Factors Affecting Customer Retention in Internet Banking among Hong Kong Professionals and Business Practitioners

YAU Suk Ching Eppie
MBA

Dissertation submitted to the Faculty of Business & Law
Newcastle Graduate School of Business
University of Newcastle
In partial fulfillment of the requirement for the degree of
Doctor of Business Administration

January 2007

I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a university degree or other similar qualification to any other University or Institution.

Yau Suk Ching Eppie

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank Dr Siva Muthaly of Swinburne University of Technology for supervising my dissertation and making valuable comments and suggestions for me to act upon. His kind guidance and encouragement drove me to complete the project on schedule and of good quality.

I would also like to express my gratitude to Mr Lee Yu Cheung for his support with finance and facilities; to Dr Margo Poole, Dr Gian Casimir, Dr Brian Wong, Mr Bruce Andresen and Mrs Coral Cherry for their advice and encouragement during this research project; to my fellow students and my many friends for their faith in me in completing the study; to Mr James Bullen and Miss Juli Batten for their proofreading assistance. I would also like to thank the people who participated in this research.

I dedicate this DBA thesis whole-heartedly to my loving father for his silent support in whatever I choose to do in life. Last but not the least, I thank God for leading my way and to Him all the credits go.

TABLE OF CONTENTS

CHAPTER 2 LITERATURE REVIEW

CHAPTER 3 RESEARCH METHODOLOGIES

CHAPTER 4 DATA ANALYSIS AND RESULTS

CHAPTER 5 CONCLUSIONS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Internet banking has revolutionized the E-commerce industry since the nineteenth century. The greatest benefits of this new form of banking for banks are that it has generated enormous cost-saving and efficiency in communication, transaction and delivery. However, it has intensified the competition between banks as well as allowing customers to easily compare offers provided by different banks. This ‘frictionless commerce’ tends to raise customers’ expectations about services and products and makes them more prone to switching to other service providers.

In order to minimize threats and maximize opportunities, banks should actively retain customers in the virtual place. Profitable customers in retail banking take up less than half of any bank’s customer base. In addition, the characteristics of the Internet channel lead to low differentiation, competing on monetary return and product attribute alone may not be sufficient to retain customers. Factors affecting customer retention have not been investigated in detail from an Internet-banking stance.

Customer satisfaction has been empirically validated to have a relationship with customer retention in service sector. Customer commitment, however, in a business relationship goes beyond satisfaction. In a setting of low-customer contact and mass service, trust is an important driver of customer retention. This research postulates on how customer satisfaction, customer commitment and trust impacts on the profitable customer segment of professionals and business practitioners in the context of Internet banking in Hong Kong.

Data from 208 survey questionnaires collected from ten professional/business organisations measuring the relationships between the various constructs have been analysed. The findings revealed that customer satisfaction, a transaction-specific attribute, has a significant positive impact on customer retention in the scope of Internet banking in Hong Kong, which concurs with extensive academic literature. Customer commitment and trust, relational-specific attributes, have negative influence on customer retention in the context. These two factors, as single effort with or mediating for customer satisfaction, do not display an effective role in enhancing the relationship towards customer retention. This finding seems to have refuted traditional marketing phenomenon in the context of non-Internet paradigms.

CHAPTER 1 INTRODUCTION

1.1 Introduction

This chapter introduces the research project. Section 1.1 introduces the sections in the chapter. Section 1.2 provides the background to this research – Internet banking. Section 1.3 reports on the literature review leading to the research problem. Section 1.4 identifies the research gap, states the research objectives and confirms the significance of the study. Section 1.5 depicts the research model of this study. Section 1.6 determines the research methodology of this study and the relevant ethical issues. Section 1.7 presents the structure of this thesis.

1.2 The Background of Internet Banking

Nineteenth century banking was transformed by political, economic, social and technological changes to create a new competitive environment to the banking industry (Jayawardhena and Foley, 2000). Of all the changes, technology has dominated the revolution (Bednar, Reeves & Lawrence*,* 1995; Gandy, 1998). As the general public becomes more computer literate and the price of personal computers drops, the number of Internet banking users has grown substantially (Karjaluoto, Kovivumäki & Salo, 2002) whereas the branch-banking customer segment has shrunk (Mols, 2000). The Internet is claimed to be the base for a new industrial structure (Furash, 1999) that has uprooted the medieval foundations of the banking system (Nehmzow, 1997).

1.2.1 Opportunities and Threats of Internet Banking

The popularity of Internet banking has created opportunities as well as threats for the service providers. The biggest benefits of Internet banking for banks are enormous cost-saving and efficiency in communication, transaction and delivery (Peterson, Balasubramanian & Bronnenberg, 1997; Furash, 1999; Robinson, 2000). Although new forms of banking can offer promising opportunities, at the same time, they have intensified competition between banks for customers (Vatanasombut, Stylianou & Igbaria, 2004). Non-bank operators entering the banking arena have mushroomed around the globe (The Economist, 2000; Itoh, 2001).

Internet banking not only intensifies competition, it also enables customers to easily compare the terms and conditions of the financial products or services offered by different banks (Rogerson, Foley & Jayawardhena, 1999). This 'frictionless commerce' tends to raise customers' expectations about services and products and could lead to dissatisfaction and make these customers more prone to switching to other service providers (Shankar, Urban & Sultan, 2002). Figure 1.1 diagrammatically presents the threats and opportunities for Internet banking.

Threats:

- Keen competition
- Difficulty in retaining customers

Opportunities:

- Enormous cost-saving
- Efficiency in delivery

Internet Banking

Figure 1.1: Threats and Opportunities of Internet Banking

1.2.2 Customer Retention in the Context of Internet Banking

In order to minimize risks and maximize opportunities, banks should retain customers in the virtual place so as to gain profit from offering Internet banking. It has been proved that increased customer retention leads to additional sales, lower costs, more endurable higher prices and free recommendations (Reichheld and Schefter, 2000). However, not all customers are profitable (Petro, 1990; Cooper and Kaplan, 1991; Peppers and Rogers, 1993; Slywotzky and Shapiro, 1993; Wang and Splegel, 1994; Wayland and Cole, 1997).

In retail banking, 50-60 percent of customers are unprofitable (Storbacka, Strandvik & Grönroos, 1994). One empirical study by a New Zealand bank revealed that one third of its customers accounted for 98 percent of its profit (Garland, 2002). Figure 1.2 shows the proportion of profitable and non-profitable customers. Logically, banks should actively build relationships with profitable customers (Shapiro, Rangan, Moriarty & Roos, 1987; Slywotzky and Shapiro, 1993; Jones and Sasser, 1995).

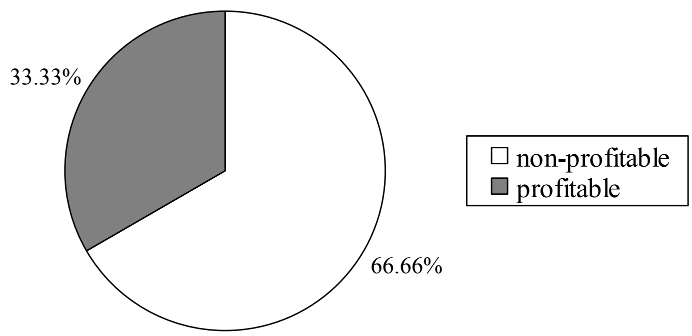


Figure 1.2: Profitable and Non-profitable Customers

of a New Zealand Bank

(Source: Garland, 2002)

1.2.3 Profitable Bank Customers

Statistics show that the two occupation categories of ‘managers and administrators’ and ‘professionals and associate professionals’ in Hong Kong earn well above the overall income standard (Hong Kong Monetary Authority, 2004b). These professionals and business practitioners routinely work around the clock seven days a week and often have to travel with their laptops for business. To these ‘cash-rich but ‘time-poor’ computer-savvy professionals and business practitioners, performing their banking business with the click of a mouse anytime and anywhere seems to be the perfect solution to help them manage their money (Hagel, Hewlin & Hutchings, 1997). Logically, these people are the potentially profitable customers for Hong Kong banks and should be targeted for retention.

