs on customer retention as well as the moderating effect of switching costs on the relationship between the customer satisfaction and customer retention in non-Internet settings were used to derive the research model. In other words, it is assumed that prior studies on the influence of customer satisfaction and switching costs on customer retention in non-Internet settings can perhaps be applied to customer retention within Internet banking setting.

This chapter first outlines the research objectives of this research. Next the research model of this study is presented linking customer satisfaction and switching costs to customer retention. Finally, the three research hypotheses are discussed.

3.2 Research Objectives

The initial conception of the present research was that it would be a study of customer satisfaction, within the context of banking. However, as the research progressed, and the fundamental concerns about customer satisfaction in banking industry became clearer, it became more focused on the impact of moderating effects of customer satisfaction and switching costs on customer retention. Consequently, Internet banking became a vehicle within which the conceptual issues could be examined rather than as an area of study in its own right. Internet banking

was selected as the service to be studied because, in contrast to other banking distributions channels (branch, telephone and ATM), there is a lack of research on the moderating effect of customer satisfaction and switching costs on customer retention in the context of Internet service, thereby allowing the results of the research to be generalized to other Internet-based services readily. The study of banking service also possessed a significant advantage over many other services as Internet banking service is in a continuous purchasing setting. This offered an excellent opportunity to measure overall customer satisfaction, switching costs and customer retention in Internet banking setting. In a continuous purchasing setting, customers maintain long-term relationships with their main Internet banks. Such settings are therefore qualitatively distinct from discrete purchasing patterns, found in, say, retail sector (Ranaweera and Prabhu, 2003). Examples of such settings are mobile phone services, Internet service providers and most of utility industries such as water, gas and electricity.

Both from a theoretical and a managerial perspective it is of interest to investigate how switching costs affect the link between customer satisfaction and customer retention. That is to say, the theoretical model built around customer satisfaction and customer retention needs to incorporate switching costs, and address the issue whether switching costs interacts with customer satisfaction can enhance customer retention (Bendapudi and Berry, 1997). From a managerial point of view, and given that long-term customer relationships are important, banks should not only manage customer satisfaction, but also switching costs and particular the moderating role of switching costs in the customer satisfaction - retention link.

This research intends to develop a more complete model that incorporates the main

effects of customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs in the customer satisfaction - retention link. In explaining the relationship between customer satisfaction and customer retention, only a few previous researches have empirically examined the moderating effect of switching costs in the customer satisfaction - retention link (Lee et al., 2001; Ranaweera and Prabhu, 2003). In marketing, Fornell (1992) was one of the first researchers to incorporate switching costs in the customer satisfaction - retention link. In the presence of switching costs, ex ante homogeneous products or services become ex post heterogeneous (Klemperer, 1987).

Moreover, this research also attempted to identify customer segments and examine the heterogeneity of the moderating effect of switching costs in the customer satisfaction - retention link in different customer segments. Such an approach uncovers hitherto neglected effect on customer retention. Recent research showed that switching costs play a significant moderating effect in the customer satisfaction - loyalty link only for the low and middle usage groups in mobile phone market in France. For mobile lovers, switching costs do not play a significant moderating effect (Lee et al., 2001). The findings of this research can help banks make better decisions about the relative value of investing in developing customer satisfaction versus switching costs in different customer segments. Specifically, the main objectives of this research are to:

(1) examine the main effects of customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs on the customer satisfaction - retention link;

(2) identify customer segments and then examine heterogeneity of the moderating effect of switching costs on the customer satisfaction - retention link in different customer segments.

This empirical research was conducted within the context of the retail Internet banking industry in Hong Kong. The retail Internet banking service is regarded as in a continuous purchasing setting which is particularly suited to the objectives of this research since all two main effects of customer satisfaction and switching costs are likely to have a strong impact on customer retention in this setting (Ranaweera and Prabhu, 2003). First, relationships between banks and Internet banking users is generally of a long-term nature, which is a suitable context to study the effects of overall customer satisfaction and perceived switching costs on customer retention. Second, in a continuous purchasing setting, switching main Internet bank is not as simple as walking to another bank. Due to the presence of switching costs, switching to another main Internet bank requires considerable times and effort. As a result, the switching decision is made subsequent to considerable thought.

3.3 Research Model

Although researchers acknowledge the importance of the customer retention concept in marketing theory and practice, and have made attempts to investigate some of the relationships among customer satisfaction, switching costs and customer retention, the complex interrelationships among theses constructs are still not well understood (Jones and Sasser, 1995; Reichfeld and Sasser, 1990). Based on a review of the literature (Lee et al., 2001; Ranaweera and Prabhu, 2003), a research model which links customer satisfaction and switching costs to customer retention was developed (Figure 3.1). Consistent with the research objectives described in section 3.2, the research model has two main features. First, it examines the main effects of each of the two independent factors (customer satisfaction and switching costs) on the dependent factor (customer retention), together with examining the simultaneous influence of customer satisfaction

and switching costs on customer retention. Second, the model examines the moderating effect of switching costs in the customer satisfaction - retention link. The details of measures of customer satisfaction, switching costs and customer retention adopted are described in Chapter 4.

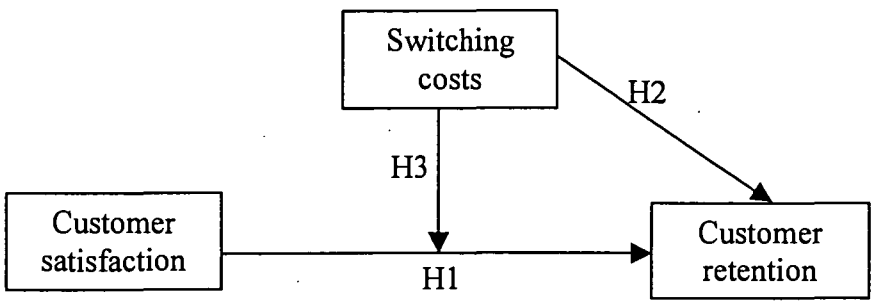


Figure 3.1: Research Model of Customer Satisfaction and Switching Costs on Customer Retention

3.4 Research Hypotheses

While the role customer satisfaction plays in retaining customers is now perceived as more complex than initially thought (Mittal and Kamakura, 2001; Oliver, 1999), the literature review identified that customer satisfaction has traditionally been regarded as a fundamental determinant of long-term customer behavior (Oliver, 1980; Yi, 1990). The more satisfied customers are the greater is their retention (Anderson and Sullivam, 1993; Fornell, 1992). Cronin and Taylor (1992) and Patterson et al.,(1997) found that customer satisfaction has a significant impact on repurchase intention in a range of services. Day et al., (1988) stated that client satisfaction is unquestionably the key determinant in retaining current clients in professional services. Kotler (1994) stated that the key to customer retention is customer satisfaction. Numerous studies in the service sector have hypothesized and empirically validated the link between customer satisfaction as well as behavioral intentions and behaviors such as customer retention

and word of mouth (Anderson and Sullivan, 1993; Bansal and Taylor, 1999; Cronin et al., 2000; Lee et al., 2001; Ranaweera and Prabhu, 2003; Rucci et al., 1998). Furthermore, the importance of customer satisfaction on customer retention is so well recognized that some major economies now measure customer satisfaction to predict customer retention and future financial performance (Fornell, 1992; Fornell et al., 1995; Reichheld and Sasser, 1990). Using the aforementioned literature, the first hypothesis was formulated:

H1: The higher the level of customer satisfaction, the higher the level of customer retention.

Ping (1993) found that when customers perceive the switching costs associated with leaving the current relationship and establishing the alternative to be high they tend to be loyal. The literature in channel relationship suggests that, in a troubled retailing scenario, switching costs is positively associated with loyalty (Ping, 1993 and 1994). Literature in industrial marketing and distribution channels also suggests that a relationship may continue to exist due to the buyer's perception of the high switching costs (Ping, 1994; Porter, 1980). Jones and Jonsser (1995) mentioned switching costs as one factor that determines the competitiveness of market environment, since high switching costs discourage changing from the current provider. Recently, Lee et al., (2001) and Ranaweera and Prabhu (2003) have tested and confirmed the positive effect of switching barriers on customer retention in continued purchasing settings of mobile phone services in France and the fixed line telephone market in the UK respectively. Further, selection of a main Internet bank is a difficult process that involves considerable time and thought. Thibault and Kelley (1959) contended that the perception of search costs to be incurred in selecting a new supplier contributes to the continuance of current relationships. A customer faces a considerable risk in switching

to an alternate main Internet bank because he/she cannot evaluate the Internet banking service before actually using it. A customer will want to avoid the accompanying psychological and emotional stress and the risk/uncertainty that the termination of the current relationship could bring (Bloom et al., 1978). This consideration may motivate a customer to stay in the present relationship with his/her main Internet bank. During the pilot study, a number of respondents indicated that they did not want to terminate their relationship with their present main Internet bank. They found that it would take time and effort to switch to another main Internet bank because they used their main Internet bank to pay bills or trade securities. In line with existing research a second hypothesis was formulated:

H2: The higher the level of perceived switching costs, the higher the level of customer retention.

All other things being equal, both customer satisfaction and switching costs are thought to be key antecedents of customer retention. However, under low switching cost conditions, an Internet bank customer would be expected to stay or leave based on their satisfaction with the relationship. Gronhang and Gilly (1991) argued that a dissatisfied customer may remain loyal because of high switching costs. Lee et al. (2001) stated that customer loyalty may be due to satisfaction or it may be due to dissatisfaction in a product category in which relatively high switching costs make customers more difficult to change provider. Similarly, customer disloyalty can be due to dissatisfaction or linked to satisfaction in a market in which low switching costs make customers easy to change providers. Lee et al.;'s (2001) study of the mobile phone service in France and Ranaweera's and Prabhu's (2003) study of the fixed telephone line sector in the UK were two of the few studies that found empirical support for it. Nevertheless, where switching costs are sufficiently strong, they are

likely to act as a significant constraint to switching to alternative providers. This would indicate that service providers are more likely to retain dissatisfied customers who perceive high switching costs. During the pilot study, a number of respondents indicated that they did not want to switch to another main Internet bank due to the perceived switching costs, even when their overall perceived satisfaction with their main Internet bank was not very high. As a respondent expressed:

> "I am not satisfied with my main Internet bank. However, I found that it is hard to switch to alternate main Internet bank as I have a house mortgage or personal load with my main Internet bank."

Therefore, the third hypothesis is:

> H3: For a given level of customer satisfaction, the higher the level of perceived switching costs the higher the level of customer retention.

Diagrammatically, this hypothesis can be represented as follows (Figure 3.2). Among dissatisfied customers, those who perceived high switching costs are significantly more likely to be retained than those who perceive low switching costs Ranaweera and Prabhu, (2003). Having presented the research objectives, model and hypothesis of this research, the next chapter discusses the research methodology adopted in this research to achieve the stated research objectives.

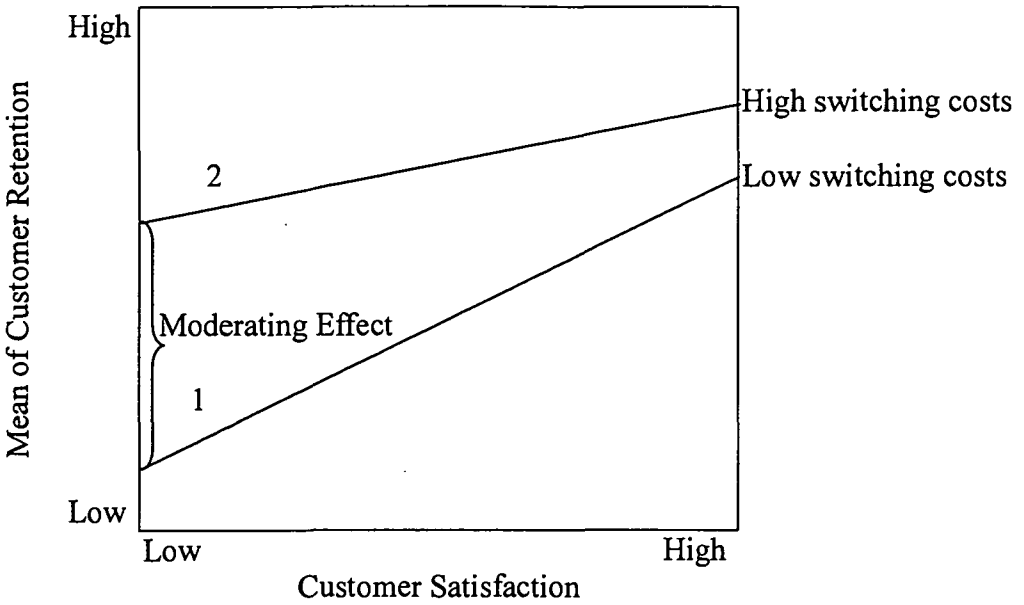


Figure 3.2: Moderating Effect of Switching Costs on the Customer Satisfaction - retention Link
Source: Ranaweera and Prabhu (2003)

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

One of the principal omissions from previous research has been the absence of a clear understanding of the moderating effect of switching costs on the customer satisfaction - retention link particularly in an Internet banking context. Therefore, an important requirement of this research was the development of a methodology to provide an appropriate way for examining the moderating effect. Methodology refers to overall approach to the research process, from the theoretical underpinning to the collection and analysis of the data (Hussey and Hussey, 1997). 'Like theories, methodologies cannot be true or false, only more or less useful' (Silverman, 1994, p.2). Thus, any given design will have biases and limitations which are specific to that design, and these inevitably affect the results and their interpretation. The aim of this chapter is therefore to discuss the research methodology of this study, to show how various considerations shapes the research methodology adopted, and to outline some of the implications which this had for the results of this study.

4.2 Design of the Research

The design of research methodology of an empirical research has a considerable influence upon the nature and quality of research outputs since it influences both validity of the results and the extent to which the results can be generalized to other setting. The principal decisions involved in the research design of this research were whether to adopt exploratory approach or confirmatory approach, whether to conduct a field survey or use an experimental approach, whether to use Internet survey or

personal interviews, and whether to conduct a longitudinal or cross-sectional survey to collect the relevant data.

4.2.1 Confirmatory Research, Exploratory Research or Combination of Both

In theory, a researcher has three alternatives in selecting the logic of a research. Three options are confirmatory research, exploratory research, and a combination of both (Cohen and Manion 1994).

Confirmatory research is conducted into a research problem or issue when there is previous theory (or theories) to which a researcher can refer for information about the problem or issue (Hussey and Hussey, 1997). The aim of confirmatory research is to find out if the theory is supported by the facts. The starting point for confirmatory research is a theory that the researcher narrows the focus to increasingly specific hypotheses and observations, which address those hypotheses. Finally, the researcher tests the final hypotheses with specific empirical data in order to confirm or reject the original theory.

Exploratory research is conducted into a research problem or issue when there are very few or no earlier studies to which a researcher can refer for information about the problem or issue (Hussey and Hussey, 1997). The aim of exploratory research is to look for patterns, ideas or hypotheses, rather then testing or confirming a hypothesis. In exploratory research the focus is on gaining insights and familiarity with the subject area for more rigorous investigation at a later stage.

However, research may also involve both confirmatory and exploratory research at the

same time (Glaser, 1992). This mixed approach is the third option for a researcher, and is known as combination of confirmatory and exploratory research. This research was classified as part confirmatory and part exploratory for two reasons.

First of all, this research was part of confirmatory research because the first objective of this research is to examine the main effects of customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs on the customer satisfaction - retention link (see Section 3.2). Three hypotheses were developed to achieve the first objective of this research (see Section 3.4). The three hypotheses were based on the theories found in previous research in non-Internet setting services (Lee et al., 2001; Ranaweera and Prabhu, 2003). The aim of the first objective is to investigate if the theories are supported in Internet service settings by empirical data.

Second, this research was also part of confirmatory research because the second objective of this research is to identify customer segments and then examine heterogeneity of the moderating effect of switching costs on the customer satisfaction - retention link in different customer segments (see Section 3.2). In fact, this research area is a little studied territory, and no generally accepted theory or framework is available in Internet banking literature. However, there are numbers of previous research studies on self-service technologies as well as technology adoption cycles. Most of findings of these research studies indicated the importance of consumer heterogeneity in determining their behaviour in technology settings (Dabholkar and Bagozzi, 2002; Meuter et al., 2002). Moreover, Lee et al. (2001) found that switching costs play a significant moderating role in the satisfaction – loyalty link only for the low mobile usage groups in France. For heavy mobile usage group, switching costs do

not affect loyalty. Thus, it seems that the influence of customer satisfaction and switching costs on customer retention varies in different usage segments. As stated above, the aim of exploratory research is to look for patterns, ideas or hypotheses, rather than testing or confirmatory a hypothesis. In terms of exploratory part of this research, the focus is on gaining insights and familiarity with the moderating role of switching costs on the relationship between customer satisfaction and customer retention between the basic and advanced Internet banking segments.

4.2.2 Field Survey or Experimental Approach

The key distinction between field survey and experimental approach is based upon the extent to which the researcher is able to exert control over the phenomenon the researcher investigates. In the field setting the researcher's role is primarily one of observation, investigating the phenomenon as it naturally occurs, while in the experimental setting the researcher takes a more proactive role in attempting to recreate the occurrence of the phenomenon in a controlled environment (Spector, 1981).

These two approaches to research design may be regarded as complementary. To this extent, it may be more appropriate to use an experimental approach when devising a new theory because of the opportunity to exert control over the occurrence of the phenomenon and to identify and limit the number of extraneous variables present (Hussey and Hussey, 1997). An extraneous variable is any variable other than the independent variable(s) which might have an effect on the dependent variable. However, once the theory is reasonably well formulated it is desirable to test it in a real-life setting. With the development of sophisticated statistical techniques to model

measurement error, field settings can be used with less concern that the presence of extraneous influences will limit the generality of the results.

For the purposes of this research it was decided to conduct the empirical research in a field setting since previous research in non-Internet settings has examined the influence of customer satisfaction and switching costs on customer retention. As a result, the relationship among customer satisfaction, switching costs and customer retention have been reasonably well formulated (Lee at al., 2001; Ranaweera and Prabhu, 2003). The study of customer satisfaction, switching costs and customer retention in a real-life setting also provided the benefits of being representative as the constructs under investigation in this research actually occurred in their natural setting over the natural period of time. Therefore, the data collected could be assumed to reflect a phenomenon which had actually taken place and which is important when examining the nuances of the relationship between customer satisfaction, switching costs and customer retention. An added advantage offered by the Internet banking service being studied was that the customers' service experiences took place in a continuous purchasing setting. This presented an excellent opportunity to measure the occurrence of overall customer satisfaction, perceived switching costs and intention to stay with current provider (Ranaweera and Prabhu, 2003).