1.3 Factors Affecting Internet Banking Customer Retention

The Internet channel, however, possesses some characteristics that make it difficult for companies to retain customers. The characteristics often lead to increased competition (Chatterjee and Narasimhan, 1994; Choudhury, Harzel & Konsynski, 1998), low differentiation (Dholakia and Rego, 1998) and commoditization of the market (Bakos, 1997). Competing on monetary return and product attribute alone may not be sufficient to retain customers (Cravens, 1995).

1.3.1 Customer Satisfaction

The factors affecting customer retention are diverse. Of the numerous factors, customer satisfaction has been empirically validated to have relationship with customer retention in the service sector (Anderson and Sullivan, 1993; Rucci, Kim & Quinn, 1998; Bansal and Taylor, 1999; Cronin, Brady & Hult, 2000; Ranaweera and Prabhu, 2003a). The importance of satisfaction on customer retention is so well recognised that some major economies measure satisfaction at the industry level to predict customer retention and future financial performance (Fornell, Ittner & Larcker, 1995). It has been cited that repeat purchase depends on satisfying customer needs and wants (Kotler, Armstrong & Cunningham, 2002).

1.3.2 Customer Commitment

Although accumulated evidence indicates that customer satisfaction influences repurchase behaviour, this explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). Satisfied customers may leave a relationship and dissatisfied customers do not necessarily switch to a competitor (Reichheld, 1993). Firms need to go beyond mere satisfaction to retain customers in a competitive business environment (Morgan and Hunt, 1994; Bendapudi and Berry, 1997; Hart and Johnson, 1999). Studies suggest that strong interpersonal relationships positively influence customers' intention to repurchase in the case of low customer satisfaction (Jones, Motherbaugh & Beatty, 2000). Commitment in a business relationship goes beyond satisfaction and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson, Soni & O'Keeffe, 1995). It has also been cited that commitment is positively related to intentions to repurchase (Fullerton, 2005). Service providers implementing effective relationship-specific investment can increase customers' dependency, thus inhibiting switching (Berry and Parasuraman, 1991).

1.3.3 Trust

Firms rely on commitment and trust to maintain long-term relationships with customers (Hennig-Thurau and Klee, 1997). A study of consistent theatergoers reveals commitment and trust as mediating factors affecting attitude for continuing to go to the same theatre (Garbarino and Johnson, 1999). In service firms, the psychological benefit of trust is more important than social benefits or special treatment in consumer relationships (Gwinner, Gremler & Bitner, 1998). In a setting of low-customer contact and mass service, trust is an important driver of customer retention (Ranaweera and Prabhu, 2003a).

1.4 Research Gap, Objective and Significance

1.4.1 Research Gap

Studies on how to successfully retain customers in the context of Internet banking remain limited (Gallaugher, 1999). An understanding of customer retention and satisfaction with a service delivery that is a technology-based self-service is rare (Yen and Gwinner, 2003). Studies into the effects of customer commitment on switching providers or customer retention have been extremely insufficient (Bettencourt, 1997; Garbarino and Johnson, 1999; Pritchard, Havitz & Howard, 1999). Even though studies have been done on the behaviour of Internet customers, the field is still in an exploratory stage (Ranaweera, McDougall & Hansal, 2004). Accordingly, one can identify a research gap pertaining to previous researches into the examination of customer satisfaction, commitment and trust in the scope of Internet banking.

1.4.2 Research Objective

Furthermore, only a few banks use customer-segment and profitability information to focus their marketing efforts (Donner and Dudley, 1996). It has become apparent that studies into segmentation in personal financial services have been inadequate (Harrison, 1994). Thus, a research topic 'Factors Affecting Customer Retention in Internet Banking among Hong Kong Professionals and Business Practitioners' is confirmed with the aim of investigating how customer retention in the scope of Internet banking in Hong Kong is affected by customer satisfaction, customer commitment and trust among professionals and business practitioners. The objective of the study is to measure the factors influencing customer retention in this context.

1.4.3 Research Significance

This research has practical significance. Once banks understand the factors affecting customer retention on the Internet channel, they can design their marketing strategies to cope with the challenges of keeping profitable customers in the virtual market place to enjoy such relevant advantages as enormous costs savings and increased efficiency in transaction and delivery (Furash, 1999; Mols, 1998) and, more important, profitability (Fornell and Wernerfelt, 1988; Anderson and Sullivan, 1990). For bank customers, the advantages of Internet banking lie in being provided with new levels of convenience with no time constraints (Jeon and Rice, 1997), as well as greater flexibility in banking services. By staying with the same Internet service provider, service users can save on switching costs while avoiding the potential risks caused by switching. Since both banks offering Internet banking services and bank customers have widely adopted the medium, this research can be of value to both entities (Quelch and Klein, 1996).

For academia, the findings of this research will provide empirical evidence and may add new knowledge to the existing marketing literature in the understanding of the impact of the complex relationship between customer satisfaction, commitment and trust on customer retention in the technology-based self-service area of Internet banking.

1.5 Research Model

Figure 1.3 depicts a conceptual research model showing the hypothesized relationship existing between factors, customer satisfaction, customer commitment and trust, on customer retention in the context of Internet banking.

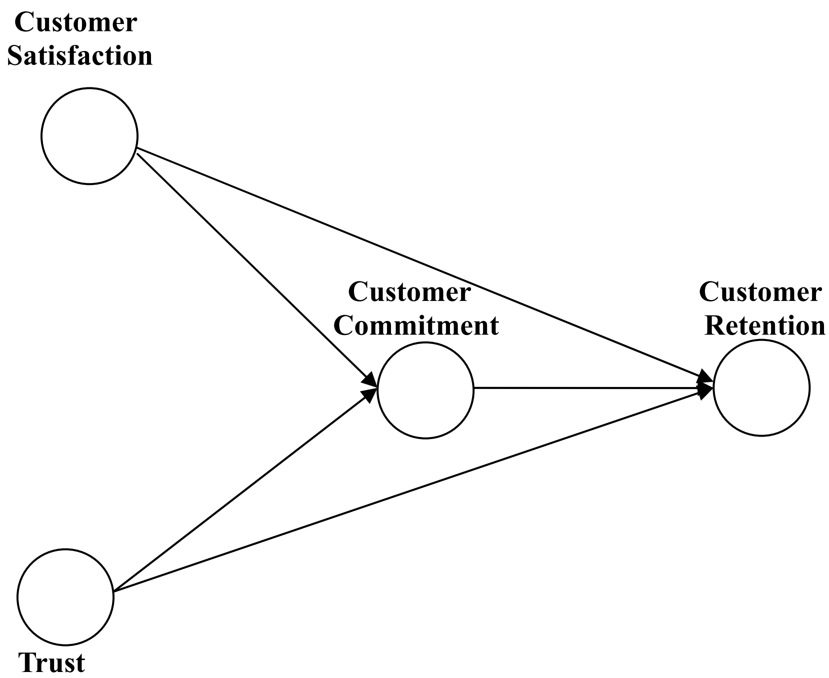


Figure 1.3: Conceptual Research Model of This Study

1.6 Research Methodologies and Ethical Issues

A well-defined research objective gives a clear direction in which to design this research. The research design for this study is described in sections 1.6.1 to 1.6.4 for the purpose of meeting the objective of the study. Section 1.6.5 presents ethical issues related to this study.

1.6.1 Quantitative Survey Questionnaire

A one-off cross-sectional quantitative research has been adopted for this research. A survey questionnaire to measure the relationships between the variables of this study and collect demographic characteristics of the respondents has been designed. In order to gain objective views and guard against faulty assumptions and detect flaws in the questionnaire, consultation with experts and pilot tests have been performed.

A seven-point interval Likert scale to examine how strongly respondents agree or disagree with statements to measure variables in the hypotheses of this research has been used. Existing established measures have been modified and adopted for this study (Churchill, 1979). Validity and reliability tests of the measures of the questions in the survey questionnaire have been conducted for valid and reliable data to be analysed correctly to reveal meaningful findings.

1.6.2 Sample and Sampling Design

The target population of this research was all Internet banking users in Hong Kong, which amounts to millions. Since the source of these people is unavailable in the public domain, judgmental sampling, one of the non-probability methods, was adopted to reach the subjects. It has been suggested that a range of a minimum sample size of 30 and a maximum of 500 is acceptable (Sekaran, 2000). This research targeted 200 respondents.

1.6.3 Data Collection

Two non-profit-making management associations and eight business organizations were contacted and they consented to have their members, employees and associates participate in the survey. Personally-administrated and mail modes to collect data was planned. It was also reasonable to assume that Internet banking users have access to the Internet and that it was logical to post the set of questionnaire and covering letter on the Internet to reach them.

1.6.4 Data Analysis

Data collected was analysed using SPSS version 14.0 for purposes of descriptive statistics, while Partial Least Square (PLS) was utilised to determine the interactions between the various constructs for ascertaining the various structured equation models (SEM). Inter-item consistency reliability was conducted for the consistency of the respondents' answers to the items in a measure in this research questionnaire.

1.6.5 Ethical Issues

Since this study involved people, a questionnaire and a covering letter inviting participation was designed. The covering letter assured potential respondents that they would remain anonymous, their participation would be voluntary, withdrawal from answering the questions and completing the questionnaire at any time would not affect them in any way, and that participants would be notified of the findings of the study when the research was completed. The letter also assured respondents that completion and return of the questionnaire implied individual consent of access to the study and that all information collected would be treated as strictly confidential.

1.7 Structure of the Thesis

The structure of this thesis consists of five stages presented in five chapters. The flow of the stages is depicted in Figure 1.4.

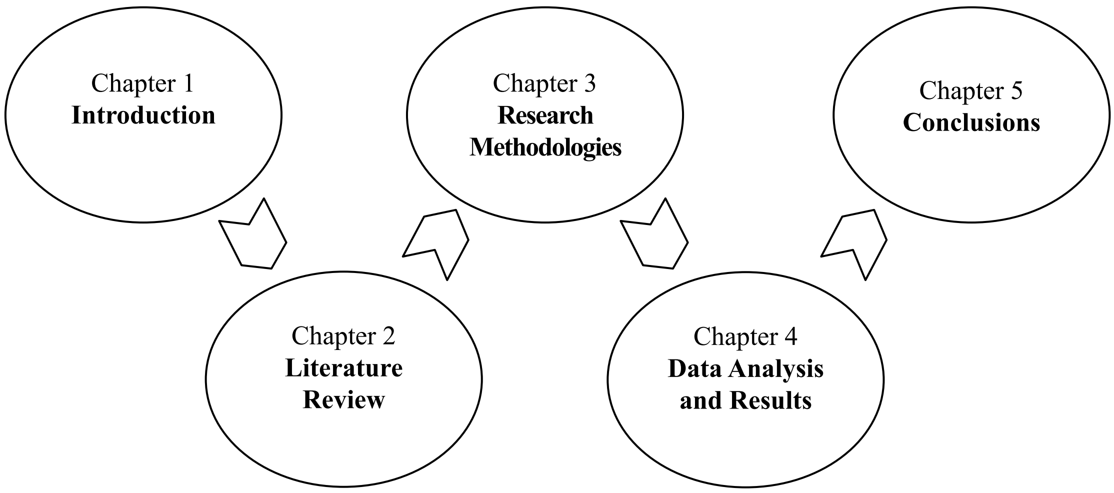


Figure 1.4: Five Stages of This Thesis

Chapter 1 introduces the background to the research topic – Internet banking and customer attitudes affecting their perceptions to retain with the same service provider; stating the title, objective and significance of the research and outlines the overall research work.

Chapter 2 reviews literature from various sources for an understanding of the development of Internet banking, research findings related to the influence of customer satisfaction, customer commitment and trust on customer retention. This chapter also depicts the research model and presents the eleven hypotheses based on the research questions.

Chapter 3 evaluates various research methodologies to deal with the research problems and to meet the research objectives. A research plan incorporating a quantitative survey questionnaire, sampling methods and data collection administration is described.

Chapter 4 analyses the survey results and assesses the research findings. The profiles of the survey sample are presented. Data collected from the survey are statistically analysed and interpreted. Hypotheses are tested and the significance of the variables is demonstrated.

Chapter 5 discusses and concludes the linkage between the research problems, theories, and the findings of the study. Research and practical implications and limitation of this study are presented. Suggestions for further research opportunities are recommended.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter focuses on literature review. A number of related theories and discussions have been reviewed in order to define an analytical approach to the research questions used to structure the research problems. The chapter is divided into nine sections. Section 2.1 introduces the sections in the chapter. Section 2.2 presents the development and adoption of Internet banking. Section 2.3 analyses various aspects of customer retention leading to the identification of profitable bank customer segment. Section 2.4 presents and evaluates different factors affecting customer retention. Section 2.5 reviews various literature to investigate the research problems for the research questions in Section 2.6. Section 2.7 proposes eleven research hypotheses which are depicted into a research model in Section 2.8. Section 2.9 concludes the chapter.

2.2 Internet Banking

2.2.1 A Brief History of Banking

Banking today can be traced back to the European Middle Ages when the Italian Medici bank sought in the fourteenth century to increase its profits by establishing branches throughout Europe and extending loans to merchants, royalty and the Pope (Goldthwaite, 1995). Banks ever since have been developing branch networks to capture market share, with the result that the first bank to provide a dense branch network in an area gained the leading position in that area (Coyne and Dye, 1998).

Since any bank's strong network is perceived by customers as that bank's enormous resources, an extensive branch network provides convenient geographic access to customers and gives customers sufficient sense of security to entrust their money to that bank (Lockett and Littler, 1997). There is evidence that a strong branch network serves as an industry entry barrier to new challengers and to maintaining the concentration rates. In the UK, networking helps to maintain the oligopolistic banking industry through which the few players can exert measurable impacts on competitors (Henderson, 1995).