4.2.3 Internet Survey or Personal interview

The next major decision in the design of the empirical research related to the issue of whether to use Internet survey or personal interviews to collect data. The pros and cons of this have been examined by a number of authors, including Tse (1998) and Schonlau et al., (2002). For the purpose of this research, Internet survey questionnaire was most

appropriate since the information required to attain the research objective was required in a quantified format across a relatively large number of cases. While such information could have been collected in the course of personal interview, the research resources available to the author were not in any way sufficient to undertake such a task. Irrespective of the resources available, the Internet survey is an accepted method of collecting quantitative data from large number of people. In addition, the Internet banking users were the object of investigation, it was reasonably assumed all Internet banking users had access to the Internet. As a result, it is assumed that they could fill in the survey via the Internet. Furthermore, respondents of pilot testing indicated that they were comfortable with the process of filling out Internet surveys.

The primary advantages of using Internet survey questionnaire for this research over using conventional personal interviews included convenience, completeness and speed. First, the survey questionnaire could be accessed at home or in the office. As a result, it was easy for potential respondents to access, navigate, and complete the Internet questionnaire of this research. These advantages were helpful to increase the response rate for this research. Second, the survey questionnaire was also designed to automatically check the responses for completeness upon submission, eliminating the possibility of missing data problems that ultimately reduces the usable sample sizes in most research. Collection method of respondents data was also designed to write automatically to an Excel file upon survey submission. Automatic data dropping alleviated the time consuming and potentially error-prone practice of manual data entry for this research. Third, using an Internet questionnaire also enjoyed the benefit of speed upon the submission of completed surveys, avoiding the usual lead-time involved with collection by mail. The ability to register the Internet survey to popular search engines enabling immediate access to potential respondents, was a considerable

advantage.

However, an Internet survey necessitates the use of a self-completed questionnaire. Using personal interviews would have given greater opportunity to address more complex issues, and would have presented the option of exploring new areas spontaneously or keeping to a rigid interview schedule. If desired, quantitative information could have been collected in a personal interview by using a questionnaire completed by the interviewer. This would have offered the benefit of being able to check if respondents had understood the questions and interpreted it in the intended way.

4.2.4 Longitudinal or Cross-sectional

The final decision in the research design concerned the collection of the data. Two broad types of design were pertinent here: a cross-sectional design, in which all the data are collected at a single point in time, or a longitudinal design in which some data are collected at one point in time, the remainder later on. The cross-sectional design is by far the most widely used in marketing research. The relative simplicity of its administration often makes it the most appropriate method of data collection, and this is its chief advantage. However, due to the inherent difficulties in linking customer satisfaction to customer retention in cross sectional survey research, it has been common to measure intention of customer retention as indicators of actual customer retention (Ranaweera and Prabhu, 2003). There have been some criticisms of this approach, specifically, that behavioral intentions are sometimes not good indicators of actual behavior. As a result, customer retention construct was referred to as a customer

behavioral intention (Zeithaml et al., 1996), or as customer switching intentions (Bansal and Taylor, 1999). Based on a longitudinal study, Bansal and Taylor (1999) showed that in purchasing settings characterized by long-term contractual relations like Internet banking service, switching intentions are a good predictor of switching behavior.

4.3 Data Analysis Methodologies

SPSS version 10.0 was used to analyze research data of this research. Moderated hierarchical multiple regression analysis was adopted to test the three hypotheses of this research. The interaction factor (moderator) is derived from multiplying the customer satisfaction factor by switching costs factor. A significant regression coefficient on the product term would confirm the moderating role of switching costs on the relationship between customer satisfaction and customer retention. The direction of the moderating effect explains how customers with the same level of satisfaction become more loyal, maybe unwillingly, as it becomes more difficult to switch. In hierarchical multiple regression analysis, independent factors are entered in steps according to theoretical or logical considerations (Shannon and Davenport, 2001). In this research, independent factors were entered according to the logical consideration as suggested by Ranaweera and Prabhu (2003).

Using moderated multiple regression (MMR) to estimate the moderating effect of switching costs in the customer satisfaction - retention link involves a regression equation that includes customer retention as a criterion, and customer satisfaction and switching costs as predictors. In addition, the MMR equation includes a third predictor consisting of the product of customer satisfaction and switching costs. This product

term carries information regarding the customer satisfaction by switching costs interaction (i.e., moderating effect of switching costs). The MMR equation is shown as follow:

$$\text{Customer retention} = a + b_1 (\text{Customer satisfaction}) + b_2 (\text{Switching costs}) + b_3 (\text{Customer satisfaction} * \text{Switching costs})$$

In the context of this research, switching costs is a moderator of the relationship between customer satisfaction and customer retention. In other words, customer satisfaction and switching costs interact in affecting customer retention. In addition, a is the least squares estimate of the intercept of the surface of best fit, b_1 is the least squares estimate of the population regression coefficient for customer satisfaction, b_2 is the least squares estimate of the population regression coefficient for switching costs, and b_3 is the least squares estimate of the population regression coefficient for the product term which carries information about the interaction between customer satisfaction and switching costs.

4.4 Sample Design and Data Collection

A central objective in the design of any sample is that the data collected from a limited number of cases will enable the researcher to make valid inferences about a wider population which the sample is supposed to represent. The primary determinant of the validity of these inferences is whether or not the sample is representative. A perfectly representative sample would be a microcosm of the population from which it is drawn, identical to the population in every way. This would enable inferences to be made about any aspect of the population from this sample (Hussey and Hussey, 1997).

According to statistical sampling theory, the representativeness of a given sample is determined by the mechanism used to select it from the population in question. A sample selected in a perfectly random manner, with each member of the population having a known probability of being selected should produce a sample near to the ideal of a microcosm. However, since no method of sample selection is perfectly random it is unlikely that any sample selected for analysis will be perfectly representative. It is therefore important to design the sample in such a way that it is likely to be representative on the most important attributes under investigation, which will vary according to the objectives of the survey.

4.4.1 Definition of Target Population

Internet Banking service is presently being offered to two sets of clients, namely, individual customers and business clients. This research included only individual bank customers in Hong Kong. Ideally, the target population should be the entire individual Internet banking users in Hong Kong. However, as this research focused on the Internet banking services, respondents like young school children or those with aged below 18 were excluded from the research population as their banking needs should be minimal or different to that of adults. As a result, the target population was defined as those who were aged 18 or over and at least used their main Internet bank to conduct bank account monitoring. Apart from these two criteria, there were no other criteria that were necessary to be imposed on the target population. As this research was conducted in Hong Kong and the Internet survey questionnaire of this research was submitted to popular free search engines in Hong Kong to request participation in the survey (see section 4.4.3), it was expected that most of respondents would be Hong Kong Chinese.

4.4.2 Sample Size

In common with many studies, the sample size was determined by considerations pertaining to the resources available, the requirements of data analysis and by the quality of the research access. Alreck and Settle (1985) stated that for populations of 10,000 and more, most experienced researchers would probably consider a sample size between 200 and 1,000 respondents. Narins (1994) presented an equation which can be used to determine the suitable sample size as shown in Equation 1 below. Although the equation is ideally used for dichotomous variables, the equation is also suitable for Likert scales if *Py and Pn* are both set at 0.5 (Narins, 1994).

$$N = \frac{(Py)(Pn) + Std.Error^{2}}{\frac{(Py)(Pn)}{N_1} + Std.Error^{2}} \qquad \text{Equation 1}$$

where

N	=	the sample size required
N_1	=	the size of the true population
Py and Pn	=	the percent of response to a dichotomous variable (usually set at (0.5)(0.5) for the most conservative estimate)
$Std.Error^2$	=	the standard error

Since the variables of customer satisfaction, switching costs and customer retention in this research are measured by Likert scales, Equation 1 was adopted to estimate the suitable sample size for this study. Since ACNielsen found that there were about 600,000 Internet banking users in Hong Kong in 2001, N was set to be 600,000. As recommended by Narins (1994), the standard error should be set at $(0.05/1.96)^2$ or 0.0006507 for 95% confident level and *Py and Pn* should be set at 0.5 for Likert scales.

$$N = \frac{(Py)(Pn) + Std.Error^{2}}{\frac{(Py)(Pn)}{N_1} + Std.Error^{2}}$$

$$N = \frac{(0.5)(0.5) + 0.0006507}{\frac{(0.5)(0.5)}{600{,}000} + 0.0006507}$$

$$N = 384.96$$

Using Equation 1, the estimated sample size of this study should be at least 385.

4.4.3 Data Collection

The overall objective of the data collection process was that the relevant data were collected with the minimum of measurement error. The data were collected from an Internet survey questionnaire of Internet banking users. Participation in the research was voluntary. The questionnaire together with a coverage message was posted on the free Internet survey server of www.my3q.com on 14th September 2003 and responses were collected for one month, until 13th October 2003. The survey questionnaire was submitted to a number of popular Hong Kong search engines (free service) to request participation in the survey. Due to the fact that this research could not obtained a list of individual Internet banking users from banks in Hong Kong, it was thought that this method of data collection was acceptable.

4.5 Design of Measures

The process of data collection is a central element in the development of a theoretical structure. It acts as the interface between abstract theoretical reasoning on the one hand and observable real-world events on the other (Tull and Hawkins, 1990). In the context of field setting, such as the one used in this research, there are two elements of the data collection process: the set of measures devised to assess the constructs of customer

satisfaction, switching costs and customer retention, and the questionnaire in which the measures are set out. Both elements are important since each can have a positive influence or an adverse effect on the quality of the data collected. The design of the measures determines the sort of information collected while the layout of the questionnaire influences the amount of extraneous noise in the data.

4.5.1 Concept of Measurement

The view of measurement traditionally accepted by researchers in the marketing discipline is encapsulated by Stevens (1951) who contended measurement is the assignment of numbers to objects or events according to rules. Most researchers accept the notion that measurement is generally concerned with the quantification of concepts. However, one school of thought gaining acceptance among marketing researchers would contend that this is a very restricted conception of measurement since it ignores the theoretical structure the measures are being used to test (Bagozzi, 1980). According to this view, measures are a means to an end. They facilitate the empirical representation of theoretical concepts and thereby enable a theory to be tested. In this research, measures are empirical concepts and therefore constitute the link between theory and the social or physical world. Measurement is a crucial facet of the process of theory construction and testing. Without measurement, the theoretical constructs of this research cannot be validated against social reality, and examinations of the influence of customer satisfaction and switching costs on customer retention could not take place. The notion of measurement can be expressed formally as follow:

$$X = T + E$$

Where X = the observed score
T = the true score
E = the measurement error

From the above equation, it is evident that the actual score observed on a measure is function of the true score, T, of the concept under scrutiny and the measurement error, E, which is endemic to any piece of research conducted into the social or physical world. This notion of a true score underpins the concepts of reliability and validity to be used later in the thesis. The specific objective of the design of the measures of this research was that their content reflected accurately the nature and scope of the appropriate theoretical constructs, thereby helping reduce the proportion of measurement error incorporated into the data.

4.5.2 Design of Measures

At least two alternatives are open to the researcher wanting to design measures for the constructs contained in the theory a researcher is testing: a researcher can either develop his own set of measures, or adopt a measure developed previously. The effect of various researches each developing a new set of measures for the same construct in their own research projects would be a fragments body of research, difficult to integrate due to absence of common basis of measurement. For this reason it is generally accepted that unless there are good reasons to contrary, such as the inadequacy of previous measures, it is preferable to adopt existing measure for one's own research (Churchill, 1979).

A review of existing measures of customer satisfaction, switching costs and customer

retention relevant to this research revealed that many constructs had been validated in previous research. In most instances it was therefore possible to use the format of these measures without substantial alteration. However, since the content of the measures tended to be specific to the context in which they were developed, the development of measures of this research were concerned primarily with marking the previous validated scale items applicable to the context of Internet banking services.

Two sources of information were used in the development of the measures employed in this research: primary and secondary data. Secondary data is data that are not gathered for the immediate study at hand but for some other purpose. Primary data, on the other hand, are originated by the researcher for the purpose of the investigation at hand. The purpose therefore defines the distinction (Churchill 1979). The secondary data sources included measures developed by previous researchers to assess customer satisfaction, switching costs and customer retention. These previous adopted measures were used to draft the three constructs of customer satisfaction, switching costs and customer retention for this research. The draft measures were than put to trial by means of a pilot testing (see section 4.7). Multi-item scales are employed to measure the three research constructs in order to adequately capture the domain of the constructs (Churchill, 1979; Nunnally, 1978).

4.5.3 The Measure of Customer Satisfaction

Following Cronin et al., (2000), this research conceptualized customer satisfaction as an evaluation of an emotion, reflecting the degree to which Internet bank customers believe their main Internet banks evoke positive feelings. Customer satisfaction was measured using a three-item, seven-point Likert-type scale with anchors "1=strongly

disagree" and "7=strongly agree". The items were adapted from the satisfaction measure developed by Cronin et al., (2000). They drew upon the definition of satisfaction used consistently over time as "an evaluation of an emotion" (Hunt, 1977). Rust and Oliver (1994) confirmed this view and suggested that customer satisfaction reflects the degree to which a customer believes that the possession or use of a service evokes positive feelings. Cronin et al., (2000) adopted a multiple item measure of customer satisfaction consisting of two categories of measures. They adapted a set of emotion-based measures from Westbrook and Oliver (1991), built their own evaluative set of measures based on previous work by Oliver (1980) and called it a cumulative or overall satisfaction measure. (Jones and Suh, 2000; Oliver, 1999) suggested that overall customer satisfaction is more fundamental and useful than transaction-specific customer satisfaction in predicting a customer's subsequent behaviors and a firm's past, present and future performance. Consistent with Cronin et al's approach, the overall satisfaction includes three items in this research, one item reflected the emotional category and two items reflected the evaluative category. The score of overall customer satisfaction of each respondent was calculated by adding the scores of the three items and then dividing by three, and gain the range scores was 1-7.

4.5.4 The Measure of Switching Costs

Following Porter (1980), switching cost, in this research, was conceptualized as the perception of the magnitude of the additional costs required for Internet banking customers to terminate the current relationship with their main Internet bank and secure an alternative. Switching or termination cost has been identified as a factor contributing to maintaining a relationship (Morgan and Hunt, 1994). Morgan and Hunt state switching cost to be of an economic nature only. However, switching costs may

comprise of psychological and emotional costs. Switching costs was measured using a five-item, seven-point Likert-type scale with anchors "1=strongly disagree" and "7=strongly agree". The items were adapted from the switching costs measures developed by Ping (1993). The score of switching costs of each respondent was calculated by adding the scores of the five items and then dividing by five. The range of switching costs was 1-7.

4.5.5 The Measure of Customer Retention

Customer retention, in this research, was defined as the future propensity of an Internet bank customer to stay with his/her main Internet bank. Accordingly, this study measured customer retention by adapting a three-item formative scale, seven-point Likert-type scale with anchors "1=strongly disagree" and "7=strongly agree". This scale was used to measure "propensity to leave" in a business-to-business relationship (Morgan and Hunt, 1994) and in a business-to-customer relationship (Ranaweera and Prabhu, 2003). The three items used measured the likelihood of the respondents leaving their main Internet banks at three different periods in the future: three months, six months and one year respectively. The overall score was a summation of the three weighted items. Following Morgan and Hunt's approach, the first item was weighted four times, the second two times, and the third item was left unweighted. The range for customer retention was 1-7.

4.5.6 The Measures of Internet Banking Usage

Internet banking usage were measured for name of main Internet bank, years with main Internet bank, frequency of using main Internet bank, split Internet bank behavior,

and sophisticated level of Internet banking usage. Name of main Internet bank was measured in seven categories according to the most popular Internet banks in Hong Kong (Nielsen/NetRatings, 2003). The seven categories including: (1) Hong Kong Shanghai Bank Corporation, (2) Hang Seng Bank, (3) Bank of China, (4) Citibank, (5) Standard Chartered Bank, (6) Bank of East Asia, and (7) other. Years with main Internet bank was measured in five levels as follow: (1) less than 12 months, (2) 13-24 months, (3) 25-36 months, (4) 37-48 months, and (5) more than 48 months. Frequency of using main Internet bank was measured in five levels as follows: (1) less than once a month, (2) once a month, (3) once a week, (4) a few times per week, and (5) every day. Split Internet bank behavior was examined by asking respondents how many Internet bank accounts they had, including their main Internet bank. The split Internet bank behavior was measured in three levels as follows: (1) only one, (2) 2, and (3) 3 or more.

This research intended to examine the moderating role of switching costs on the relationship between customer satisfaction and customer retention in different customer segments. Respondents were asked to indicate the sophisticated level of Internet banking service that they had used. The sophisticated level of Internet banking service used was measured in two levels, namely basic and advanced levels users. Basic level users included those respondents who only used their main Internet bank for account monitoring whereas the advanced level users included those users who had used their main Internet bank to pay bills, transfer funds, or trade securities.

4.5.7 The Measures of Demographic Characteristics

Respondent's demographic characteristics were measured for sex, age, marital status,

education, occupation, income, and ethnicity. These demographic variables are recognized as important in Internet research (Cyperatlas, 2001; GVU, 2001; Hoffman and Novak, 1996; Iconocast, 2001). Age was measured in six levels as follows: (1) 18-24, (2) 25-34, (3) 35-44, (4) 45-54, (5) 55-64, and (6) 65 or above. Marital status was measured in three categories, married, single, and other. Education was measured as the highest level of formal education that respondents completed. The scale included five levels including: (1) form 5 or below, (2) form 7, (3) diploma or equivalent, (4) undergraduate degree or equivalent, and (5) postgraduate degree or equivalent. Occupation was measured in eight categories, taken from the Hong Kong census survey (2001). The categories of occupation included (1) manager, administrator or professional, (2) clerk, (3) service worker or shop sales worker, (4) craft or related worker, (5) Plant, machine operator or assembler, (6) skilled agricultural or fishery worker (7) student, and (8) others. Income was measured as total personal income per month from all sources before taxes. The scale included nine levels, taken from the Hong Kong census survey (2001). The nine levels were (1) HK$5,999 or less, (2) HK$6,000-HK$7,999, (3) HK$8,000-HK$9,999, (4) HK$10,000-HK$14,999, (5) HK$15,000-HK$19,999, (6) HK$20,000-HK$24,999, (7) HK$25,000-HK$29,999, (8) HK$30,000-HK$39,999, and (9) HK$40,000 or above. Additional demographic information was included in the survey regarding ethnicity, measured in two categories, Hong Kong Chinese and others. This additional demographic information helps the representative of the survey result to the Hong Kong population.

4.6 Objectives in Questionnaire Design

The measures described above form the central component of the data collection process of this research. Their reliability and validity is the primary determinant of the quality of data collected, and therefore of the value of the analysis to be presented later in the thesis. However, while the measures are the source of the data, the questionnaire devised to contain them constitutes the channel through which the data are collected. As such the design of the questionnaire plays an important role determining the quality of the data collected.

The overall objective of the data collection process was that the relevant data were collected with the minimum of measurement error. Both the questionnaire and measure design contributed toward this objective, but in different ways. The specific objective which guided the design of the measures was that their content reflected accurately the nature and scope of the appropriate theoretical constructs, thereby helping the proportion of measurement error incorporated into the data. The objective underlying the design of the questionnaires was that they were constructed in such a way to minimize the measurement error introduced during the actual process of data collection. Three sources of measurement error were felt to be potential biases in the research: interpretive error, response set and equivalence between the English and Chinese version of questionnaire (Brislin, 1980).

4.6.1 Interpretive Error

Interpretive error occurs when a respondent interprets a question in a different way to that intended by the researcher. It is a particular problem in field surveys since it is not possible for the researcher to check if the respondent has understood the question and

is clear about the sort of response he is required to make (Converse and Presser, 1986). The use of a Internet questionnaire in this research made it likely that some interpretive error would be introduced during data collection, and various actions were taken to attempt to minimize its effects, predominantly through the combination of careful question wording and pilot work.

4.6.2 Response Set

Theoretical considerations and the requirements of statistical analysis dictated that the measure consisted exclusively of multi-point scales, requiring the respondent to tick the box on the scale appropriate to his response to the question. It was therefore important that the use of a large number of these scales did not confuse the respondents or introduce problems of response set. The occurrence of response set relates to a situation in which a respondent's answer to a question is influenced by the format of the measure as well as by the question itself. For example, if a respondent's actual answers to several questions involve him ticking the box on the left hand side of the scales this can create a tendency toward ticking this box even when it is inappropriate for the respondent's actual answer. The measures selected for this research almost entirely utilized a multi-point scale format, in which a circle was clicked to indicate the desired response. The widespread use of similar methods made response set a potential problem for this research. The conventional way of reducing its occurrence on scales with two endpoints is to alter their order so that, for example, a favorable response is not always associated with the bottom of the scale. In some cases it was possible to use this technique. However, it was suggested by the respondents in pilot testing that it would confuse the respondents and induce them to commit errors. Consequently, all

the Likert-type scales had the bottom portion of the scale associated with a favorable response.

4.6.3 Equivalence between the English and Chinese Version

The questionnaire items were first written in English. The Chinese version questionnaire was then developed by applying Brislin's (1980) recommendation to minimize the problem of lack of equivalence between the English and Chinese version. The English version of the questionnaire was translated into Chinese and back translated into English to check the translation's accuracy. Different Chinese translators were used in these two stages. When a major inconsistency occurred in the translation, a discussion between two translators was conducted to reconcile the differences. The precise wording of the questionnaire was based on original language version and adjusted so that it was smooth and natural sounding, as well as equivalent, in both languages.

4.7 Pilot Study of the Survey Internet Questionnaire

The design of the questionnaire was for the most part interwoven with the design of the measures. However, having finalized the content and format of each individual measure and questions it was necessary to test whether the structure of the composite questionnaire was appropriate. Converse and Presser (1986) stressed the importance of having consultation with others on the content and structure of a questionnaire before using it. This reduces deliberate bias and broadens the scope of the document. Converse and Presser suggested consulting with the following experts: professional experts and cultural insiders. In this case, pilot study was conducted in order to

determine whether the structure of the composite questionnaire was appropriate, to ascertain whether the format and question wording was comprehensible to respondents and to check that no additional problems were raised by the compilation of different questions into a single questionnaire. In drafting the questionnaire, many assumptions and pre-judgments that respondents will be able and willing to do the things the survey requires of them were made. Clearly respondents differ in their knowledge, memory and willingness to try to answer difficult or sensitive questions. Therefore, there was a need for pilot testing the questions with other people to gain objective views. Pilot testing the questions can guard against faulty assumptions and to detect flaws in the questionnaire. Pilot study allows many potential impediments to be identified and corrected in advance before too many resources have been expended.

The pilot study was undertaken in two stages. In stage one, initial English and Chinese questionnaires were constructed from discussion with Internet banking service experts to develop an understanding of customer satisfaction, switching costs and customer retention in the context of retail Internet banking service. The experts were included three academic lecturers in Marketing, three postgraduates major in Marketing, two managerial staffs from a local bank, and also four Internet banking users from general public. The question-by-question approach was adopted in the pilot study. Each participant was asked in turn about his or her interpretation of the questions, this was to ensure they understood the measure of the question in the same manner for reliable responses. They were encouraged to comment on the questionnaire critically and spelt out any problems they could identify in the questions as if they were the respondents. If problem areas were detected, all the participants were then encouraged to comment alternatives for handling the identified problems. From their comments, some questions were rephrased.

In stage two, a pilot test was then undertaken among Internet banking users. The users were required to have experience in the Internet banking usage at least twice in the last month. This ensured they had fresh memory to complete the questionnaire. A total of 30 respondents were recruited with convenience sampling method in a church in Hong Kong. The respondents were asked to complete the questionnaire and comment on the wordings of questionnaire items. The pilot test brought to light some of the problems in the comprehension and completion of the survey questions. The recommendations to solve the problems being gathered by the pilot test were taken. As a result, three items were retained for the measurement of customer satisfaction, five items were retained for the measurement of switching costs and three items were retained for the measurement of customer retention.

4.8 Structure of Questionnaire

The structure of the questionnaire plays an important role in determining the quality of the data collected in a piece of research. A poorly structured questionnaire can confuse the respondent and lead to interpretive errors, bias the data by predisposing the respondent to answer in a particular way, and de-motivate the respondent from completing the questionnaire. Two important aspects of questionnaire structure are question sequencing and layout. The principle underlying the sequencing of the questions in the questionnaire was to group them by the subject to which they referred. Within each subject group the questions tended to be grouped into relatively straightforward factual questions followed by the measure relevant to that area. In most instances the factual questions were included to help the respondent to think about that particular aspect of perception of Internet banking services and provide a context for

the appropriate measures. The final survey questionnaire consisted of five sections and contained 23 questions as shown in Appendix A.

The first section (Section 1) of the questionnaire with three questions (Question 1 to 3) focused on the respondents' perceived satisfaction towards their main Internet bank.

The second section (Section 2) of the questionnaire containing five questions (Question 4 to 8) focused on the respondents' perceived switching costs towards their main Internet bank.

The third section (Section 2) of the questionnaire containing three questions (Question 9 to 11) focused on the respondents' chances of switching to an alternate main Internet bank or terminating the relationship with their main Internet bank.

The fourth section (Section 3) of the questionnaire containing five questions (Question 12 to 16) related to the respondents' main Internet banking usage. Internet banking usage questions inquired about respondents' (1) name of main Internet bank, (2) years of with their main Internet bank, (3) frequency of usage, (4) split Internet bank behavior, and (5) sophisticated level of Internet banking usage.

The final section (Section 4) of the questionnaire containing seven questions (Question 17 to 23) related to respondents' demographic characteristics. Demographic questions inquired about respondents' (1) sex, (2) age, (3) marital status, (4) education level, (5) occupation, (6) income level, and (7) ethnicity.

4.9 Reliability and Validity of the Research

The concepts of validity (accuracy) and reliability (precision) concern the degree to which the measuring instrument is free of measurement error. Reliability and validity checks on the measures in the questionnaire are very important and must be carried out rigorously in order to ensure that the data being collected in the next step is of value. The property of validity can be described as the extent to which the measurement scale, or variable, represents what it is supposed to and yields the type of information needed. Reliability can be through of in terms of consistency. The more consistent the results from a measurement instrument are, the more reliable they are (Shannon and Davenport, 2001).

Reliability and validity are essential criteria for developing trustworthy information about customers and their behavior. It has been argued that most marketers fail to ascertain either the reliability or the validity of the measuring instruments they use. They assume that their findings are sufficiently reliable and valid for their purposes. Literature also suggests that the best resolution to the problem of reliability and validity is to verify research findings by quantitative methods whenever possible. Each study attempting to contribute to the theoretical development of a particular field of academic research must demonstrate sufficient reliability, validity, and generalizability (Runyon and Stewart, 1987).

According to the discussion above, although previous studies have validated the three constructs of customer satisfaction, switching costs and customer retention adopted in this research (Ranawera and Prabhu, 2003; Ping, 1993; and Morgan and Hunt, 1994), it was considered that it was necessary to conduct reliability and validity analysis for the three constructs as the validation of these three constructs was in non-Internet context.

Thus, in order to make sure that these constructs were valid in Internet context, the validity analysis and reliability tests were performed.

4.9.1 Validity Analysis

Validity refers to the extent to which an instrument measures what it purports to or is intended to measure, i.e. the true score it was designed to measure. The most common classification of types of validity discerns three types of validity: content, criterion-related, and construct. The last of these is considered the most important from the customer research point of view (Kerlinger, 1980).

Content validity refers to the degree to which a specific set of items are a representative and appropriate sample of the content (subject matter) contained in the instructional objectives the attainment of which the test is intended to measure. The theory of content validity suggests that a measurement (scale) has a content validity when its items are a randomly chosen subset of the universe of appropriate items. (Cronbach and Meehl, 1955). In this research, content validity was increased by planning the questions accurately. For instance, negative questions were avoided, questions were kept relatively short and clear, each question or item was planned to represent an aspect of the variable being measured, and biased questions, including derogatory statements, slang terms, and prejudicial or leading questions, were avoided.

Criterion-related validity refers to the extent to which scores on a test correspond to a certain criterion. Criterion validity is studied by comparing scores with one or more external variables, or criteria, known or believed to measure the attribute in the study. Criterion-related validity used to be called predictive validity or empirical validity, because validity is primarily evaluated statistically. For example, if the measurement

scale can predict some future event, then predictive validity is established. (Kerlinger, 1980)

Construct validity, as stated, is the most important form of validity. Construct validity refers to the degree to which a test measures the target construct, or psychological concept or variable, inferred from all of the logical arguments and empirical evidence available. Construct validity is thus directly concerned with the relationship of a variable to other variables. (Cronbach and Meehl, 1955). Factor analysis was used as a method of construct validation in this research. Factor analysis is a technique used to identify factors that statistically explain the variation and covariation among measures. Generally, the number of factors is considerably smaller than the number of measures and, consequently, the factors succinctly represent a set of measures. From this perspective, factor analysis can be viewed as a data-reduction technique since it reduces a large number of overlapping measured variables to a much smaller set of factors (Kerlinger, 1980).

Two stages of factor analysis, factor extraction and factor rotation, were performed in this research as suggested by Green et al., (2000). The primary objective of the first stage was to make an initial decision about the number of factors underlying a set of measured variables. The goal of the second stage was twofold: (1) to statistically manipulate (i.e., to rotate factors) the results to make the factors more interpretable and (2) to make final decisions about the number of underlying factors.

4.9.2 Reliability Tests

In this research, Cronbach's alpha is used to determine the reliability of the scales and

results. According to Nunnally and Bernstein (1994) the alpha of a scale should be greater than 0.70 for the items to be used together as a scale. The alpha for the total scale is also computed on the assumption that the item under examination is deleted. Nunnally and Bernstein (1994) gave a common guideline for the alpha standards of reliability: (a) early stage of research, alpha = 0.5-0.6, (b) basic research, alpha = 0.7-0.8, and (c) applied settings, alpha = 0.8-0.9. While one objective of scientific work is to discover and determine the relations between variables, reliability becomes a necessary condition of the value of research results and interpretation. There are several strategies available to improve the reliability of the results. The primary principle underlying improvement in reliability is the "maximization of the variance of the individual differences and minimization of the error variance" Kerlinger (1980, 454). He proposes three general procedures for doing this: (1) measuring instruments should be written unambiguously, (2) adding more items of equal kind and quality, usually decreases the change error while more items increase the probability of accurate measurement, and (3) providing clear and standard instructions for questions. Ambiguous instructions are said to increase the error variance. These standards were taken into account in planning the questionnaire.

Cronbach's alpha coefficient was performed to test the internal consistency of each construct in this research. If items are a consistent measure of the same construct, then the variables themselves should be correlated. Variables that have low inter-item correlations may not belong to the same construct, and should be dropped from the instrument (Nunnally and Bernstein, 1994). Using item analysis, it is possible to examine the extent to which variables perform as consistent measures of a single construct. More consistent variables will result in a higher coefficient alpha, representing a higher level of reliability. The target Cronbach's alpha in this research

was larger than 0.70, which is sufficient in most basic research (Nunnally and Bernstein, 1994).

4.10 Summary

The research objectives set out at the beginning of this chapter make an important and distinctive contribution to the understanding of the impact of customer satisfaction and switching costs on customer retention. In order to achieve the research objectives, an Internet questionnaire was employed as the means of data collection. To facilitate response, high-structured questions were used in the design of questionnaire. Bank customers with aged 18 or above constituted the target population of this research. The final version of the Internet questionnaire was pilot tested to avoid any major problems of design and thereby help avoid difficulties of question wording, format and structure. The research findings derived from the questionnaires are presented in the next chapter.

CHAPTER 5

RESEARCH FINDINGS

5.1 Introduction

Participation in the research was voluntary. The Internet survey questionnaire was placed on a free survey server for one month. The Internet survey questionnaire was submitted to popular free search engines in Hong Kong to request participation in the survey. After one month, 743 responses were received. The number of responses was considered to be sufficient for data analysis as the estimated sample size of this research is only at least 285 (see section 4.4.2). Since no counter was placed on the survey web page, no mechanism was used to monitor the number of visits to the web page when compared to the number of actual survey responses. The remainder of this chapter outlines the main research findings of this study.

5.2 Non-response Bias

A common problem in all field survey is non-response bias. For the present study although it was generally desirable that the respondents should be representative of the sample in demographic terms, given the current research objective, a more problematic area of response bias would have been if only those members of the sample who were very satisfied or dissatisfied responded. In order to access whether or not non-response bias was present in the present research, a telephone survey was undertaken of 50 non-respondents (telephone respondents) who were randomly selected from the Hong Kong Yellow Pages 2003. The brief survey collected basic demographic details together with information relating to satisfaction, switching costs and retention of their main Internet bank. Chi-square test was used to test the demographic differences

between the 743 Internet respondents and 50 telephone respondents. The results of Table 5.1 show that telephone respondents were older and had a lower income ($p<0.01$).

In order to further test the perceptual differences of customer satisfaction, switching costs and customer retention between the Internet respondents and non-respondents, an independent-sample T-test was computed. As Table 5.2 indicates, customer satisfaction, switching costs and customer retention were not perceived to be significantly different between the Internet respondents and telephone respondents ($p<0.01$).

Table 5.1: Analysis of Non-response Bias

	Type of Respondent %		Chi-Square	df	P-value
	Internet	Telephone			
Gender					
Male	52.8	50	0.143	1	0.705
Female	47.2	50			
Age					
18-21	24.8	18.0	43.607	5	0.000
25-34	28.0	14.0			
35-44	24.8	16.0			
45-54	13.2	14.0			
55-64	6.2	30.0			
65 or above	3.1	8.0			
Marital Status					
Married	53.0	60.0	0.956	2	0.620
Single	45.1	38.0			
Other	1.9	2.0			
Education					
Form 5 or below	22.3	28.0	3.622	4	0.460
Form 7	19.7	14.0			
Diploma or certificate	18.3	26.0			
Undergraduate degree	19.9	16.0			
Postgraduate degree	19.8	16.0			
Occupation					
Manager, administrator or professional	31.4	30.0	1.423	6	0.964
Clerk	31.0	34.0			
Service worker or shop sales worker	19.5	16.0			
Craft or related worker	2.2	4.0			
Plant, machine operator or assembler	5.4	4.0			
Student	5.4	6.0			
Other	5.2	6.0			
Income					
HK$5,999 or below	9.3	30.0	27.868	8	0.000
HK$6,000 to HK$7,999	9.6	14.0			
HK$8,000 to HK$9,999	11.3	14.0			
HK$10,000 to HK$14,999	12.7	14.0			
HK$15,000 to HK$19,999	12.7	4.0			
HK$20,000 to HK$24,999	12.7	6.0			
HK$25,000 to HK$29,999	12.4	8.0			
HK$30,000 to HK$39,999	11.0	6.0			
HK$40,000 or above	8.5	4.0			
Ethnic Group					
Hong Kong Chinese	97.3	96.0	0.297	1	0.586
Others	2.7	4.0			

Table 5.2: Independent-sample T-test between Internet and Telephone Respondents (*p<0.01)

	Type of Respondent	N	Mean	T-test for Equality of Means (Equal variances assumed)			
				t-value	df	*p*-value (2-tailed)	Mean Difference
Customer Satisfaction	Internet	743	3.621	-0.748	791	0.455	-0.165
	Telephone	50	3.787				
Switching Costs	Internet	743	3.593	-1.073	791	0.284	0.237
	Telephone	50	3.776				
Customer Retention	Internet	743	4.143	-0.556	791	0.578	-0.119
	Telephone	50	4.263				

The overall findings shown in Table 5.1 and Table 5.2 imply that non-response should not have a significant impact on the main research findings. Hence, the Internet data collection method was not expected to introduce any bias in responses.

5.3 Representativeness of Survey Respondents

Seven demographic measures were collected for this research. They were: a) gender; b) age; c) marital status; d) education; e) occupation; f) income; and g) ethnicity. Since the sample was drawn from Hong Kong, an effort was made to ensure that the respondents did not differ significantly from the target population (i.e. retail Internet banking users in Hong Kong) so that that the findings could be used to infer about a wider population. Iamasia (2002) found that the demographic profile of Internet banking users in Hong Kong was similar to the demographic profile of Hong Kong general population, thus the demographic profiles of the respondents were compared with that of Hong Kong population. Table 5.3 lists the distribution of the respondents' demographics against the distribution of Hong Kong population's demographics, as

reported in the most recent Hong Kong Census survey in 2001 (http://www.info.gov.hk/censtatd/home.html). Though there are some minor differences, the distributions of the both survey's respondents and Hong Kong population exhibit generally similar patterns in most categories.