Times changed such that in the twentieth century banking was failing (Berger, Kashyap & Scalise, 1995; Edwards and Mishkin, 1995; Holland, Lockett & Blackman, 1996). The citation: "Banking is essential to a modern economy. Banks are not. If some other entity performs the functions of banking faster, smarter, or cheaper than banks, it will replace banks" (Furash, 1993, p.20) essentially means that the traditional 'brick-and-mortar' banks will be marginalised. In fact, while the overall banking business continues to grow, retail banking is in decline (Wendel, 1993; Berger et al., 1995; Spiegel, Gart & Gart, 1996; Bird, 1997). Section 2.2.2 explains the forces behind this decline.

2.2.2 Forces Driving Changes in Banking

Changes in banking are driven by both external and internal factors. The external forces are changing the technological, political, economic and social environments, whereas the internal forces are the threats from new entrants, increasing customer power, and volatile supply forces (Jayawardhena and Foley, 2000). Figure 2.1 shows the internal and external forces on changes in the banking industry.

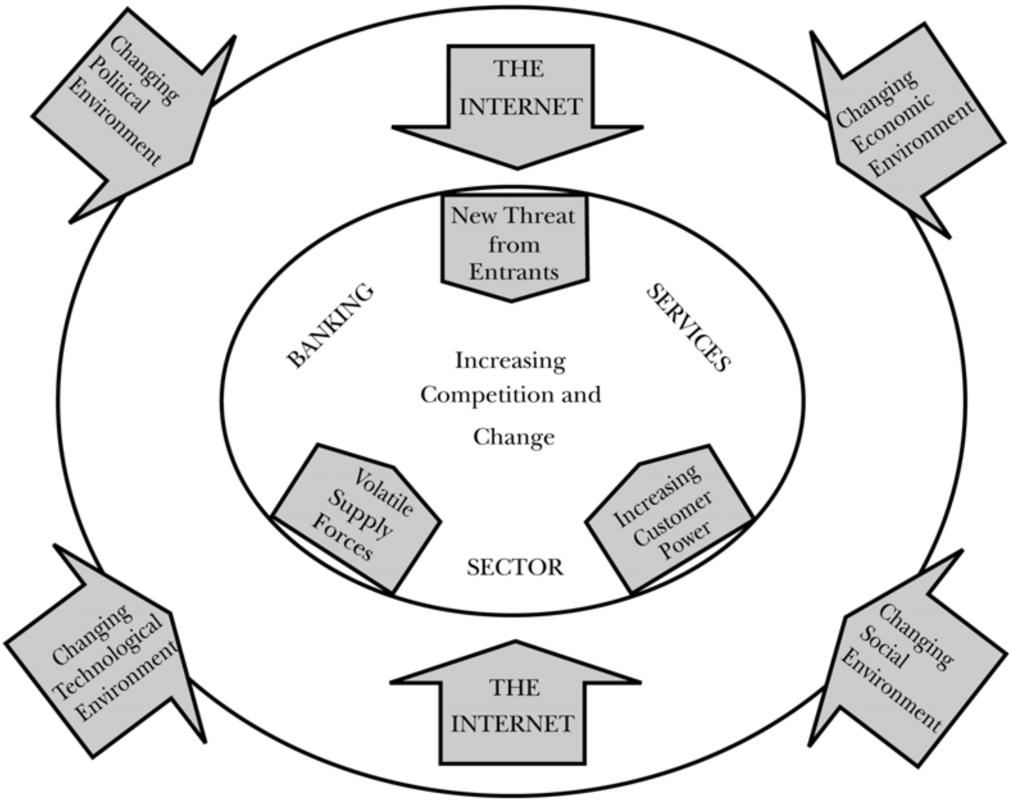


Figure 2.1: The Competitive Environments of Banking Industry in Internet Age

(Source: Jayawardhena and Foley, 2000)

Political-economic changes, mainly liberal legislation and deregulation in the banking-services sector, have intensified competition between banks and increased the powers and rights of customers (Trethowan and Scullion, 1997; Noulas, 2001; Waite, 2001). In addition, the growth in aging bank customers, those with their high purchasing power for financial products and services groups, has reshaped the established bank customer base (Bone, 1991; Kennett, Moschins & Bellenger, 1995).

Besides demographic trends, such social changes as attitudes towards technology and workforce mobility now greatly influence customer behaviour (Seipp, 2000). Younger bank customers with high education and a professional occupation are usually ‘computer savvy’ and they tend to use the Internet. They are considered as the typical users of electronic banking services (Sathye, 1999; Jayawardhena and Foley, 2000; Mattila, 2001; Karjaluoto et al., 2002). Volatile supply refers to the regularity of the delivery chain of banks. The force drives banks to sort out a balance between staffing levels, skills and technological development and branch-network investment (Gentle, 1993).

Of all the changes, technology has dominated the revolution in the banking industry (Bednar et al., 1995; Gandy, 1998). Technologies for connection well support the huge volume of global capital flows around financial institutions, and banking based on supplying intensive information needing a minimum of physical exchange is ideally suited to the Internet (Perumal and Shanmugam, 2004).

‘Online banking’ has been defined as the provision of information or services by a bank to its customers over the Internet (Daniel, 1999). ‘Internet banking’ is a term used for performing such transactions as payments, withdrawals, deposits, transfers, and account-checking over the Internet through a bank’s secure website (Wikipedia, 2006). In fact, the terms ‘online banking’ and ‘Internet banking’ are used interchangeably in most published works.

2.2.3 Distribution Channels for Banking

Six electronic channels have been identified for communicating with bank customers, and Internet banking is only one of them (Daniel, 1999). Table 2.1 lists and describes six different delivery platforms for electronic banking:

Delivery Platform	Description
PC banking (private dial up)	Propriety software distributed by a bank is installed by its customers on their PCs and access to the bank is made through a modem linked directly to the bank.
Internet banking	Customers have access to their banks through the Internet.
Managed network	A bank makes use of an online service provided by another party.
TV banking	Account information is delivered via satellite or cable to the TV screens of customers (Internet based).
Telephone banking	Customers use their own personal ID and password to access their bank via telephone.
Mobile-phone banking (SMS, WAP, 3rd generation)	Customers gain bank access through text message (SMS), Internet connection (WAP), or high-speed 3rd generation mobile connection (also Internet based).

Table 2.1: Delivery Platforms for Electronic Banking

(Source: Daniel, 1999)

As the general public becomes more computer literate and personal computers become cheaper, the number of Internet-banking users has increased substantially whereas the branch-banking customer segment has shrunk (Mols, 2000). At the same time, the increase in Internet use means that the geographic protection of a bank’s customer base has begun to shrink (Heinen, 1996; Evans and Wurster, 1997). Furthermore, as the number of Internet banks increases (Crede, 1997), a decline in the number of bank branches has been observed (Howcroft and Kiely, 1995; Heffernan, 1996; Mols, 2000).

Contrary to the implication that bank branches will vanish in a computerized world, bank branches continue to survive with their role and image transformed to meet the changing business environment (Mendonca and Nakache, 1996; Moutinho, Davies, Peris & Alcaniz, 1997). Technology can enable bank branches to serve their customers better (Wah, 1999). Flexibility increase is one example of this (Burns, 2000). In 2004, the UK-based Barclays Bank cut back its investment in offices and IT to invest in branch staff (Finextra.com, 2004a, 2004b, 2004c). Around the same time the NatWest Bank curtailed its branch-closure programme introduced in 2000 to launch a country-wide branch-refurbishment programme aimed at recruiting more than 17,000 staff in its physical retail outlets (Finextra.com, 2003, 2004b).