Where this is not the case is for education and age only 22.3 % of survey respondents had an education level of form 5 or below, as compared to 74.1 for the Hong Kong population and there were 3.1% of respondents aged 65 or above, as compared to 11.1% of the Hong Kong general population (Table 5.3). Since Internet banking usage involves technical Internet knowledge, it is possible that users with low education and elders have less knowledge of and need for such services. In addition, it must be mentioned that the Hong Kong Census data was conducted in 2001 and may not accurately represent the current population of Internet users. Comparing January 2003 survey data with the January 2001, the Hong Kong Internet users have grown by 38%, with the Internet banking user growing by 78% (Nielsen/NetRatings, 2003). Such drastic growth may have altered the overall demographics of Internet banking users.

Table 5.3: Demographics of Survey Respondents and Hong Kong Population

		Respondents (N=743) %	Hong Kong Census (2001) %
Gender	Male	52.8	49.0
	Female	47.2	51.0
Age	18-21	24.8	na
	25-34	28.0	16.5
	35-44	24.8	20.3
	45-54	13.2	14.3
	55-64	6.2	7.5
	65 or above	3.1	11.1
Marital status	Married	53.0	59.4
	Single	45.1	31.9
	Other	1.9	8.7
Education	Form 5 or below	22.3	74.1
	Form 7	19.7	9.4
	Diploma or equivalent	18.3	3.7
	Undergraduate degree or equivalent	19.9	12.7
	Postgraduate degree or equivalent	19.8	
Occupation	Manager, administrator or professional	31.4	31.5
	Clerk	31.0	16.3
	Service worker or shop sales worker	19.5	15.0
	Craft or related worker	2.2	9.9
	Plant, machine operator or assembler	5.4	7.3
	Student	5.4	na
	Other	5.2	19.8
Income	HK$5,999 or below	9.3	12.5
	HK$6,000 to HK$7,999	9.6	5.7
	HK$8,000 to HK$9,999	11.3	5.9
	HK$10,000 to HK$14,999	12.7	15.5
	HK$15,000 to HK$19,999	12.7	12.8
	HK$20,000 to HK$24,999	12.7	10.9
	HK$25,000 to HK$29,999	12.4	7.8
	HK$30,000 to HK$39,999	11.0	10.7
	HK$40,000 or above	8.5	18.3
Ethnic Group	Chinese (Hong Kong)	97.3	94.9
	Others	2.7	5.1

5.4 Comparison of Early Respondents from Late Respondents

Since the Internet questionnaire survey was completed during a one month period (from 14th September 2003 to 13th October 2003), it is worthwhile to examine any if differences exist between early respondents and late respondents with respect to respondents' perceived customer satisfaction, switching costs and customer retention. Hence, respondents to this research were divided into two groups, namely early respondents and late respondents, according to the date of questionnaire submission. Early respondents contained those respondents, who submitted their Internet questionnaires between 14th September 2003 and 28th September 2003 (i.e. the first 15 days), while late respondents contained those respondents, who submitted their Internet questionnaires between 29th September 2003 and 13th October 2003 (i.e. the last 15 days). As shown in Table 5.4, there were 496 (66.76%) respondents belong to early respondents, while 247 (33.24%) respondents belong to late respondents. Analyzing the data by date of submitting Internet questionnaire provides additional information about the perceptual differences of customer satisfaction, switching costs and customer retention between early respondents and late respondents.

In order to test the perceptual differences of customer satisfaction, switching costs and customer retention between early respondents and late respondents, an independent-sample T-test was computed. As Table 5.4 indicates that customer satisfaction, switching costs and customer retention were not perceived to be significantly different between early respondents and late respondents ($p>0.05$). The findings implies that the speed of submitting Internet questionnaire had no impact on respondents' perceived customer satisfaction, switching costs and customer retention.

Table 5.4 Independent-sample T-test between Early and Late Respondents

	Group of Respondents	N	Mean	T-test for Equality of Means (Equal variances assumed)			
				t-value	df	*p*-value (2-tailed)	Mean Difference
Customer Satisfaction	Early Respondents	496	3.625	0.093	741	0.926	0.011
	Late Respondents	247	3.614				
Switching Costs	Early Respondents	496	3.542	0.084	741	0.933	0.010
	Late Respondents	247	3.532				
Customer Retention	Early Respondents	496	4.132	-0.308	741	0.758	0.036
	Late Respondents	247	4.167				

5.5 Demographic Profiles of Respondents

As shown in Table 5.3, both male and female respondents were evenly distributed. Most respondents (77.6%) were aged 44 or below. In term of the respondents' marital statuses, 53.0% were married and 45.1 were single. The education level of the participants varied relative to the general Hong Kong population. Respondents had higher level of education than Hong Kong general population. There were 58.0% of respondents that had a diploma qualification or above, as compared to only 16.4% for the Hong Kong general population. The largest proportion of the respondents' occupation categories was manager/administrator/professional (31.4%), followed by clerk (31.0%). Respondents with an income HK$40,000 or above accounted only for 8.5%, as compared to 18.3% for the general Hong Kong population.

5.6 Internet Banking Usage

Several Internet banking usage measures were collected in this study. They were: a)

name of main Internet bank; b) years with main Internet bank; c) frequency of usage; d) number of Internet bank account; e) segment of Internet banking user (Table 5.5).

Top three banks had over three-quarter (77.1%) of Internet bank users. These results were consistent with the findings of Nielsen/NetRatings (2003), which showed Hong Kong Shanghai Bank Corporation led the Internet banking in Hong Kong, followed by Hang Seng Bank, and Bank of China. Less than half of respondents (43.4%) had Internet banking experience less than 2 years. About 47% of respondents used Internet banking at least a few times per week. About 71% of respondents had more than one Internet bank accounts, indicating split Internet bank behavior was common in Hong Kong.

Table 5.5: Internet Banking Usage by Respondents

		Respondents (N=743) Percent
Name of main Internet bank	Hong Kong Shanghai Bank Corporation	30.4
	Hang Seng Bank	26.9
	Bank of China	19.8
	Citibank	7.1
	Standard Chartered Bank	6.5
	The Bank of East Asia	5.5
	Others	3.8
Years with main Internet bank	Less than 12 months	20.1
	13 to 24 months	23.3
	25-36 months	20.7
	37 to 48 months	19.8
	More than 48 months	16.2
Frequency of usage	Every day	23.3
	A few times per week	23.4
	Once a week	17.6
	Once a month	19.4
	Less than once a month	16.3
Number of Internet bank account	Only 1	41.9
	2	29.3
	3 or more	28.8
Segment of Internet bank user	Basic	51.5
	Advanced	48.5

When respondents were split into two segments, namely basic Internet banking segment and advanced Internet bank segment according to their level of Internet banking service used, there were 48.5% of respondents who claimed that they were advanced Internet bank user, while basic Internet bank users were slightly more (51.5%). Having examined the demographic profiles and Internet banking usage of respondents, the next section tests for validity for the three research constructs of this study.

5.7 Construct Validity

In order to ensure the adapted constructs of customer satisfaction, switching costs and customer retention that were validated in previous non-Internet research were also valid in this research, a two stages factor analysis, factor extraction and factor rotation, was performed as suggested by Green et al., (2000). As mentioned in Chapter 4, the primary objective of the first stage is to make an initial decision about the number of factors underlying a set of measured variables. The goal of the second stage is twofold: (1) to statistically manipulate (i.e., to rotate factors) the results to make the factors more interpretable and (2) to make final decisions about the number of underling factors.

5.7.1 Factor Extraction

As part of the first decision to determine the number of extracted factors, the eigenvalues based on the principal components solution was used to assess their absolute and relative magnitudes. In Table 5.6, the eigenvalues are listed for components 1 through 11. The percent of variance of the variables accounted for by the factor (Table 5.6) is equal to the eigenvalue divided by the total amount of variance of the variables times 100. For example, the eigenvalue associated with the first factor is 4.616 and the percent of total variance accounted for by the first factor is (4.616 / 11) x 100 = 41.960 (as shown in the first row in Table 5.6). Although eigenvalue greater than 1 are helpful criterion in deciding how many factors should be used for data analysis, it is better to examine the plot of the eigenvalue, also known as the scree test. Based on the scree plot (Figure 5.1), it can be concluded that three factors should be rotated.

Table 5.6: Initial Statistics from Factor Extraction Procedure
Extraction Method: Principal Component Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.616	41.960	41.960	4.616	41.960	41.960
2	3.040	27.634	69.594	3.040	27.634	69.594
3	1.248	11.346	80.940	1.248	11.346	80.940
4	.363	3.303	84.242			
5	.316	2.871	87.114			
6	.289	2.628	89.741			
7	.285	2.594	92.336			
8	.247	2.242	94.578			
9	.212	1.929	96.507			
10	.194	1.766	98.273			
11	.190	1.727	100.000			

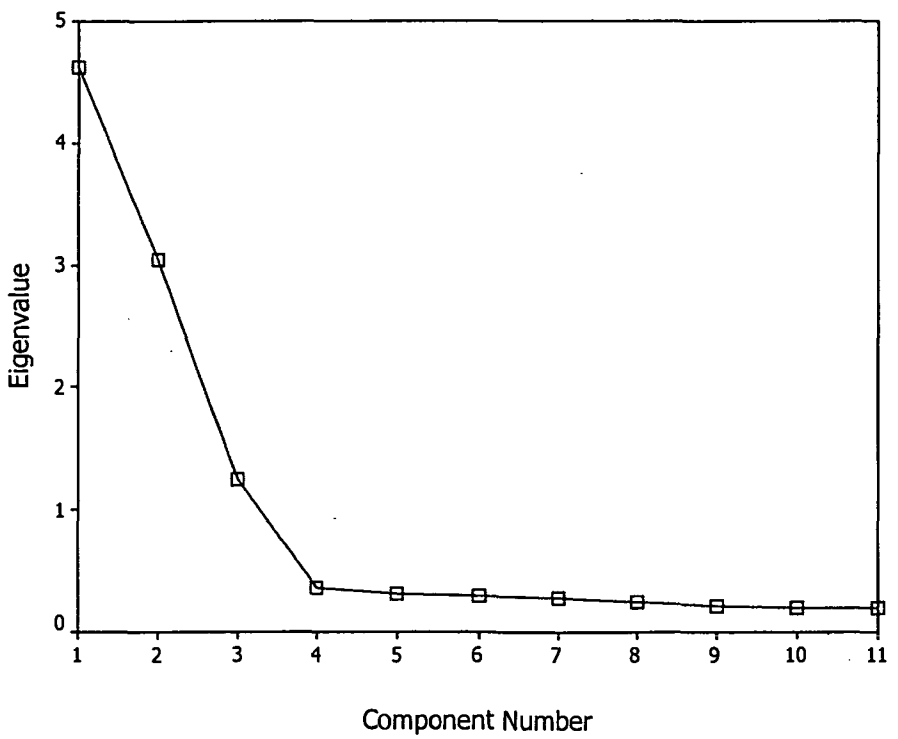


Figure 5.1 Scree Plot of the Eigenvalues
Extraction Method: Principal Component Analysis

5.7.2 Factor Rotation

The next stage of factor analysis is to rotate a three-factor solution. The rotated factor

matrix is shown in Table 5.7. This matrix shows factor loadings, which are the correlations between each of the variables and the factors for a varimax rotation. The criteria used to identify and interpret factors were: each item should load 0.50 or greater on one factor and 0.35 or below on the other two factors (Igbaria et al., 1995). The factors are interpreted by naming them based on the size of the loadings. As shown in Table 5.7, the three variables (CS1, CS2 and CS3) are associated with the first factor. The five variables (SC1, SC2, SC3, SC4 and SC5) are related strongest to the second factor. Finally, the remaining three factors (CR1 and CR2 and CR3) are associated with the third factor. On the basis of looking of the content of these three sets of variables, the first factor was named as customer satisfaction, the second factor was named as switching costs and the third factor was named as customer retention. These results confirmed the three constructs, which were previous validated in non-Internet setting (Morgan and Hunt, 1994; Ping, 1993; Ranawera and Prabhu, 2003), are uni-dimensional, factually distinct and applicable in Internet banking setting. The proportion of variance accounted for by each of the rotated factors is frequently reported in literature to indicate the relative importance of each factor. As reported in Table 5.7, the first, second and third factors accounted for 34.211%, 21.011% and 18.546% of the variance of the eleven variables. In total, the three factors accounted for 73.768% of the variable variance.

Table 5.7: The Rotated Factor Matrix from the Factor Analysis

Factor/Item Label	Content	Factor 1	Factor 2	Factor 3	Eigen Value	% of Variance	Cumulative %
Factor 1							
SC3	It is risky to change my main Internet bank as the new provider may not give good services.	0.884	0.021	0.103	3.763	34.211	34.211
SC4	I would feel frustrated if I terminated my current relationship with my main Internet bank.	0.875	0.023	0.110			
SC1	It would cost me a lot of time to change my main Internet bank.	0.851	0.022	0.121			
SC5	Considering everything the cost to stop using my main Internet bank and start up with a new main Internet bank would be high.	0.846	0.022	0.107			
SC2	It would cost me a lot of effort to change my main Internet bank.	0.844	0.022	0.151			
Factor 2							
CS2	I think I did the right thing when I chose my main Internet bank.	0.022	0.893	0.222	2.311	21.011	55.222
CS3	Overall, I am happy with my main Internet bank.	0.023	0.830	0.220			
CS1	My main Internet bank meets my expectation.	0.038	0.814	0.222			
Factor 3							
CR2	What do you think are the chances of switching to an alternate main Internet bank or terminating the relationship with my main Internet bank within the next six months?	0.133	0.194	0.837	2.040	18.546	73.768
CR3	What do you think are the chances of switching to an alternate main Internet bank or terminating the relationship with my main Internet bank within the next one year?	0.143	0.214	0.756			
CR1	What do you think are the chances of switching to an alternate main Internet bank or terminating the relationship with my main Internet bank within the next three months?	0.160	0.278	0.741			

5.8 Reliability Tests

Table 5.8 reports information about inter-total statistics and reliability coefficients for the three scales of customer satisfaction, switching costs and customer retention. There are several important pieces of information shown in Table 5.8. The second column (corrected item-total statistics) summarizes the relationships between each item (variable) and the total score, which is simply a sum of the items. If items are consistent with each other, they will correlate with the total score. Therefore, it is expected to see strong and positive item-total correlations. The third column (squared multiple correlation) describes the amount of variance shared with all of the other items. The higher the squared multiple correlation indicates a larger amount of consistency among the items of a scale. The fourth column (alpha if item deleted) reports what would happen to the reliability coefficient of the scale if an item were deleted. An item that negatively impacts the reliability of the scale should be examined carefully and possibly moved. The final column reports the coefficient alpha for each scale.

Examining the corrected item-total correlation listed in second column, all of the inter-total correlations from the customer retention scale are positive, ranging from a low of 0.7247 to a high of 0.7672. In contrast, the item-total correlations for the customer satisfaction and switching costs are higher, only item (SC1) is slightly below 0.800, indicating a greater degree of internal consistency with the two scales.

Table 5.8: Reliability Analysis for Customer Satisfaction, Switching Costs and Customer Retention Scales

Constructs/Items	Corrected Item-total Correlation	Squared Multiple Correlation	Alpha if item Deleted	Coefficient Alpha
Switching Costs				
SC1	0.8264	0.6925	0.9256	0.9384
SC2	0.8254	0.6861	0.9260	
SC3	0.8534	0.7318	0.9206	
SC4	0.8486	0.7291	0.9214	
SC5	0.8206	0.6858	0.9268	
Customer Satisfaction				
CS1	0.7933	0.6353	0.8824	0.9064
CS2	0.8433	0.7119	0.8391	
CS3	.0.8027	0.6547	0.8740	
Customer Retention				
CR1	0.7269	0.5334	0.8191	0.8628
CR2	0.7672	0.5885	0.7816	
CR3	0.7247	0.5330	0.8210	

Examining the squared multiple correlations listed in third column, all of the squared multiple correlations from customer retention are positive, ranging from a low of 0.5330 to a high of 0.5885. In contrast, all squared multiple correlations for the customer satisfaction and switching costs are also positive and higher than the customer retention scale, only one item (SC1) is less than 0.650, indicating a larger amount of consistency among the items of the two scales than customer retention scale. In other words, if regression analysis is used to correlate the two items, CS2 and CS3, with item CS1, the squared multiple correlation would be 0.6353. That is, CS1 shares approximately 64% of its variance in common with a combination of the CS2 and CS3.

Comparing the alpha if item deleted listed in fourth column and the coefficient alpha listed in the final column, it appears that deletion of any one item of the three scales

results in a decrease in the reliability coefficient for the corresponding scales. These results indicate that all items of each scale are contributing to the reliability of each scale and therefore should be maintained.

Examining the coefficient alpha listed in the final column, the lowest estimate of reliability is reported for the customer retention scale (alpha=0.8628). The estimates for customer satisfaction and switching costs scales are 0.9064 and 0.9384 respectively. This is consistent with the information showed in the second column. Customer retention scale has the least amount of variability and lowest inter-total correlations. This indicates a lesser degree of internal consistency and therefore, results in a lower estimate of reliability. However, since the coefficient alpha of each scale is above the acceptable values of 0.700 (Nunnally, 1978), all three scales are considered to be reliable.

5.9 Descriptive Statistics and Correlation Matrix for Constructs

As mentioned in Chapter 3, customer satisfaction was measured using a three-item, seven-point Likert-type scale. The mean score of customer satisfaction was calculated by adding the scores of the three items and then dividing by three. Switching costs was measured using a five-item, seven-point Likert-type scale. The mean score of switching costs was calculated by adding the scores of the five items and then dividing by five. Customer retention was measured using a three-item, seven-point Likert-type formative scale. The mean score of customer retention was calculated by a summation of the three weighted items. The first item (CR1) was weighted four times, the second item (CR2) two times, and the third item (CR3) was left unweighted. With these systems, a score of 4 would represent the central point

for the three factors.

The mean scores of customer satisfaction, switching costs and customer retention were 3.621, 3.539 and 4.143 respectively (Table 5.9). As customer satisfaction and switching costs were less than the central point of 4 in a seven-point Likert-type scale, these indicate that respondents generally perceived less satisfaction and low switching costs towards their main Internet bank. However, since the mean of customer retention was more than 4, this indicates respondents were generally perceived loyal to their main Internet bank.

Table 5.9: Descriptive Statistics and Correlation Matrix for Constructs

Construct	Mean	Std Dev	Skewness	Kurtosis	Customer Satisfaction	Switching Costs	Customer Retention
Customer Satisfaction	3.621	1.591	0.247	-0.767	1.000 -		
Switching Costs	3.539	1.517	0.304	-0.869	0.072 (0.051)	1.000 -	
Customer Retention	4.143	1.479	-0.015	-0.791	0.458* (0.000)	0.277* (0.000)	1.000 -

* Correlation of significant at 0.01 level (2-tailed)

For checking the extent of the actual departure from normality of each construct, the value of skewness and kurtosis of the three constructs were computed (Table 5.9). As all values of skewness and kurtosis of the three factors were fall within acceptable limits of ±1, the data obtained from the three constructs did not show deviations from normality (Hair et al., 1998).

The results of correlation analysis suggest that there were significant positive effects

of customer satisfaction ($p<0.00$) and switching costs ($p<0.00$) on customer retention, with satisfaction explaining a higher proportion of variance in the customer retention (R=0.458) than switching costs (R=0.277). In addition, switching costs is marginally correlated with customer satisfaction (p=0.051) at 0.05 significance level. The overall results of the correlation matrix confirm that the theoretical model of this research is true (Figure 3.1). There is a significant relationship between customer satisfaction and customer retention (H1). In addition, there is also significant relationship between switching costs and customer retention (H2).

5.10 Hypothesis Testing

Hierarchical regression analysis was employed to test the research hypothesis. Assessment of potential violations of regression assumptions was first undertaken in order to examine whether the assumptions of linear regression were satisfied. This is followed the results of hypotheses testing.

5.10.1 Examining the Assumption of Linear Regression

As recommended by Green et al., (2000), two main assumptions, linear relationship and residuals, must be met in order to use linear regression.

Linear Relationship

The linear relationship assumption refers to the relationships between independent factors (customer satisfaction and switching costs) and a dependent factor (customer retention), which are linear. Green et al. (2000) stated that this assumption can be

checked by examining a simple scatter plot between the independent factors and dependent factor if there is a general agreement of the relationship between independent factor and dependent factor. Since Oliver and Bearden (1995) argued that the customer satisfaction – retention link is non-linear, it can be argued that using a simple scatter plot to examine the non-linear effects between customer satisfaction and customer retention is adequate as the Likert type scales used in this research lead to super-imposed data points on a scatter diagram. This means that there is no way to detect the density of the data points by using a simple scatter plot. In this case, a satisfaction^2 factor was incorporated as a predictor of customer retention to test for the significant satisfaction^2 factor on customer retention. Specifically, a correlation analysis was conducted to examine the significance between satisfaction^2 factor on customer retention factor. The result shows that correlation between satisfaction^2 factor on customer retention factor is 0.461 ($p<0.001$). Thus, there does not appear to be any sign of a curvilinear relationship between customer satisfaction and customer retention. Therefore, it can be said that the assumption of linear relationship between independent and dependent factors was satisfied and the model shown in Figure 3.1 is correct.

According to the literature review in section 2.5, it seems that previous research findings generally agreed that there is a linear relationship between switching costs and customer retention. A simple scatter plot was used to examine the relationship between switching costs and customer retention. Figure 5.2 displays a simple scatter plot for the relationship between switching costs and customer retention. Examining the plot, there does not appear to be any sign of a curvilinear relationship between switching costs and customer retention. Hence, it can be said that the assumption of linear relationship between switching costs and customer retention was satisfied.

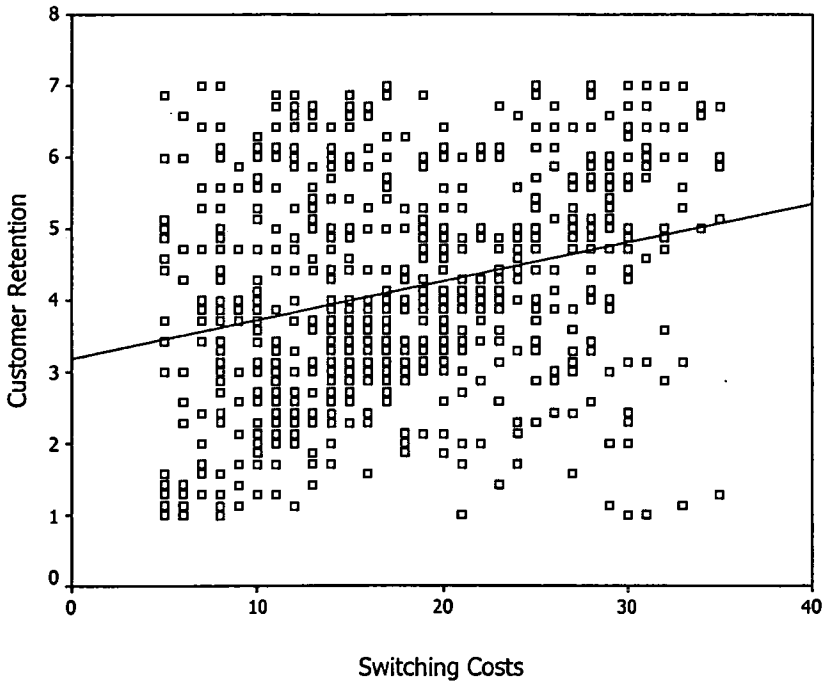


Figure 5.2 Simple Scatterplot of Switching Costs and Customer Retention

Residuals

The assumption of residuals concerns error. Specifically, it is assumed that the residuals are normally distributed, they have a mean of zero and a constant variance across levels of the independent factors, they are independent across all subjects, and they are not systematically related (correlated) to the independent factors. The residual analysis is divided into two parts. The first part examines the residual analysis for customer satisfaction whereas the second part examines the residual analysis for switching costs.

Residual Analysis (Independent Factor = Customer Satisfaction)

Table 5.10 summaries the residuals statistics for independent factor (customer satisfaction) and dependent factor (customer retention). The range of residuals is

from -4.2244 to 3.4481. The mean of these residuals is reported as 5.803E-15. That is 0.0000000000000058 (fourteen zeros). Hence, the mean of residuals is approximately equal to 0.

Table 5.10: Linear Regression - Residuals Statistics
Dependent Factor = Customer Retention
Independent Factor = Customer Satisfaction

	Minimum	Maximum	Mean
Residual	-4.2244	3.4481	5.803E-15

Durbin-Watson Statistic = 1.682

The Durbin-Watson statistics of 1.682 was found. The Durbin-Watson test is serial correlation among residuals. This test value will range 0 to 4, with values close to 0 indicating a positive correlation among residuals and those close to 4 identifying a negative relationship. Value between 1.5 and 2.5 are acceptable (Shannon and Davenport, 2001). The value of 1.682 falls in this range, so residuals are not correlated to the independent factor.

To examine the extent to which the residual follow a normal distribution, a histogram (Figure 5.3) and a normal probability plot (Figure 5.4) were derived. These figures visually determine the extent to which the residuals are normal distributed. Figure 5.3 displays a histogram of the standardized residuals with a superimposed normal curve. Although the residuals do not adhere perfectly to a normal distribution, they do not appear to depart significantly. Figure 5.4 displays a normal probability plot for the standardized residuals. If the residuals follow a normal distribution perfectly, their cumulative probability would follow a straight line. Again, this is not perfect, but no significant departures appear.

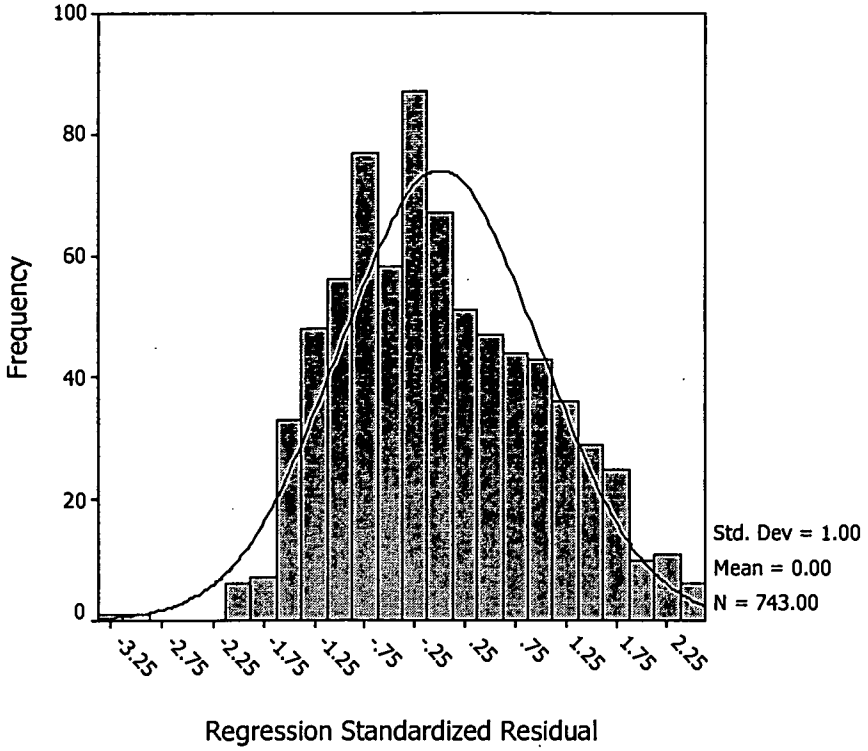


Figure 5.3: Histogram of the Standardized Residuals
Dependent Factor = Customer Retention
Independent Factor = Customer Satisfaction

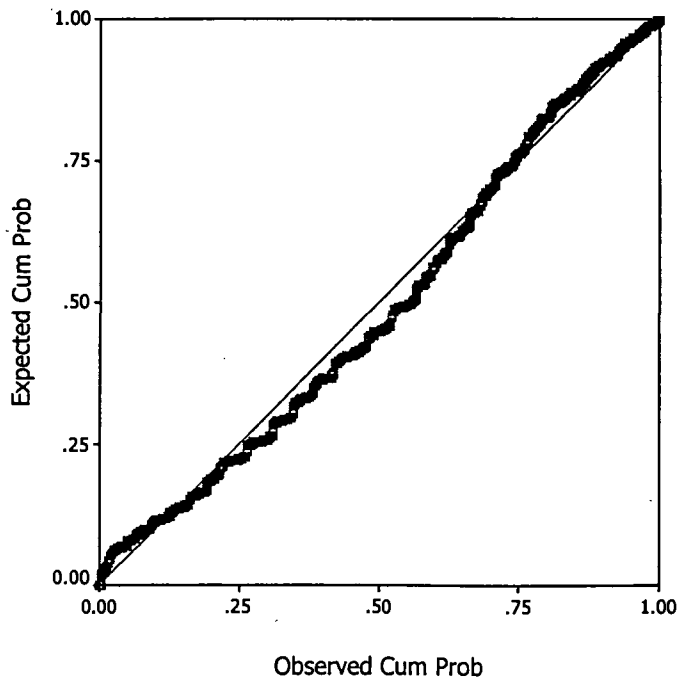


Figure 5.4: Normal Probability Plot
Dependent Factor = Customer Retention
Independent Factor = Customer Satisfaction

Figure 5.5 displays a plot of the studentized residuals and the standardized predicted values for the examination of the distribution of residuals across levels of independent factor of customer satisfaction. If the variance of the residuals is constant, there will be no pattern of the points in the plot. In other words, the residuals will be randomly distributed throughout the scatterplot, as they are in Figure 5.5.

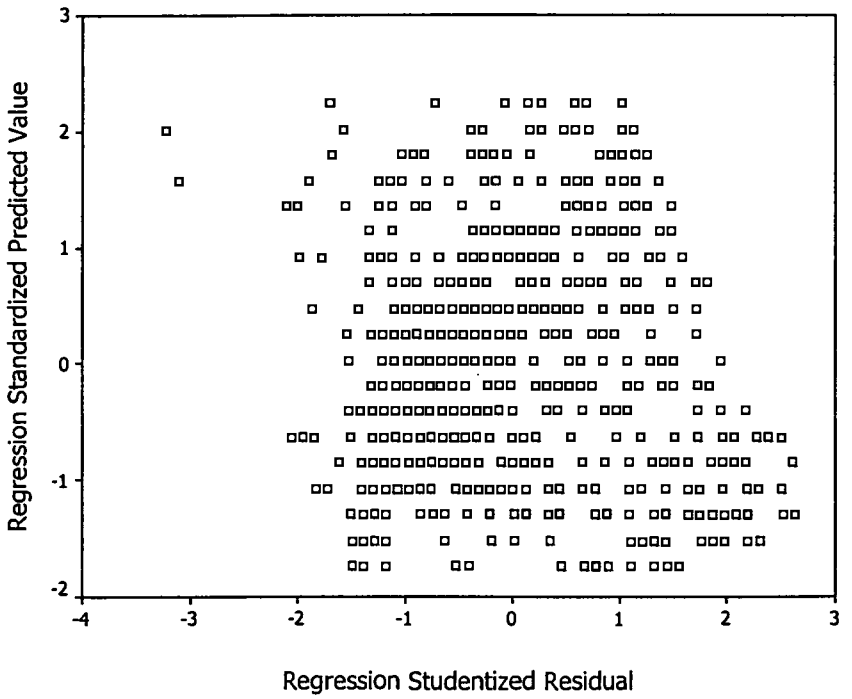


Figure 5.5: Scatterplot of Studentized Residuals and Standardized Predicted Values (r=0)
Dependent Factor = Customer Retention
Independent Factor = Customer Satisfaction

Finally, Figure 5.6 displays a scatterplot of the residuals and the independent factor of customer satisfaction in order to check if the residuals are related to the independent factor. Figure 5.6 displays the scatterplot of the residuals and the independent factor of customer satisfaction and reports the correlation coefficient of 0. This supports the assumption that the residuals are not correlated with

independent factor of customer satisfaction.

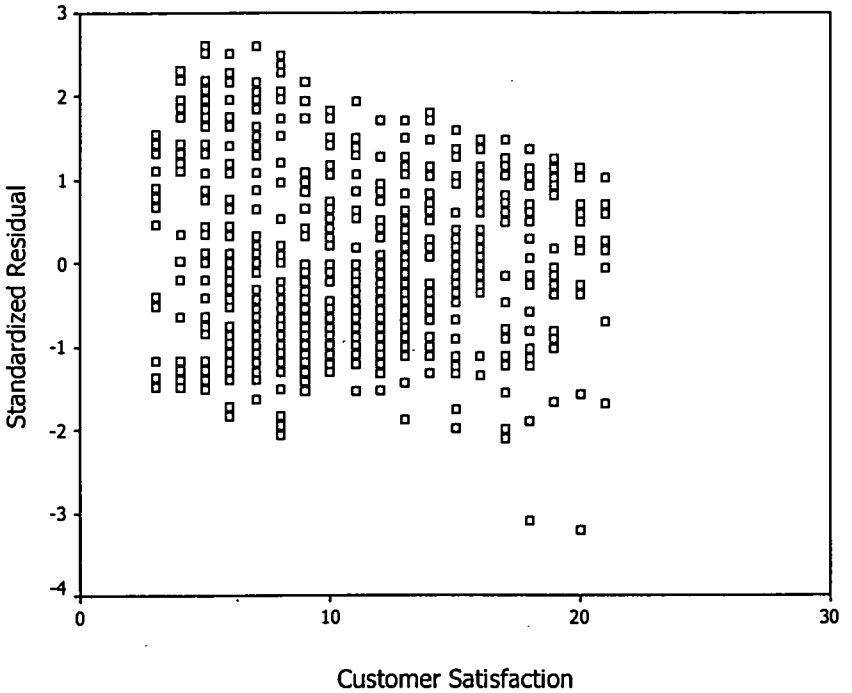


Figure 5.6: Scatterplot of Residuals and Independent Factor (r=0)
Dependent Factor = Customer Retention
Independent Factor = Customer Satisfaction

Residual Analysis (Independent Factor = Switching Costs)

Table 5.11 summaries the residuals statistics for independent factor (switching costs) and dependent factor (customer retention). The range of residuals is from -3.8635 to 3.4352. The mean of these residuals is reported as 5.652E-15. That is 0.0000000000000015 (fourteen zeros). Hence, the mean of residuals is approximately equal to 0.

Table 5.11: Linear Regression - Residuals Statistics
Dependent Factor = Customer Retention
Independent Factor = Switching Costs

	Minimum	Maximum	Mean
Residual	-3.8635	3.4352	5.652E-15

Durbin-Watson Statistics = 1.741

As the value of Durbin-Watson statistics of 1.741 falls in the acceptable range (between 1.5 and 2.5), residuals are not correlated to the independent factor of switching costs. Figure 5.7 displays a histogram of the standardized residuals with a superimposed normal curve. Although the residuals do not adhere perfectly to a normal distribution, they do not appear to depart significantly. Figure 5.8 displays a normal probability plot for the standardized residuals. Again, this is not perfect, but no significant departures appear.

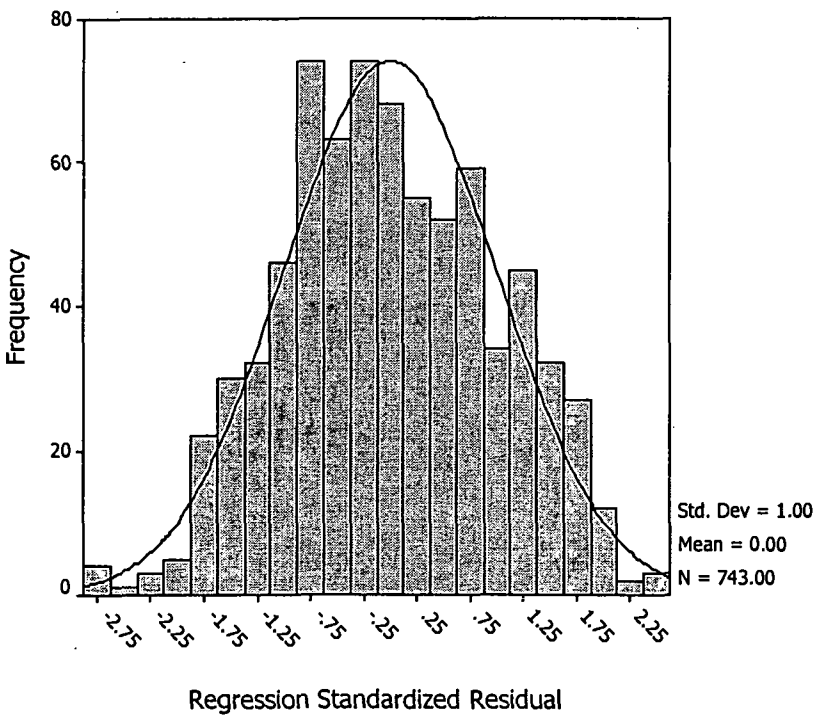


Figure 5.7: Histogram of Standardized Residuals
Dependent Factor = Customer Retention
Independent Factor = Switching Costs

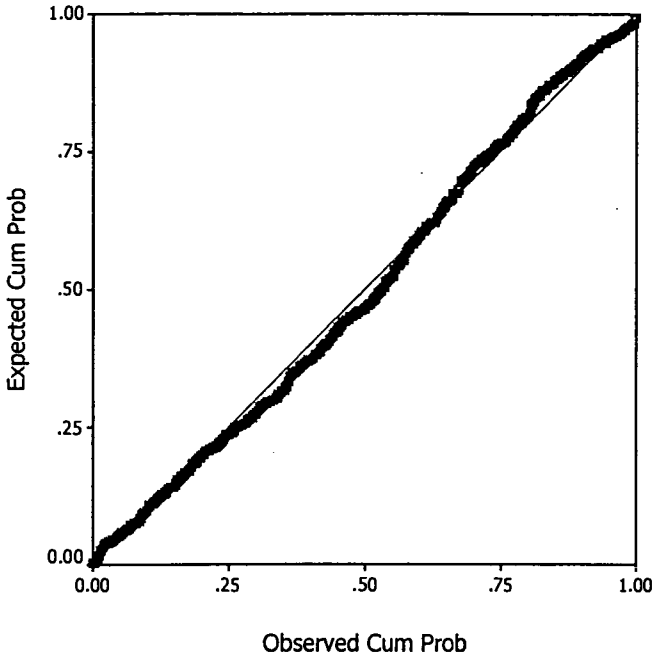


Figure 5.8: Normal Probability Plot
Dependent Factor = Customer Retention
Independent Factor = Switching Costs

Figure 5.9 displays a plot of the studentized residuals and the standardized predicted values for the examination the distribution of residuals across levels of independent factor of switching costs. Figure 5.9 shows that there is no pattern of the points in the plot. In other words, the residuals are randomly distributed throughout the scatterplot.