In practice, bank customers may prefer to use more than one banking channel for different purposes (Prendergast and Marr, 1994; Mols, 1998). For example, they may want to meet a branch's staff officer to get financial advice for major investment decisions; they may use the Internet to pay bills; and they may simply pick up the phone to check their account balances. This customer segment has been labelled 'multiple-channel', and this multi-channel strategy has grown to become the main model for the European banking business (Mocanu and Filip, 2001). Nonetheless, it is suggested that the main electronic delivery channel in banking is the Internet (Karjaluoto et al., 2002).

2.2.4 Evolution of Internet Banking

Technology as a powerful driver for changes in the banking industry was initially applied during the 1960s to automating processes in the back-office. This was later extended to the front-office and subsequently beyond to the branch (Legg, 1994; Llwellyn, 1995). Interestingly, the introduction of Internet banking was mainly defensive. A thousand-bank survey revealed that the main impetus for banks setting up websites rests merely upon responding to the actions of competitors (Sheshunoff, 2000). In addition to this, banks copy one another's work and modify the features and styles as their own in order to control costs in developing new technologies, the result of which is that Internet banking services differ little from service provider to service provider (Gurăău, 2002).

Developing and implementing a winning Internet banking strategy in today's world of e-commerce is taken as a top managerial priority for local and national banks, as well as for other financial institutions. One prediction is that a retail bank's competitive advantage rests upon its ability to be the first to master the Internet-based distribution and communication channels (Ghorab, 1997). The role and content of banks' websites has also evolved over time (Tuchila, 2000), progressing from merely providing general information about a certain bank to communication with customers to now offering a full range of banking services through the Internet (Figure 2.2).

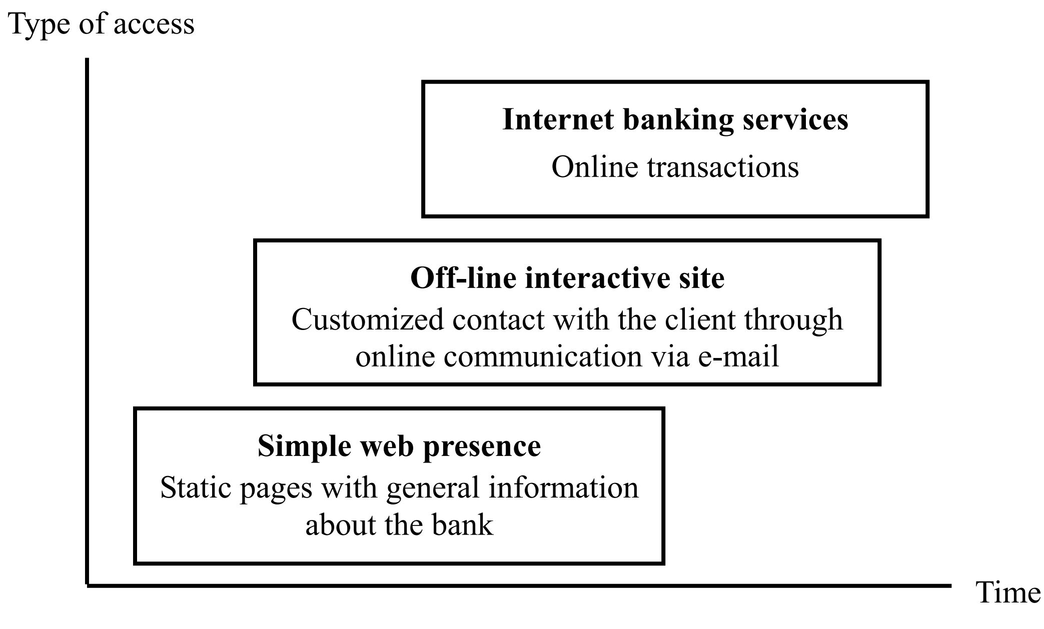


Figure 2.2: Evolution of a Bank's Web Presence
(Source: Tuchila, 2000)

A survey of 121 bank websites in the US was carried out in 1998 and the functions of these sites were analysed and classified into the following three different opportunities):

1. An information-publishing vehicle;
2. A channel for conducting transactions; and
3. A tool for improving relationships with customer (De Armas Associates, 1998).

At the basic level, Internet banking can mean a bank, such as the Saudi Arabian banks, setting up a webpage simply for the purposes of brand awareness and to promote its products and services, (Jasimuddin, 2000). At an advanced level, Internet banking generally involves providing access to accounts, facilitating the transfer of funds, and delivering and trading financial products or services online, such as those now offered by banks in the United States (Diniz, 1998).

Six general reasons have been offered as to why bank customers use the services of banks have been identified (Essinger, 1998), namely:

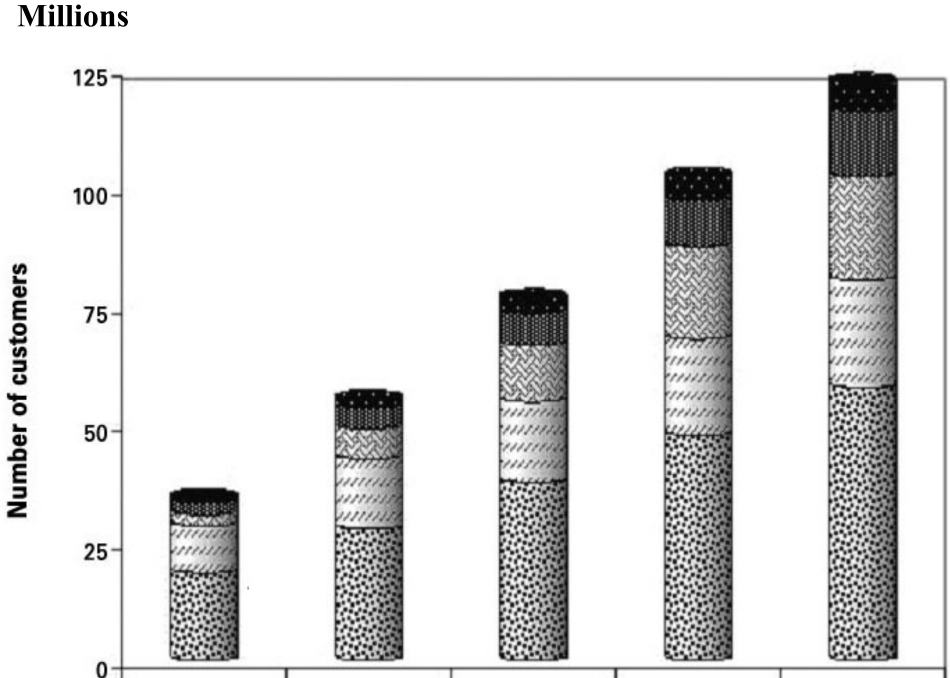
1. To keep their money safe and secure;
2. To obtain interest payments and other returns on investment;
3. To obtain convenient access to cash;
4. To obtain convenient access to payment facilities;
5. To obtain access to loan facilities; and
6. To obtain status and equality with peer groups

Item 1 and Item 3 (keeping one's money safe and obtaining convenient access cash) are the only reasons that might involve the physical presence of cash; a virtual bank can manage the other items (2, 4, 5 and 6) equally well. By offering Internet transactions, a bank can provide better services in response to items 4, 5 and 6. At the same time, the bank can deal with Item 2 (obtaining interest payments and returns on investment) just as well as it did prior to introducing Internet banking.