Figure 5.10 displays the scatterplot of the residuals and the independent factor of switching costs and reports the correlation coefficient of 0. This supports the assumption that the residuals are not correlated with independent factor of switching costs.

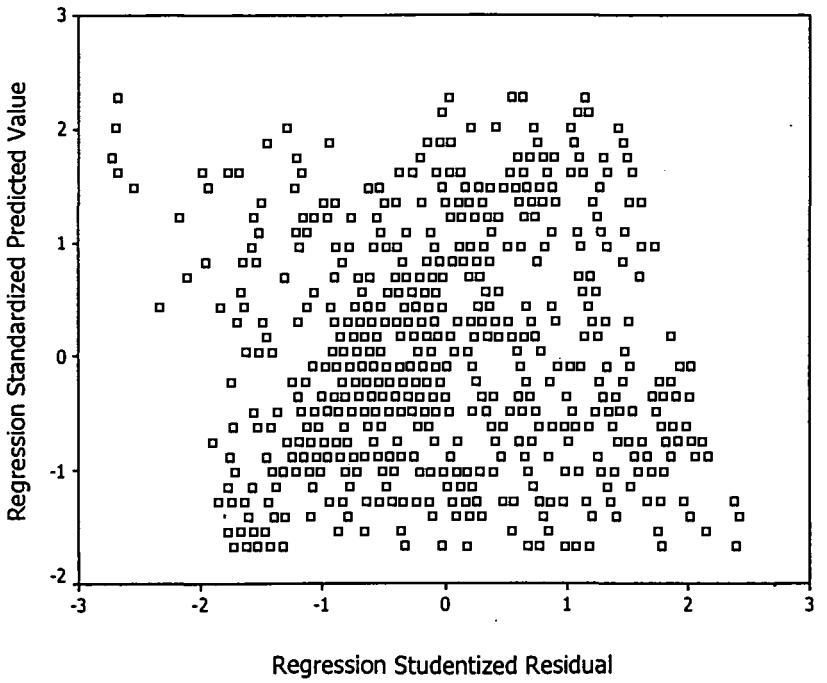


Figure 5.9: Scatterplot of Studentized Residuals and Standardized Predicted Values
Dependent Factor = Customer Retention
Independent Factor = Switching Costs

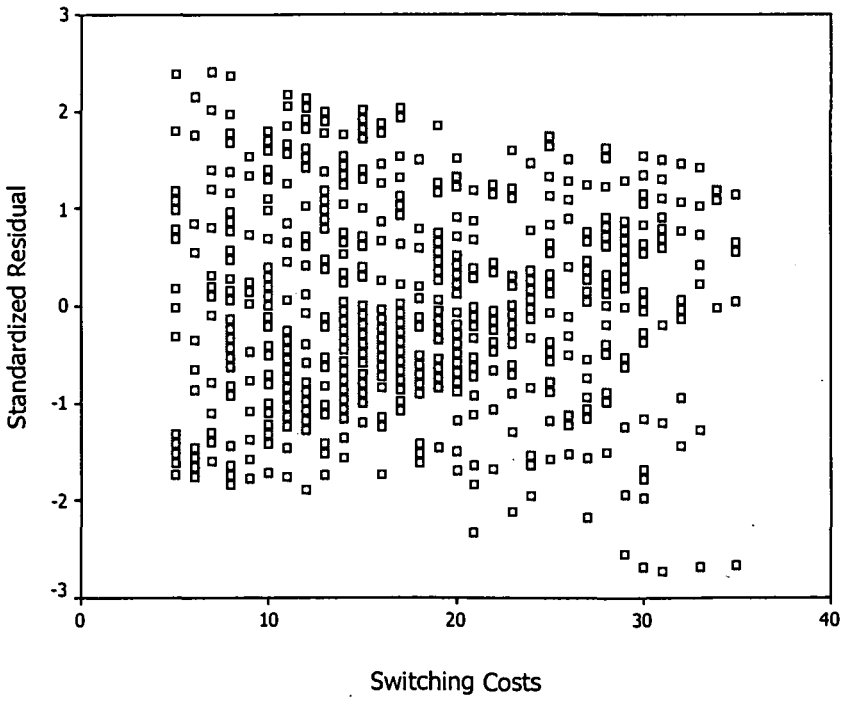


Figure 5.10: Scatterplot of Residuals and Independent Factor (r=0)
Dependent Factor = Customer Retention
Independent Factor = Switching Costs

5.10.2 Regression Analysis

Hierarchical regression analysis was used to test the three hypotheses of this research. In this research, independent factors were entered according to the logical consideration as suggested by Ranaweera and Prabhu (2003).

In Model one, customer satisfaction was entered into the model to test the simple effect of customer satisfaction on customer retention. In Model two, switching costs was entered into the model to test the simultaneous influence of customer satisfaction and switching costs on customer retention. In Model three, the interaction factor was entered to test for significant moderating effect over and above the main effects of the independent factors.

The initial model (Model 1) contained the simple effect of customer satisfaction on customer retention and had an adjusted R^2 value of 0.209, indicating that 20.9% of the variance in customer retention could be explained using the customer satisfaction (Table 5.12). In Model 2, the switching costs factor was added to the model to examine the main effects of both independent factors acting together. This resulted in an increase in the adjusted R^2 value to 26.8%, which was statistically significant (F change = 60.964, $p<0.001$). Finally, the interaction factor was added to the model. As shown in Model 3, this addition resulted in a further increase in the adjusted R^2 value to 28.7%, which was statistically significant (F change = 20.446, $p<0.001$). Indeed, while the marginal increases in the R^2 values were not necessarily of large magnitude, Model 3 explains the highest variance in the dependent factor and is the best model derived in this research (Figure 5.11).

Table 5.12: Results of Regression Analysis of Drivers of Customer Retention

Independent Factor	Model 1	Model 2	Model 3
Customer Satisfaction (CS)	0.458*	0.440*	0.740*
Switching Costs (SC)		0.246*	0.531*
Customer Satisfaction × Switching Costs			-0.451*
R^2	0.210	0.270	0.289
Adjusted R^2	0.209	0.268	0.287
F	196.502*	60.964*	20.446*

Notes:
$\alpha<0.01$. β coefficients have been reported. All changes in R^2 values had a significant F statistic (*$p<0.01$).

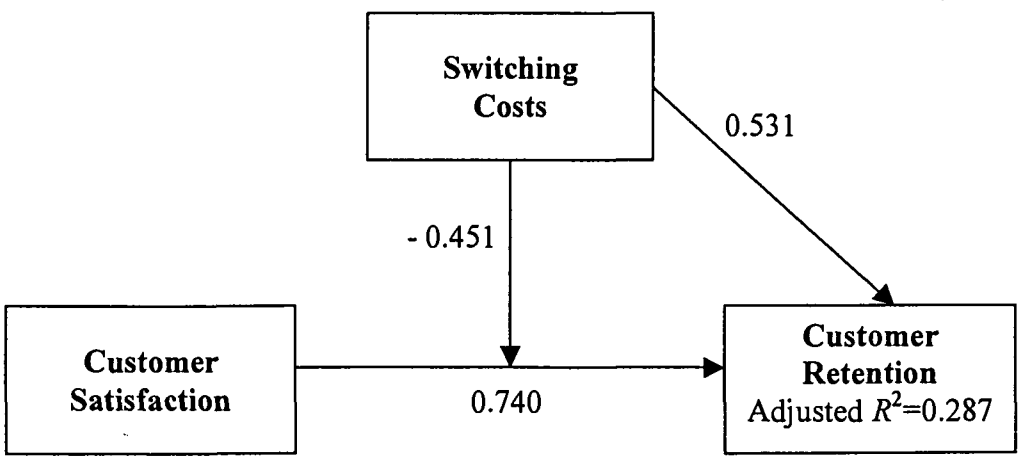


Figure 5.11: Results of Theoretical Model of Customer Retention

The results of Model 3 show that the main effects of customer satisfaction (β = 0.740, $p<0.01$) and switching costs (β = 0.531, $p<0.01$) are all significant and positive, thus confirming hypotheses H1and H2. As consistent with the correlation analysis (Table 5.9), these results also indicate that customer satisfaction is a stronger driver of customer retention than switching costs ($\beta_{cs} = 0.740 > \beta_{sc} = 0.531$). Indeed, this finding is also supported by Model 2 in which the main effects of only

customer satisfaction and switching costs were examined ($\beta_{cs} = 0.440 > \beta_{sc} = 0.246$). Model 3 provides evidence in support of H3. Specifically, the interaction effect of customer satisfaction and switching costs is significant and negative ($\beta = -0.451$, $p<0.01$). The negative sign indicates that the higher the level of switching costs, the lower the slop of customer retention on customer satisfaction. This shows that switching costs act as a constraint, limiting those who are less than satisfied from leaving his/her main Internet bank. This indicates that switching costs, where appropriate, can be an effective and alternative means of strengthening customer retention (Ranaweera and Prabhu, 2003).

5.10.3 Factorial ANOVA Analysis for Hypotheses Testing

To shed further light on the specific nature of the interaction effects, graphical and statistical analysis were conducted as recommended by (Aiken and West, 1991). First, the means scores for the two independent factors of customer satisfaction and switching costs were computed. Second, the entire sample was split into groups of respondents who were either above or below the mean value on the two factors and compared with the mean of customer retention rates of these groups. Finally, factorial ANOVA analysis was conducted in order to determine the effects of each independent factor on dependent factor separately and the interaction effect of the independent factors on dependent factor. An interaction effect occurs when the effects of one independent factor on a dependent factor are dependent upon levels of another independent factor.

Table 5.13 shows the descriptive results of factorial ANOVA analysis. For low customer satisfaction group, the mean of customer retention of the low switching

costs group and the high switching costs group are quite different (3.243 against 4.041). However, for the high customer satisfaction group, the mean of customer retention of the low switching costs group and the high switching costs group are quite similar (4.676 against 4.717).

Table 5.13: Descriptive Results of Factorial ANOVA Analysis

Customer Satisfaction	Switching Costs	Mean of customer Retention	Standard Deviation	N
Low	Low	3.243	1.406	216
	High	4.041	1.499	149
High	Low	4.676	1.262	176
	High	4.717	1.210	202

Table 5.14 summaries the tests of between-subject effects. There are three F-tests, one for each of the main effects and one for the interaction effect. Of these F-tests, all two main effects and the one interaction effect are statistically significant. Again, the values of Eta Squared show that customer satisfaction is a stronger driver of customer satisfaction (Eta Squared = 0.132), followed by switching costs (Eta Squared = 0.023) and interaction effect (Eta Squared = 0.019).

Table 5.14: Tests of Between-Subjects Effects (Customer Satisfaction by Switching Costs)
Dependent Variable = Customer Retention

Source	F	Sig.	Eta Squared
Customer Satisfaction	112.362	0.000	0.132
Customer Costs	17.781	0.000	0.023
Customer Satisfaction * Customer Costs	14.476	0.000	0.019

Figure 5.12 illustrates a profile of the interaction effect. These results indicate that among low customer satisfaction group, those who perceived high switching costs were significantly more likely to be retained than those who perceived low switching costs. However, among the high customer satisfaction group, switching costs have no significant impact in retaining satisfied customers, i.e. there is no significant difference in the mean of customer retention between those with perceived low and high switching costs. These results provide additional support for H3. In addition, these results are also consistent with the previous empirical research findings of Ranaweera and Prabhu (2003).

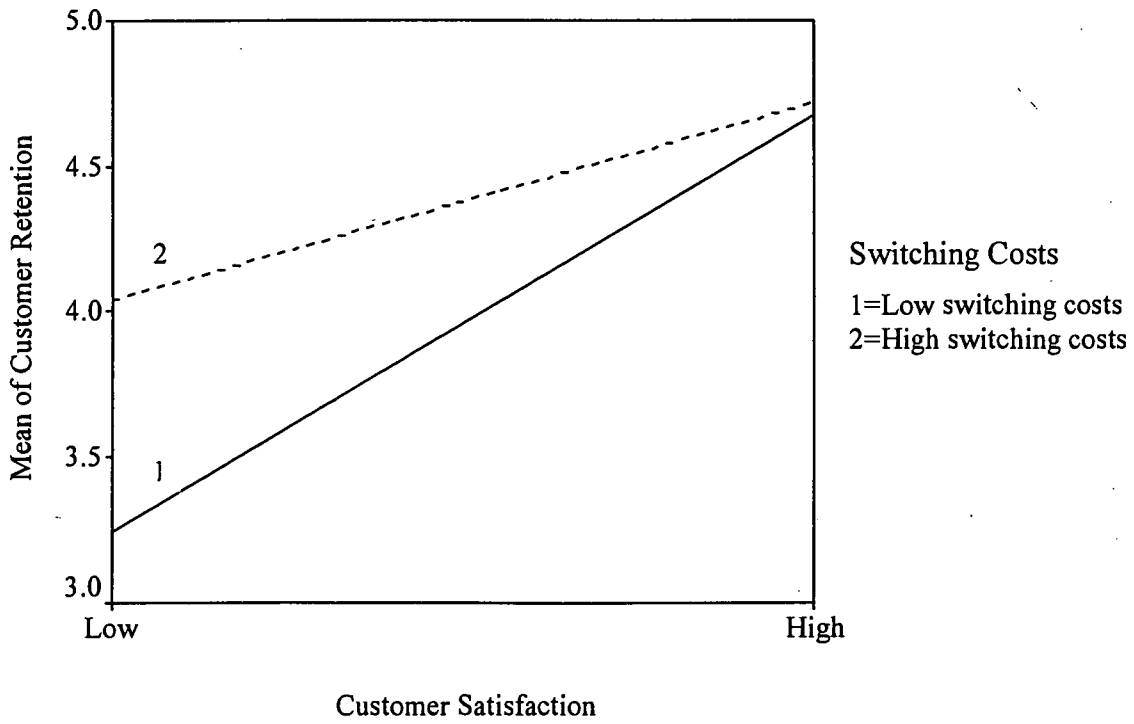


Figure 5.12: Mean Customer Retention across Different Levels of Customer Satisfaction and Switching Costs

5.11 Segment Analysis Based on Level of Internet Banking Service Usage

Blattberg and Deighton (1991) suggest that firms should partition their customer

base into behaviorally and attitudinally homogeneous groups that spend at different levels and then estimate the retention characteristics for each group. In the context of this research, Internet banks offer a variety of services to customers. Customers choose services appropriate for their banking needs. Hence, respondents to this research were divided into two segments, namely basic Internet banking users and advanced Internet banking users, according to the sophisticated level of Internet banking service used. As shown in Table 5.5, 51.5% of respondents belong to basic Internet bank segment (51.5%), while 48.5% of respondents belong to advanced Internet bank segment. Basic Internet banking segment contained those users, who only used their Internet bank for account monitoring, while advanced Internet banking segment contained those users, who used their Internet bank to pay bills, transfer funds or trade securities, in addition to accounting monitoring. Analyzing the data by segment provides additional information about the moderating role of switching costs on the across-segment differences in the customer satisfaction - retention link (Table 5.15).

Table 5.15: Results of Straightforward Regression Analysis of Drivers of Customer Retention based on Level of Internet Banking Service Used

Independent factor	Basic Internet Banking Users	Advanced Internet Banking Users
Customer Satisfaction (CS)	0.717*	0.689*
Switching Costs (SC)	0.650*	0.352*
Customer Satisfaction × Switching Costs	-0.454*	-0.360
Segment Size	383	360
R^2	0.352	0.231
Adjusted R^2	0.347	0.225
F	11.179*	5.707*

Notes:
$\alpha<0.01$. β coefficients have been reported. All changes in R^2 values had a significant F statistic (*$p<0.01$).

It is interesting that switching costs play a significant moderating role in the customer satisfaction - retention link only for the segment of basic Internet banking segment (Figure 5.13). For the advanced Internet banking segment, switching costs does not play a significant moderating role (Figure 5.14). Thus, it seems that, as users became more sophisticated in their use of Internet banking services, switching becomes difficult and users accept whatever the bank has to offer. Customers in this group can be thought of either as true loyalists or as hostages, depending on their satisfaction level (Lee et al., 2001). Another interpretation is that there is a threshold of usage costs related to the amount of usage that can deter customers from switching so that the satisfaction - retention relationship becomes almost flat over the threshold (Lee et al., 2001). Furthermore, the results of the segment analysis were consistent with the research findings of Sheshunoff (2000) who found that once a customer moves to full-service Internet banking combined with electronic

bill paying and automatic fund transfers, the effort to move to another bank will be considerable.

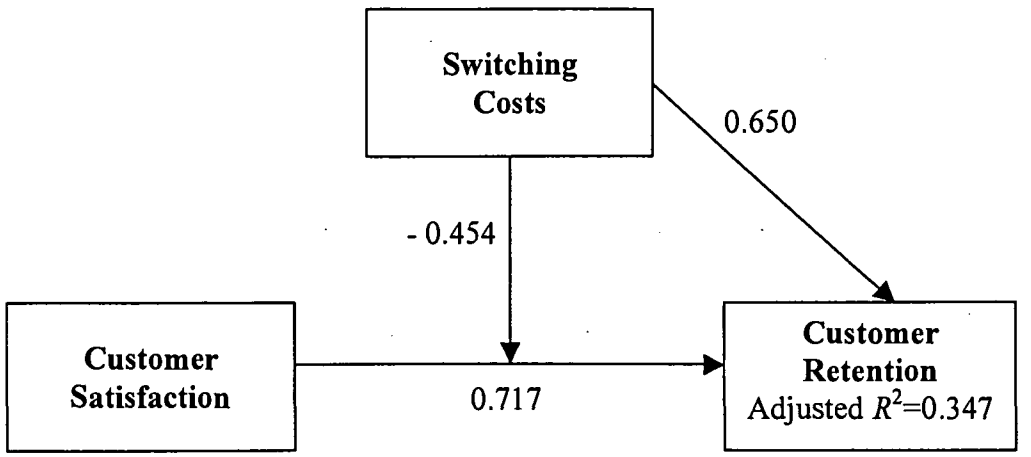


Figure 5.13: Result of Theoretical Model of Customer Retention (Basic Internet Banking Segment)

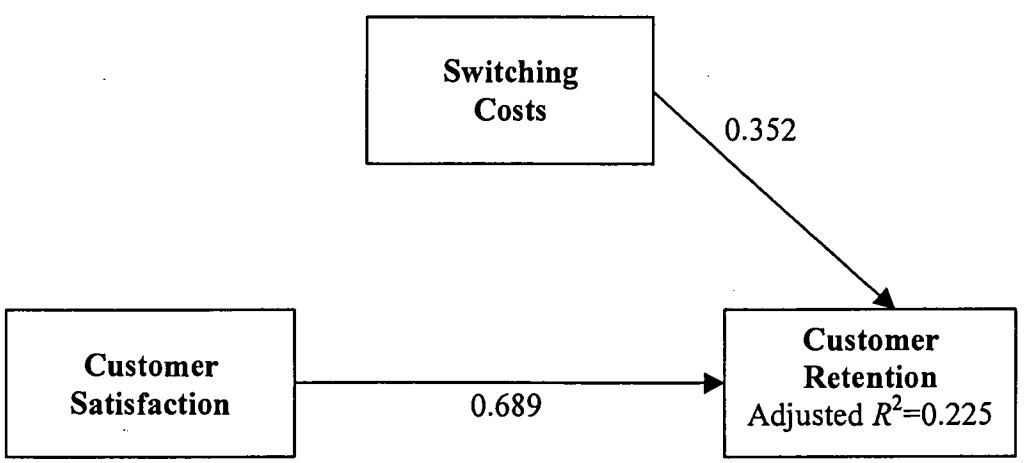


Figure 5.14: Result of Theoretical Model of Customer Retention (Advanced Internet Banking Segment)

The results of the segment analysis as shown in Figure 5.13 and Figure 5.14, indicate that the theoretical model of basic Internet banking segment explains the highest variance in the dependent factor of customer retention than the theoretical model of advanced Internet banking segment. The theoretical model of advanced Internet banking segment is comparatively the best model derived in this research

(Adjusted $R^2_{\text{Basic Internet banking segment}} = 0.347 >$ Adjusted $R^2_{\text{Advanced Internet banking segment}} = 0.225$). These results also indicate that customer satisfaction of basic Internet banking segment is a slightly stronger driver of customer retention than transactional Internet banking segment (Adjusted $R^2_{\text{Customer satisfaction of basic Internet banking segment}} = 0.717 >$ Adjusted $R^2_{\text{Customer satisfaction of advanced Internet banking segment}} = 0.689$). However, it is interesting to note that switching costs of basic Internet banking segment is a much stronger driver of customer retention than transactional Internet banking segment (Adjusted $R^2_{\text{Switching costs of basic Internet banking segment}} = 0.650 >$ adjusted $R^2_{\text{Switching costs of transactional Internet banking segment}} = 0.352$). The overall results of segment analysis indicate that the moderating role of switching costs on the relationship between customer satisfaction and customer retention varies in different Internet banking customer segments.

5.12 Profile of Basic and Advanced Internet Banking Users

Figure 5.13 and Figure 5.14 show that switching costs play a significant moderating role in the customer satisfaction - retention link only for the segment of basic Internet banking segment. Thus, it seems that these two segments are distinguishable. As a result, it is worthwhile to examine whether there are significant differences in terms of their demographics, Internet banking usage as well as their perception towards the three research factors between basic and advanced Internet banking users. This section presents these examinations.

5.12.1 Demographic Profile of Basic and Advanced Internet Banking Users

Apart from deriving support for the hypotheses of this research, it is also important

the demographic variables that are associated with basic and advanced Internet banking users. Demographic backgrounds in seven areas - gender, age, marital status, education, occupation, income and ethnic - were investigated with a Chi-square test in order to find out the differences between basic and advance Internet banking users. The results of Table 5.16 show that education, occupation and income yielded significant differences between the basic and advance Internet banking users ($p<0.01$). The results clearly purport that advance Internet banking users are more educated, have a job, and wealthier than basic Internet banking users. There are no significant differences between basic and advanced Internet banking users' gender, age, marital status and ethnicity. Basic Internet bank users were distributed in different gender, marital status and ethnic categories and so were advanced Internet bank users.

Table 5.16: Demographic Profile of Basic and Advanced Internet Banking Users

	Basic Internet Banking Users %	Advanced Internet Banking Users %	Chi-Square	df	P-value
Gender					
Male	51.4	54.2	0.555	1	0.456
Female	48.6	45.8			
Age					
18-21	27.4	21.9	9.952	5	0.077
25-34	25.3	30.8			
35-44	22.5	27.2			
45-54	15.4	10.8			
55-64	5.7	6.7			
65 or above	3.7	2.5			
Marital Status					
Married	52.5	53.6	2.266	2	0.322
Single	44.9	45.3			
Others	2.6	1.1			
Education					
Form 5 or below	32.1	11.9	79.027	4	0.000
Form 7	23.8	15.3			
Diploma or certificate	17.8	18.9			
Undergraduate degree	15.1	25.0			
Postgraduate degree	11.2	28.9			
Occupation					
Manager, administrator or professional	22.2	41.1	43.718	6	0.000
Clerk	39.9	21.4			
Service worker or shop sales worker	20.6	18.3			
Craft or related worker	1.8	2.5			
Plant, machine operator or assembler	4.7	6.1			
Student	5.7	5.0			
Others	5.0	5.6			
Income					
HK$5,999 or below	17.0	1.1	134.944	8	0.000
HK$6,000 to HK$7,999	14.6	4.2			
HK$8,000 to HK$9,999	13.6	8.9			
HK$10,000 to HK$14,999	12.3	13.1			
HK$15,000 to HK$19,999	12.8	12.5			
HK$20,000 to HK$24,999	11.5	13.9			
HK$25,000 to HK$29,999	9.7	15.3			
HK$30,000 to HK$39,999	6.8	15.6			
HK$40,000 or above	1.8	15.6			
Ethnic Group					
Chinese (Hong Kong)	97.1	97.5	0.098	1	0.754
Others	2.9	2.5			

5.12.2 Internet Banking Usage Patterns of Basic and Advanced Internet Banking Users

Table 5.17 shows the results of Chi-square test between basic and advanced Internet banking users in terms of their Internet bank usage patterns. It is evident that years with main Internet bank, frequency of Internet bank usage, number of Internet bank yielded statistically significant differences between the basic and advanced Internet banking users ($p<0.01$). The results clearly purport that advance Internet banking users had more years with their main Internet, used their Internet bank more frequently, and had more Internet bank account than basic Internet bank users. However, there is no preference of Internet bank between basic and advanced Internet banking users. These results indicate that basic and advanced Internet banking segments are distinctly characterized by their Internet banking usage.

Table 5.17: Internet Banking Usage of Basic and Advanced Internet Banking Users

	Basic Internet Banking Users %	Advanced Internet Banking Users %	Chi-Square	df	P-value
Name of Main Internet Bank					
Hong Kong Shanghai Bank Corporation	31.9	28.9	5.703	6	0.457
Hang Seng Bank	25.3	28.6			
Bank of China	19.6	20.0			
Citibank	8.4	5.8			
Standard Chartered Bank	6.8	6.1			
The Bank of East Asia	4.2	6.9			
Others	3.9	3.6			
Years with Main Internet Bank					
Less than 12 months	29.8	9.7	83.497	4	0.000
13 to 24 months	24.8	21.7			
25-36 months	21.9	19.4			
37 to 48 months	16.4	23.3			
More than 48 months	7.0	25.8			
Frequency of Usage					
Every day	32.6	13.3	106.232	4	0.000
A few times per week	31.3	15.0			
Once a week	15.4	20.0			
Once a month	13.1	26.1			
Less than once a month	7.6	25.6			
Number of Internet Bank					
Only 1	55.1	27.8	57.266	2	0.000
2	23.5	35.6			
3 or more	21.4	36.7			

5.12.3 Perceptual Differences of Customer Satisfaction, Switching Costs and Customer Retention between Basic and Advanced Internet Users

In order to further test the perceptual differences of customer satisfaction, switching costs and customer retention between basic and advanced Internet users, an independent-sample T-test was computed. As Table 5.18 indicates customer satisfaction, switching costs and customer retention were perceived to be significantly different between basic and advance Internet users ($p<0.01$). The

findings imply that the segment of advanced Internet banking users were more satisfied with their Internet bank, perceived more difficultly in switching Internet banks, and displayed more loyalty to their Internet bank than the segment of basic Internet banking users.

Table 5.18: Independent-sample T-test between Basic and Advanced Internet Users (*p<0.01)

	Segment of Internet Banking User	Mean	T-test for Equality of Means (Equal variances assumed)			
			t-value	df	*p*-value (2-tailed)	Mean Difference
Customer Satisfaction	Basic	3.466	2.916	741	0.004*	0.321
	Advanced	3.787				
Switching Costs	Basic	3.383	2.893	741	0.004*	0.320
	Advanced	3.704				
Customer Retention	Basic	3.864	5.421	741	0.000*	0.578
	Advanced	4.441				

5.13 Summary

Three hypotheses were presented to predict the influence of customer satisfaction and switching costs on customer retention. All three hypotheses are supported. The results suggest significant positive effects of customer satisfaction and switching costs on customer retention, thus confirming hypotheses H1 and H2. The results also indicate that customer satisfaction is a stronger driver of customer retention. The analysis of interaction effect of customer satisfaction and switching costs is significant and negative, thus confirming hypotheses H3. Specifically, the negative relationship indicates that switching costs act as a constraint, limiting those who are less than satisfied from leaving his/her main Internet bank. Furthermore, the result of

factorial ANOVA analysis provides additional support for H3.

The results of customer segment analysis based on level of Internet banking service usage indicate that switching costs play a significant moderating role in the customer satisfaction - retention link only for the segment of basic banking users. For advanced Internet banking users, switching costs does not have a significant moderating role. Thus, it seems that these two segments are distinguishable.

Since the basic and advanced Internet banking segments are distinguishable, statistical analysis was conducted to reveal significant differences in terms of demographics, Internet banking usage and perception towards the three research factors between basic and advanced Internet banking users. The results are interesting. First, advanced Internet banking users are more educated, have a good job, and wealthier than basic Internet banking users. Second, advanced Internet banking users had more years with their Internet bank, used their Internet bank more frequently, and had more Internet bank account than basic Internet bank users. Finally, the results of independent-sample T-test revealed that advanced internet banking users were more satisfied with their Internet bank, perceived more difficultly in switching Internet banks and displayed more loyal to their Internet bank than basic Internet banking users. The discussion of research findings, implication of this research, limitation of this research, opportunities of future research, and contribution of this research are presented in next chapter.

CHAPTER 6

CONCLUSIONS

6.1 Introduction

The objective of this research was to develop a research model to examine the main effects of customer satisfaction and switching costs on customer retention as well as the moderating effect of switching costs on the relationship between customer satisfaction and customer retention. This empirical research was conducted in the context of current Internet banking users in Hong Kong. Internet banking service provides excellent context to study customer satisfaction and switching costs on customer retention for a number of reasons. First, Internet banking users have more power to choose and switch among a large number of Internet banks on the Internet. This has caused power to shift from businesses to customers and has resulted in a lower level of customer retention (Kalakota and Whinston, 1996). Second, Internet banking service is believed in a continuous purchasing setting which provides excellent context to study perceived customer satisfaction, switching costs and customer retention (Ranaweera and Prabhu, 2003).

The aim of this chapter is fivefold. First, it discusses the results findings. Second, the implications of this research both for researchers and banks are presented. Third, limitations of this research are discussed. Forth, suggestions for future research are recommended. Finally, the contributions of this study are presented.

6.2 Discussion of Research Findings

The results of this research support the main effects of customer satisfaction and

switching costs on customer retention. The results also support the moderating role of switching costs in the customer satisfaction - retention link.

Sizeable previous research has tested the main effect of customer satisfaction on customer retention (Anderson and Sullivan, 1993; Bansal and Taylor, 1999; Cronin et al., 2000; Rucci et al., 1998). After all, the underpinning of the marketing concept is that identification and satisfaction of customer needs leads to improved customer retention (Ranaweera and Prabhu, 2003). The findings of this research are consistent with previous research which has generally found a significant positive relationship between customer satisfaction and customer retention. This research found that customer satisfaction is the stronger driver of customer retention than switching costs in Internet banking context which is characterized as a continuous purchasing setting and low customer contact setting. This result is consistent with Ranaweera's and Prabhu's (2003) research of fixed telephone line users in the UK which is also in a continuous purchasing setting with low customer contact setting.

This research also shows that the main effect of switching costs on customer retention was highly significant. As reflected in the switching costs measure of this research (see the research questionnaire in Appendix A), the switching costs items involve economic costs and psychological costs. Thus banks may try to increase switching costs adopted in this research as a means of retaining Internet banking customers. Nevertheless, previous research showed that customers could become resentful of switching costs especially if these costs led to a situation of complete entrapment (Withey and Cooper, 1989). For example, some banks provide very attractive terms for credit card applicants in the beginning, but customers end up with less benefit because of a higher interest rate per month. Such practices have

been received negatively because they give the impression of hassling customers and requiring them to have a detailed knowledge of the contract terms. Given that the time and effort required to switch Internet bank are perceived to be important switching costs, banks may therefore focus on service features that increase switching costs without necessarily creating absolute barriers to switching. Ranaweera and Prabhu (2003) suggested that an ideal way for firms to prevent customer resentment is to create switching barriers that also add value to the service. For example, banks may regularly conduct market research to understand what kinds of service features customers want and in this way in order to increase switching costs in a more positive manner.

The regression result based on all respondents supports the significant moderating role of switching costs in the relationship between customer satisfaction and customer retention. The significant moderating role of switching costs implies that customers with high switching costs are more loyal, since high switching costs make them less likely to switch (Lee et al., 2001). This forced loyalty is equivalent to the false loyalty described in Jones and Sasser (1995). While Jones and Sasser identified difference false loyal groups such as defector, mercenaries, or hostages based on the level of customer satisfaction and loyalty, Lee et al. (2001) believed that the relationship between customer satisfaction and loyalty can be better characterized by explicitly accounting for the impact of switching costs. In addition, among low customer satisfaction groups, those who perceived high switching costs were significantly more likely to be retained than those who perceived low switching costs (Figure 5.12). These results provide additional support for the moderating role of switching costs on the relationship between customer satisfaction and customer retention. Thus, in a climate of strong competition in the Internet banking industry,

switching costs can be a useful alternative

Although the moderating role of switching costs on the relationship between customer satisfaction and customer retention was highly significant (based on all respondents), it is not as significant when respondents were split into two groups. It is interesting that the moderating role of switching costs play a highly significant moderating role on the customer satisfaction - retention link only for basic Internet banking users (Figure 5.13). For advance Internet banking users, the moderating role of switching costs does not significantly affect satisfaction - retention link (Figure 5.14). This means that advanced users will switch even in the presence of switching costs. This result indicates switching costs will be no longer an effective strategy at the disposal of banks when more and more customers become web savvy in the future. Long-term customer retention in future competitive Internet banking markets may require a bank to go beyond mere basic satisfaction and switching costs and to look for other ways of establishing ties of retaining customers.

6.3 Implications of this Research

This research identifies certain significance implications for researchers and the banking industry. With recent technological development, the technology costs have made computers more affordable, and access to the Internet more readily available. As a result, the use of Internet banking service has grown dramatically in the world (ACNielsen, 2002). This change gave customers more power to choose and switch to alternative Internet banks (Kalakola and Whinston, 1996). Therefore, surveying current Internet banking users regarding the influence of customer satisfaction and switching costs on customer retention will provide both researchers and banks with

information valuable in retaining customers.

6.3.1 Implications for Researchers

Responding to the threat to customer retention from the use of the Internet as a commercial medium, this research investigated factors affecting customer retention in the Internet banking context. The findings of this research should prompt Internet researchers to pay closer attention to how firms manage retention of their customer who are Internet users through the electronic infrastructure of the Internet.

This study also moves beyond tradition IS research, whose focus is mainly on factors that encourage technological adoption and increase computer usage (Brancheau and Wetherbe, 1990; Bretschneider and Wittmer, 1993; Chau, et al., 1997; Copper and Zmud, 1990; Igbaria, et al., 1997). In retrospect, past IS research has made significant progress on adoption and system usage constructs. To assure technology adoption and acceptance from end users, IS researchers believe that a system should create perception of usefulness and ease of use (Davis, 1989; Igbaria et al., 1997). To increase usage, the system and the information must have a high quality; user must feel satisfied (DeLone and Ephraim, 1992), and must expect net benefit from future use (Seddon, 1997). Once the system has been adopted and used, the next logical inquiry for IS research seems to be how to retain users. The findings of this research urge IS researchers to extend their emphasis factors leading to effective strategies to maintain users (Figure 6.1).