The Internet has churned up the working environment, living style and patterns of banking use (Hagel et al., 1997), as well as dramatically changing the delivery channels of banking (Tilden, 1996). The efficiency and convenience of transactions through the Internet is likely to significantly alter customer behaviour and future business practices (Wolfinbarger and Gilly, 2003; Rush, 2004). The Internet has been claimed as the base for a new industrial structure (Furash, 1999) that will uproot the medieval foundations of the banking system (Nehmzow, 1997).

2.2.5 Adoption of Internet Banking

Internet banking has been gathering momentum around the world (Aladwani, 2001). By 2003, most United States banks offered Internet services (Gurăău, 2002). By the fourth quarter of 2005, Internet banking customers in the United States had grown to nearly 40 million (comScore Study, 2005). Banks in the European Union (EU) countries have been quick to introduce Internet banking as an essential component of their business portfolio (Irish Times, 1999). In 2004, Western Europe, recording 57.9 million users, had the highest adoption rate of Internet banking in the EU. Figure 2.3 shows the growth of Internet banking in the major regions of the world between 2000 and 2004 (International Data Corporation, 2004).



	2000	2001	2002	2003	2004
Rest of the world	1.0	1.7	3.1	5.1	6.1
Asia-Pacific (exc Japan)	2.4	4.4	6.8	9.8	13.8
Japan	2.5	6.5	11.9	19.6	21.8
United States	9.9	14.7	17.1	20.4	22.8
Western Europe	18.6	28.0	37.8	47.7	57.9

Year

Figure 2.3: Growth in Internet Banking

(Source: International Data Corporation, 2004)

According to Figure 2.3, excluding the category of 'Rest of the world', 'Asia-Pacific (excluding Japan) scored the lowest figure in the growth in Internet banking. However, Hong Kong, being in the Asia-Pacific region, showed the speed of growth by having the highest activity in the region. Table 2.2 shows the penetration of Internet banking between July and October 2001 in the Asia Pacific region.

Countries/ cities	Number of users	Proportion of users	Frequency of usage
South Korean	5.3 million	Over 50%	50% banking online monthly 20% banking daily or weekly
China (Mainland)	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

Table 2.2: Penetration of Internet Banking in 2001 (July-October)

(Source: ACNielsen, 2002)

These statistics show the rapidly growing acceptance of Internet banking in Hong Kong. The number of Internet banking users in Hong Kong increased by 78 percent between January 2001 and January 2003 (ACNielsen/NetRatings, 2003). By December, 2003, there were around 2.2 million personal Internet banking accounts (38% up on 2002) and 67,000 Internet banking accounts belonging to businesses (116% up on 2002). On average, each month in 2003 saw about 4.8 million transactions processed through personal Internet banking (38% up on 2002), while 737,000 transactions were processed through business Internet banking every month in 2003 (five times more than 2002) (Hong Kong Monetary Authority, 2004a).

Despite the promising future outlook for Internet banking in Hong Kong, the adoption of the Internet service does not necessarily mean that customers actually use the service. A study has shown that only 14.3 percent of adopters actively use Internet banking (Al-Sabbagh and Molla, 2004). In Hong Kong, the situation seems better since a survey revealed that approximately 20 percent of respondents had access to Internet banking services, and most of these respondents claimed to have used the service (ACNielsen Financial Services Study, 2004/5).

Additionally, empirical research findings reveal that Internet banking customers are more satisfied with their bank than non-Internet banking customers (Mols, 1998). Another research found that customer satisfaction with Internet banking was high across the Asia Pacific (ACNielsen, 2002). In the Asia-Pacific region, Hong Kong recorded only six percent Internet of banking customers as being dissatisfied. Singapore had the smallest number of dissatisfied Internet banking customers (4%) in the region, while Taiwan had the most dissatisfied customers in the region (12%), and South Korea and Mainland China both recorded eight percent of Internet banking customers as being dissatisfied with the use of an Internet banking service. Table 2.3 shows the percentage of dissatisfied Internet banking customers in the Asia Pacific region.

Countries / Cities	Dissatisfied Internet Banking Customers
South Korean	8%
China (Mainland)	8%
Taiwan	12%
Hong Kong	6%
Singapore	4%

Table 2.3: Dissatisfied Internet Banking Customers in the Asia Pacific Region

(Source: ACNielsen, 2002)

2.2.6 Opportunities and Threats of Internet Banking

The popularity of Internet banking has created many opportunities for both service providers and customers. At the same time, however, it has created certain threats. For customers, Internet banking presents such benefits as:

- an extremely efficient medium for accessing, organizing, and communicating information (Peterson et al., 1997);
- no time or location constraints (Jeon and Rice, 1997) because users can do their banking at home, in their offices, in their hotels, or even in an aeroplane; and
- being offered more benefits at lower costs (Mols, 1998).

Banks employing the Internet in their services can:

- research new segments of the population,
- achieve greater efficiency,
- enhance reputation, and
- improve customer service and satisfaction (Brogdon, 1999; Jayawardhena and Foley, 2000).

Above all, the biggest benefits for banks are cost-cutting in communication, transaction and delivery (Peterson et al., 1997; Furash, 1999). The cost of a transaction is considerably less for banks when carried out via an electronic mode than in a branch (Robinson, 2000). Figure 2.4 shows the results of a survey into the processing costs per transaction of the Internet mode in comparison with other delivery channels.

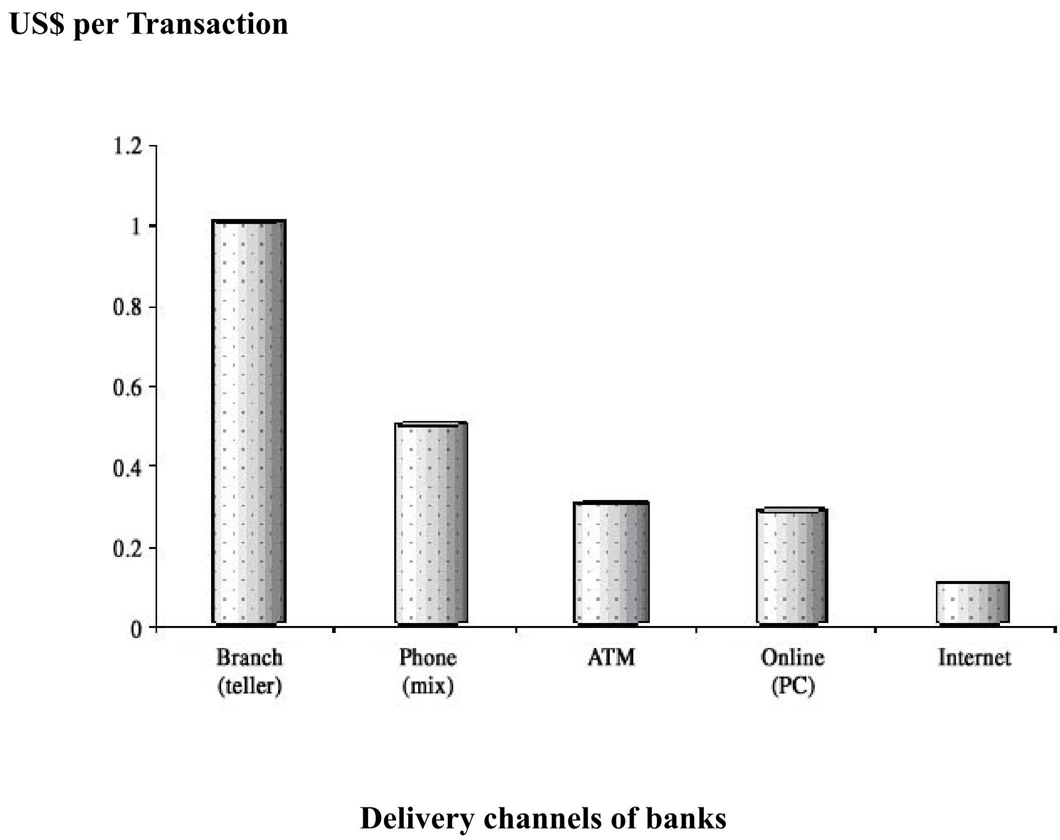


Figure 2.4: Processing Cost per Transaction

(Source: Booz-Allen & Hamilton, JP Morgan, 2003)