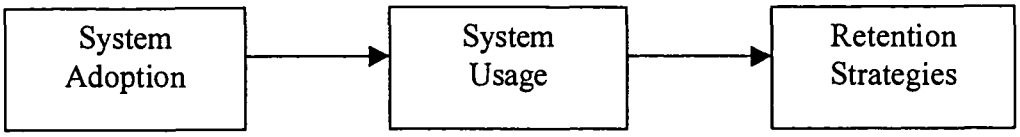


Figure 6.1 Extension of Traditional IS Research Focus: Adoption-Usage-Retention

6.3.2 Implications for Banks

Managing effective retention strategies is increasingly important since the length of years of customer relationship is the most important factor in providing an explanation to the firm's profitability (Buchanan and Gilles, 1990; Fornell, 1992; Reichheld and Sasser, 1990). Specifically, Reichheld (1996) found that five percent increase in customer loyalty produces 85 percent increase in profitability for the banking industry. A recent wave of mergers and acquisitions in the Hong Kong banking industry clearly illustrate how much value banks put on acquiring new customers. Needless to say, it is important for banks to develop well-designed customer satisfaction programs in order to increase customer retention. Lee al el. (2001) argued that the customer satisfaction programs should be accompanied by switching costs management for early detection and prevention of switching behavior. By understanding the moderating role of switching costs in affecting the relationship between customer satisfaction and customer retention, banks can take advantage of structuring switching costs.

As mentioned before, the results of this research indicate that the impact of moderating role of switching costs in affecting the relationship between customer satisfaction and customer retention were not applicable to all customer segments in the Internet banking context. Switching costs play a significant moderating role in

the customer satisfaction - retention link only for basic Internet banking users. For advanced Internet banking users, switching costs do not affect customer retention. Viewing the importance of customer retention in banking industry, banks should make use of their database by tracking customers' consumption behavior to infer their behavioral switching costs. Hauser et al. (1994) argued that, if customers can be segmented by switching costs, a firm can improve its profits by placing different weights on customers with different levels of satisfaction and different switching costs. Satisfaction receives the highest weight when the absolute values of the switching costs are small. However these implication and results should be considered within certain limitations.

6.4 Limitations of this Research

The limitations of this research can be classified as two main categories. These are limitations of research methodology and limitations of data and analysis.

6.4.1 Limitations of Research Methodology

Although methodologies cannot be true or false, methodologies can be only more or less useful (Silverman, 1994), there are some limitations of methodology adopted in this research. Firstly, research investigating actual retention, rather than intention to remain using the Internet banking service, is encouraged. Although previous research has always used intention to stay as a surrogate for actual retention (Garbarino and Johnson, 1999; Morgan and Hunt, 1994; Rust and Zahorik, 1993; Shemwell et al., 1994; Sirohi et al., 1998), intention to remain using main Internet banking service may not accurately represent actual retention. The meta-analytic

findings of Tett and Meyer (1993), for example, indicate the turnover intention account for only 27 percent of actual turnover. Nevertheless, intention remains an important construct since it can signal the need for intervention to prevent and reduce the occurrence of actual service termination.

Secondly, this empirical research was based on the survey of Internet banking industry. Naturally, the findings of the main effects of customer satisfaction and switching costs on customer retention as well as the moderating role of switching costs on the relationship between customer satisfaction and customer retention are most likely to hold for other similar low customer contact and mass service context with a continuous purchasing pattern (Ranaweera and Prabhu, 2003). The results need to be replicated for other Internet-based services to further validate of the research model of this study.

Finally, respondents of this research were divided into two segments, namely basic Internet banking users and advanced Internet banking users, according to the sophisticated level of Internet banking service used. As advanced Internet users were defined as those users who used Internet banking to pay bills, transfer funds and/or trade securities, this definition might be considered too generic. The definition of advanced Internet banking users might have improved if respondents were able to state which advanced Internet banking services they actually used.

6.4.2 Limitations of Data Analysis

Although this study provides interesting insights into factors affecting customer retention in the Internet banking setting, the results must be interpreted with caution.

Firstly, based on analysis of all respondents, both customer satisfaction and switching costs factors explained only 28.7 percent of the variance in customer retention (Figure 5.11). Since more than 71 percent of the variance is unexplained, there is a need for additional research incorporating potential variables that were not measured in this research.

Secondly, Internet banking is undoubtedly a changing phenomenon. Previous research indicated that customers' attitudes and perceptions do change over time (KPMG, 1997). Therefore, the research should be conducted at different time interval to understand the changing customers' attitudes towards customer satisfaction, switching costs and customer retention. However, for the purpose of this research, only a cross-sectional survey i.e. a snapshot in time was conducted. As such, the collected data can only represent the attitude and perception of the respondents at the time the survey was conducted. While cross-sectional survey is useful in identifying patterns of relationships among relevant factors, longitudinal research is essential to confirm the causal linkages among the study factors (Igbaria et al., 1997).

Thirdly, the findings of this study may not be generalizable to the population as a whole, since there were only 22.3 percent of survey respondents had an education level of form 5 or below, as compared to 74.1 percent for the Hong Kong population and there were 3.1 percent of respondents with aged 65 or above, as compared to 11.1 percent of the Hong Kong general population (Table 5.1). However, higher education and younger people may be somewhat representative of those individuals who are active on the Internet banking users.

Finally, the fact that more than ninety-seven percent of respondents are Hong Kong Chinese and presumably lived in Hong Kong, this may present selection bias to the findings. These customers may possess specific cultural characteristics that limit the generalization of research findings to other populations. While it is not obvious that the findings are sensitive to geographic location, future research can address this by replicating this study with sample from different regions in the world.

6.5 Future Research

This research represents one of the very few empirical inquiries into a phenomenon of great managerial and academic interest. Clearly, though, a number of limitations are warranted to qualify this research findings and to encourage future research efforts.

First and foremost, though this research has served to reveal certain aspects within the arena of retention of customers in the context of Internet banking in the Hong Kong, there is still a room for further research in order to ascertain and enrich the findings of this study. Firstly, since Internet banking relies heavily on maintaining relationships with customer (Barnes, 1997), the theoretical models of this study should be tested in other kinds of e-commerce industries, such as Internet retailing and Internet travel agencies, in order to strengthen the generalizability of the findings.

Second, the results of segment analysis indicate that the influence of customer satisfaction and switching costs on customer retention varies in different customer segments (Table 5.15). Future research should analyze the moderating role of

switching costs on the relationship between customer satisfaction and customer retention for each of advanced banking segment (i.e. bills payment, funds transfer and securities trading) to examine heterogeneity in the customer satisfaction - retention link among different advanced banking segments.

Third, as both customer satisfaction and switching costs factors explained only 28.7% of the variance in customer retention (Figure 5.11), future research should attempt to introduce more moderating factors in order to increase the variance explained in customer retention. Specific factors include relationship investment (Jones et al., 2000), availability of alternative (Benedapudi and Berry, 1997), and attractiveness of alternative (Anderson and Narus, 1990).

Finally, the fact that more than ninety-seven percent of respondents are Hong Kong Chinese and presumably lived in Hong Kong may present selection bias to the findings. These customers may possess specific cultural characteristics that limit the generalization of research findings to other populations. While it is not obvious that the findings are sensitive to geographic location, future research can address this by replicating this study with sample from different regions in the world.

6.6 Contributions of this Research

The main contributions of this research are threefold. First a large amount marketing literature has examined the issues of customer retention and loyalty in traditional non-Internet settings (Anderson and Sullivan, 1990; Bowen and Shoemaker, 1998; File and Prince, 1994; Hellier, 1995; Hennig-Thurau and Klee, 1997; Jacoby and Chestnut, 1978, Lian, 1994; Reichheld and Aspinwall, 1993; Reichheld and Sasser,

1990; Reichheld, 1994; Reichheld, et al., 2000; Rust and Zahorik, 1993 and Sirohi et al., 1998). However, in spite of the rapid adoption of the Internet, few customer retention studies have extended beyond traditional non-Internet settings into the context of Internet setting. Therefore, this study would be among the earliest attempts to integrate Internet banking service and marketing concepts in order to identify factors contributing to customer retention in Internet environment.

Secondly, while the main effects of customer satisfaction and switching costs on customer retention as well as the moderating role of switching costs on the relationship between customer satisfaction and customer retention have been empirically validated in non-Internet settings (Lee et al., 2001; Ranaweera and Prabhu, 2003), few have tested for the moderating role in the context of Internet setting particular in Internet banking setting. This research is one of the earliest attempts to examine a theoretical model incorporating the main effects of customer satisfaction and switching costs on customer retention, together with the moderating effect of switching costs in the customer satisfaction – retention link. Results from statistical analyses show that both customer satisfaction and switching costs have strong positive direct effects on customer retention. These analyses also confirm the moderating effect of switching costs in the customer satisfaction – retention link. However, when Internet banking adoptors are categorized into two segments according to their usage of Internet banking service (basic and advanced users), results show that switching costs play a significant moderating role on the relationship between customer satisfaction and customer retention only for the basic Internet banking users. These results indicate that basic and advanced Internet banking users are distinguishable.

In sum, this research indicates that customer retention programs accompanied by well-designed customer satisfaction programs can be effective in increasing customer retention in both segments of basic and advanced Internet banking users. However, switching costs can only indirectly strengthen the customer satisfaction - retention link and in turn contribute to increased customer retention only for the segment of advanced Internet banking users. In the future, it is recommended that banks should develop different customer retention programs for the two segments of customers. For the basic Internet banking segment, banks should implement a reward program in order to encourage the basic Internet banking users to try to use one or few advanced Internet banking services. Once a basic Internet banking user starts to use and eventually adopt the advanced Internet banking services, their switching to another bank will be more difficult and bank should be easier to retain them. For the advanced Internet banking segment, the attention of banks is to maintain a high switching costs. One possible to achieve this objective is to encourage the existing advanced Internet banking users to consume more advanced banking services. As more banking services are adopted, advanced Internet banking users will perceive higher switching costs, this will make the advanced Internet banking users more difficult to switch.

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APPENDIX A

RESEARCH QUESTIONNAIRE

Instruction: 前言:

I am a doctoral student of the University of South Australia. I would like to invite you to participate in my research study. This Internet questionnaire should take about 10 minutes to complete.
我是一名南澳大學博士研究生，我誠意邀請您參與我的研究調查，這網上問卷大約需要 10 分鐘完成。

This questionnaire intends to solicit your perception on your main Internet bank. Your main Internet bank is defined as the Internet bank, which you use most frequently now. In order to be qualified to fill in the questionnaire, you must be:
這份問卷的目的是調查你對你的主要網上銀行的觀感。你的主要網上銀行是指你現在最通常用的網上銀行。答卷人必須符合以下 2 個要求:

(1) aged 18 or over, and
(1) 18 歲或以上

(2) currently using your main Internet bank to conduct account monitoring.
(2) 你現正使用你的主要網上銀行來核對戶口帳項。

The data collected will be treated as anonymous and analyzed as a group, without identifying individual responses. All data collected will remain confidential and will not be released to any individual or organization. I will take every care to remove response from the Internet as early as possible. However, I cannot guarantee the confidentiality or anonymity during transmission of data via the Internet. All information collected as part of my study will be retained for seven years in a locked cabinet in my office.
收集到的答卷資料將進行匿名處理，集中分析，及不會識別到個人的資料。收集的答卷資料將進行保密，絕不向任何人或組織透露。我也會在網上及時小心地清除答卷資料。但是，我不能爲網路傳輸過程中資料的保密負責。所有收集到的資料將只作爲本人研究的一部分及將保存在我辦公室一個上了鎖的櫃子裏七年。

If you have any additional questions at any time please contact me on +(852) 23597888 or wongchibo@sinaman.com or Vicki Allen (Human Research Ethics Committee of the University of South Australia) on +(618) 83023118 or vicki.allen@unisa.edu.au.
如你有其他問題，請聯絡本人，電話號碼 +(852) 23597888 或電郵到 wongchibo@sinaman.com，或聯絡南澳大學人文研究道德委員 Vicki Allen，電話號碼 +(618) 83023118 或電郵 vicki.allen@unisa.edu.au。

Please indicate your consent to participate in this Internet questionnaire by clicking on the 'Next' button.
如果您同意參加此項問卷調查，請點擊"Next"按扭

Mr. WONG Chi Bo	王志寶先生
BSc(Hons), MBA, MA, MSc	理榮譽學士，工商管理碩士，文碩士，理碩士
Researcher	研究員

Section 1: **With respect to your own feelings as an Internet banking user of your main Internet bank, please click the appropriate circles to indicate the degree of your agreement or disagreement with each statement.**

第一部份: 根據你的觀感，作爲一個你的主要網上銀行的用戶，請點擊適合的小圓形來顯示你對以下句子的同意程度。

1. **My main Internet bank meets my expectation.**
我的主要網上銀行達到我的期望。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

2. **I think I did the right thing when I chose my main Internet bank.**
我認爲我選對了我的主要網上銀行。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

3. **Overall, I am happy with my main Internet bank.**
整體上，我滿意我的主要網上銀行。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

Section 2: Please click the appropriate circles to indicate the degree of your agreement or disagreement with each statement.

第二部份: 請點擊適合的小圓形來顯示你對以下句子的同意程度。

4. It would cost me a lot of time to change my main Internet bank.

轉換我的主要網上銀行是很費時的。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

5. It would cost me a lot of effort to change my main Internet bank.

轉換我的主要網上銀行是很費神的。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

6. It is risky to change my main Internet bank as the new Internet bank may not give good services.

轉換我的主要網上銀行是冒險的，因爲新的網上銀行可能不能提供優質的服務。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

7. I would feel frustrated if I terminated my current relationship with my main Internet bank.

我會感到徬徨，如果我終止使用我現在的主要網上銀行。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

8. **Considering everything the cost to stop using my main Internet bank and start up with a new main Internet bank would be high.**
整體上，終止使用我現在的主要網上銀行和使用另一新的主要網上銀行的代價是很高的。

Strongly disagree	極不同意	O
Disagree	不同意	O
Slightly disagree	幾不同意	O
Neutral	既不同意也不反對	O
Slightly agree	幾同意	O
Agree	同意	O
Strongly agree	極同意	O

Section 3: What do you think are the chances of switching to an alternate main Internet bank?

第三部份: 從以下三個時段來看，你認爲你轉到另一間新的主要網上銀行的機會有多高?

9. ...within the next three month?

...在未來三個月內?

Very low	很低	O
Low	低	O
Slightly low	幾低	O
Neutral	既不高也不低	O
Slightly high	幾高	O
High	高	O
Very High	很高	O

10. ... within the next six months?

...在未來六個月內?

Very low	很低	O
Low	低	O
Slightly low	幾低	O
Neutral	既不高也不低	O
Slightly high	幾高	O
High	高	O
Very High	很高	O

11. ... within the next one year?

...在未來一年內?

Very low	很低	O
Low	低	O
Slightly low	幾低	O
Neutral	既不高也不低	O
Slightly high	幾高	O
High	高	O
Very High	很高	O

Section 4: This section is concerned with your usage of your main Internet bank.

第四部份: 這部份涉及你使用你的主要網上銀行的情況。

12. What is the name of your main Internet bank?

你的主要銀行是?

Hong Kong Shanghai Bank Corporation	香港匯豐銀行	O
Hang Seng Bank	恆生銀行	O
Bank of China	中國銀行	O
Citibank	花旗銀行	O
Standard Chartered Bank	渣打銀行	O
The Bank of East Asia	東亞銀行	O
Others	其他	O

13. How long have you been using your main Internet bank?

你用了你的主要網上銀行多久?

Less than 12 months	少於 12 個月	O
13 to 24 months	13 至 24 個月	O
25 to 36 months	25 至 36 個月	O
37 to 48 months	37 至 48 個月	O
More than 48 months	超過 48 個月	O

14. On average, how often do you use your main Internet bank?

平均來說，你多經常使用你的主要網上銀行?

Less than once a month	少於一個月一次	O
Once a month	一個月一次	O
Once a week	一星期一次	O
A few times per week	一星期數次	O
Every day	每天	O

15. How many Internet bank accounts do you currently have (including your main Internet bank)?

你現在有多少個網上銀行戶口 (包括你的主要網上銀行)?

Only 1	1 個	O
2	2 個	O
3 or more	3 個或以上	O

16. Apart from conducting account monitoring, are you currently using your main Internet bank to pay bills, transfer funds or trade securities?

除了使用你的主要網上銀行來核對戶口帳項，你是否現正使用你的主要網上銀行來付帳單，轉帳或買賣證券。

Yes	是	O
No	否	O

Section 5: This section is concerned with your background information.
第五部份: 這部份涉及你的個人資料。

17. What is your gender?
你的性別？

Male	男	O
Female	女	O

18. What is your age?
你的年齡？

18-24	18 至 24 歲	O
25-34	25 至 34 歲	O
35-44	35 至 44 歲	O
45-54	45 至 54 歲	O
55-64	55 至 64 歲	O
65 or over	65 歲或以上	O

19. What is your marital status?
你的婚姻狀況？

Married	已婚	O
Single	單身	O
Others	其他	O

20. What is the highest level of formal education your have completed?
你已完成最高的教育水平?

Form 5 or lower	中五或以下	O
Form 7	中七	O
Diploma or equivalent	文憑或同等學歷	O
Undergraduate degree or equivalent	學士或同等學歷	O
Postgraduate degree or equivalent	碩士學位或同等程度	O

21. Which one of the following categories best describes your occupation?
以下哪一類最適合表示你現在的職業？

Manager, administrator or professional	經理，行政人員或專業人員	O
Clerk	文員	O
Service worker or shop sales worker	服務工作或商店銷售人員	O
Craft or related worker	工藝或有關人員	O
Plant, machine operator or assembler	機台，機器操作或裝配員	O
Skilled agricultural or fishery worker	漁農業熟練工人	O
Student	學生	O
Others	其他	O

22. What is your total personal income per month from all sources before taxes? (US$1=HK$7.8)
你個人每月稅前的總收入是多少？（一美元等於七元八角港元）

HK$5,999 or less	少於港幣 5,999	O
HK$6,000-HK$7,999	港幣 6,000 至港幣 7,999	O
HK$8,000-HK$9,999	港幣 8,000 至港幣 9,999	O
HK$10,000-HK$14,999	港幣 10,000 至港幣 14,999	O
HK$15,000-HK$19,999	港幣 15,000 至港幣 19,999	O
HK$20,000-HK$24,999	港幣 20,000 至港幣 24,999	O
HK$25,000-HK$29,999	港幣 25,000 至港幣 29,999	O
HK$30,000-HK$39,999	港幣 30,000 至港幣 39,999	O
HK$40,000 or above	港幣 40000 或以上	O

23. What is your race?
你屬於哪一個種族?

Hong Kong Chinese	香港中國人	O
Others	其他	O

End of Survey
Thank you very much for your cooperation!
If you want to have a summary of results of this survey, please email wongchibo@sinaman.com.

調查完結
很多謝你參與這份問卷調查!
如果你想獲得這問卷的調查結果，請電郵 wongchibo@sinaman.com.