Although new forms of banking can offer promising opportunities, they have also intensified competition between banks for customers (Vatanasombut et al., 2004). By way of testimony, a 2000 survey concluded that (1) e-banking is having the biggest impact on competition among banks and (2) the Internet has become the gateway for new competitors in the search for customers (Davies, 2000).

Non-bank operators entering the banking arena have mushroomed around the globe (The Economist, 2000; Itoh, 2001). Table 2.4 lists some of the non-banking companies competing in the financial market (González and Guerrero, 2004).

New competitor	Country	Promoter	Promoter's activity	Bank partner
Sainsbury's Bank	UK	Sainsbury's	Retailer	Halifax Bank of Scotland
Tesco Personal Finance	UK	Tesco	Retailer	Roya1 Bank of Scotland
Marks & Spencer Money	UK	Marks & Spencer	Retailer	No bank partner
Uno-e	Spain	Terra	Internet	BBVA
Egg	Retailer	Prudential PLC	Insurance	No bank partner
Volkswagen Bank direct	Germany	Volkswagen	Car manufacturer	Partner for mortgages; Aareal Bank, SaarLB, AHBR, DSL Bank
Virgin Money	UK	Virgin	Several	Royal Bank of Scotland
GE Capital	USA	General Electric	Energy	No bank partner
S2P	France	Carrefour	Retailer	Cetelem (BNP Paribas subsidiary)
Cofinoga	France	Galeries Lafayette	Retailer	Cetelem (BNP Paribas subsidiary)
Shell Capital	UK & USA	Royal Dutch Shell	Energy	Royal Bank of Scotland
Banca Generali	Italy	Gruppo Generali	Insurance	BSI
IKANO Banken	Sweden	IKEA	Retailer	No bank partner
Migrosbank	Switzerland	Migros	Retailer	No bank partner
Inversis	Spain	EI Corta Inglés	Retailer	Cajamadrid, CAM, Banco Zaragozano y Cajamar
		Indra	Technology	
		Terra	Internet	
Edel	France	E. Leclerc	Retailer	Groupe Crédit Coopératif
BMW Financial Services	Germany	BMW	Car manufacturer	No bank partner
GMAC Financial Services	USA	General Motors	Car manufacturer	No bank partner
Siemens Fin. Services	Germany	Siemens	Technology	No bank partner
Sony Bank	Japan	Sony	Technology	Sakura Bank, JP Morgan
Centro de Seguros y Servicios	Spain	EI Corte Inglés	Retailer	Hispamer

Table 2.4: Financial Market Non-Banking Competitors

(Source: González and Guerrero, 2004)

Internet banking not only intensifies competition, it also enables customers to easily compare the terms and conditions of the financial products or services offered by different banks (Rogerson et al., 1999). This ‘frictionless commerce’ tends to raise customers’ expectations about services and products and could lead to dissatisfaction and make these customers more prone to switching to other service providers (Shankar et al., 2002). However, economic, social and psychological risks may come into play whenever customers switch banks (Bendapudi and Berry, 1997). The economic risk refers to financial penalties, search and transaction costs, learning costs and the loss of loyal-customer discounts. The social risk means habit change, and the psychological risk involves emotional bonds and cognitive efforts. In short, time, money and effort are the costs of switching banks (Fornell, 1992).

The risks for banks using Internet banking include the removal of the entry barrier into the retail banking sector for competitors (Howcroft and Kiely, 1995), the removal of geographical boundaries - especially in remote areas - for market penetration (Evans and Wurster, 1997), an increase in competition and the reduction of profits owing to little products differentiation (Heinen, 1996). In order to minimize risks and maximize opportunities, banks should retain customers in the virtual place so as to gain profit from offering Internet banking. The success of banks operating via the Internet depends on how well they attract and keep customers (Wah, 1999). One opinion is that Internet banking also strengthens the relationship between banks and their customers since Internet banking facilitates banking directly to home or office of the customers, and these characteristics, services 24 hours a day, 7 days a week, help to maintain customer retention (Robinson, 2000). Section 2.3 presents various aspects of customer retention.

2.3 Customer Retention

2.3.1 Concepts of Customer Retention

Customer retention has been conceptualized as a dimension of a customer loyalty construct (Boulding, Kalbra, Staeling & Zeithaml, 1993; Zeithaml, Berry & Parasuraman, 1996). Indeed, the terms 'customer retention' and 'customer loyalty' are often used interchangeably in literature. However, customer retention and customer loyalty are not surrogates for each other because the two terms can refer to different things. Therefore it is suggested that the conceptualization of customer retention needs further clarification (Hennig-Thurau and Klee, 1997).

'Customer retention' is concerned with repeated patronage, which is closely related to repeat-purchasing behaviour and brand loyalty (Jacoby and Chestnut, 1978). 'Brand loyalty' contains attitudinal aspects whereas customer loyalty contains both attitudinal and behavioural aspects. Customer retention only focuses on developing marketing strategies that cause repeat-purchasing behaviour and ignores factors that influence such behaviour (Hennig-Thurau and Klee, 1997).

2.3.2 Impacts of Customer Retention on Profitability

Numerous studies report that firms in an intensively competitive market realize that their most valuable asset is their existing customer base (Colgate, Stewart & Kinsella, 1996; Heskett, Sasser & Schlesinger, 1997; Woodruff, 1997; Mols, 1998; Paulin, Perrien, Ferguson, Salazar & Seruya, 1998; Athanassopoulos, 2000; Jones et al., 2000; Thomas, 2001). Other studies reveal that long-term customer relationships are desirable because they are more profitable for firms (Buchanan and Gilles, 1990; Reichheld and Sasser, 1990; Fornell, 1992). One estimate is that the cost of recruiting a new customer to a product or service is around six times higher than that of retaining an existing one (Anonymous, 1997). Increased customer retention leads to additional sales, lower costs, price raise acceptance and no cost word of mouth recommendations (Reichheld and Schefter, 2000).

However, the assertion that loyal customers are more profitable is over-simplified. The assumption that the costs involved in serving loyal customers are lower, that loyal customers pay higher prices, and that loyal customers spend more money than disloyal ones with a firm has been met with scepticism (Dowling and Uncles, 1997). The argument is supported by the statement that long-term customers expect value-added relationships in order to purchase more, otherwise, they spend less (Mohs, 1999). In contrast, short-term customers might not have any expectations of value-added relationships from the firm, so nothing stops them from buying. The finding in a case study at AT&T revealed that no differences regarding spending were spotted between long-term and short-term customers (Reinhartz and Kumar, 2000).

Apart from the little empirical evidence on negative lifetime-profitability relationship, reservation is still made that the majority of life-time relationship outcomes will be positive along the diagonal line, as shown in Figure 2.5.

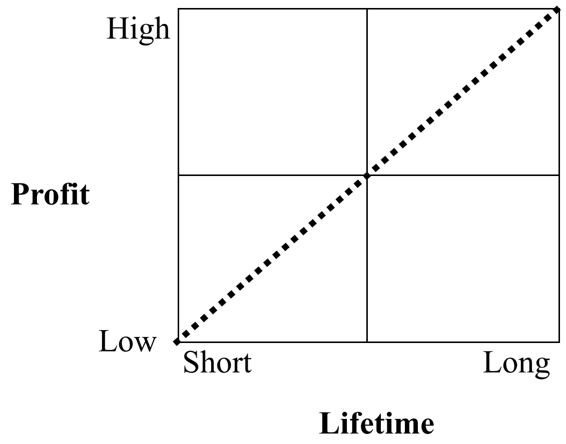


Figure 2.5: Lifetime-Profitability Association

(Source: Reinartz and Kumar, 2000)

2.3.3 Relationship between Customer Retention and Profitability in Banks

One customer does not necessarily generate the same revenue and, ultimately over time, profit for businesses as another customer (Petro, 1990; Cooper and Kaplan, 1991; Peppers and Rogers, 1993; Slywotzky and Shapiro, 1993; Wang and Splegel, 1994; Wayland and Cole, 1997). There was an estimate that in retail banking, between 50 and 60 percent of customers are unprofitable (Storbacka et al., 1994). An empirical study of the customers of a New Zealand bank revealed that one third of its customers were unprofitable, one third barely broke even and the remaining one third accounted for 98 percent of its profit (Garland, 2002). However, the challenge for banks is how to identify their profitable customers, that is, those with large financial portfolios (Walsh, 1983).

In established economies, market segmentation in the financial services sector is a common practice (Speed and Smith, 1991; Harrison, 1994). Treating all customers equally regardless of the value they generate to the firm is uneconomical. New Zealand banks are gearing low-profitability customers to cheaper delivery systems and adjusting their customer-service levels accordingly (Garland, 2005). The non-branch bank ING Direct closes between three and four percent of its customer accounts on a monthly basis because these customers require too much personal service (Nickson, 2001). To outperform competitors, banks should make customer segments and profitability analysis their marketing focus (Donner and Dudley, 1996).

A five percent improvement in customer loyalty has been found to generate an increase of between 35 and 95 percent in the lifetime value of a customer (Reichheld, 1996). As shown in Figure 2.6, this increase is noticeable in the financial sectors of life insurance (90%), banking (85%) and general insurance (84%).

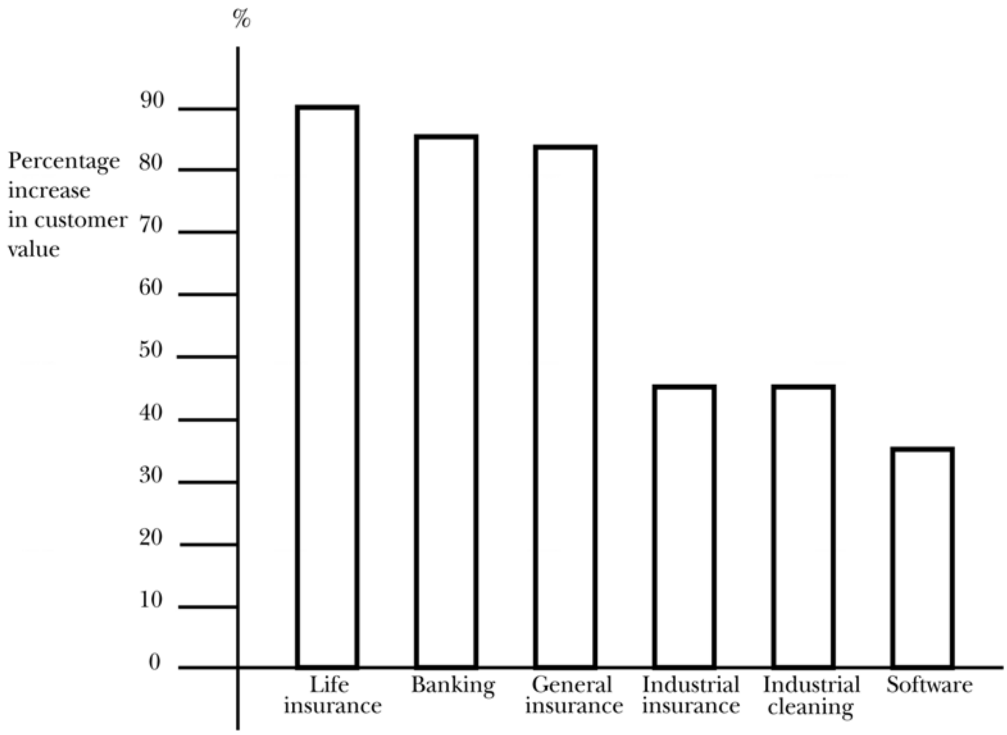


Figure 2.6: The Effect of a Five-Percent Retention Increase on Customer Value

(Source: Reichheld, 1996)

Figure 2.6 shows that the magnitude of any increase depends on, among other factors, the business nature of an industry. In banking, the initial costs are high and sales per customer increase sharply after a few years, so banks should actively build relationships with profitable customers (Shapiro et al., 1987; Slywotzky and Shapiro, 1993; Jones and Sasser, 1995). Furthermore, another finding revealed that different retention strategies fit for different business models (Wirtz and Lihotzky, 2003).

2.3.4 Profile of Profitable Bank Customers

Despite the need to capture profitable customers, the benefit segmentation in the financial service sector was rarely studied before the mid-nineties (Minhas and Jacobs, 1996). The typical Internet banking users of today are identified as young, highly educated, relatively wealthy, having good computer skills and with a knowledge of the Internet. They are also likely to belong to the upper or professional classes (Spiegel et al., 1996; Locarek-Junge and Swaiger, 1998; Sathye, 1999; Jayawardhena and Foley 2000; Mattila, 2001; Karjaluoto et al., 2002). Three reasons have been suggested as to why customers in this segment are profitable and less risky for banks:

1. The aggregate cash flow leads to economies of scale. As the number of high-net-worth accounts is comparatively low, a large turnover and a low administrative workload for banks can be achieved.
2. This segment represents longer relationships, because customers in this segment are relatively young.
3. Since this segment is likely to be mobile, the Internet banking mode fits their banking needs irrespective of geographical boundaries (Jayawardhena and Foley, 2000).

It has been cited that the uptake of electronic banking, including Internet banking, is likely among people with higher levels of financial assets and education (Kolodinsky, Hogarth & Shue, 2000). Commercial banks are currently developing strategies to attract affluent customers with a net worth exceeding US$1 million (Stanley, 1984). These customers tend to be loyal to their financial institutions and are likely to be from the senior corporate executive, self-employed business person and professional levels (Stanley, 1984). Interviews conducted by JP Morgan in the United States revealed that people between the ages of 18 and 49 with a household income in the US$41,000-US$59,000 or above range display great interest in Internet banking whereas people over 65 show very little interest in Internet banking (BAI, 2003). Figure 2.7 shows the different demographic segments interested in Internet banking.

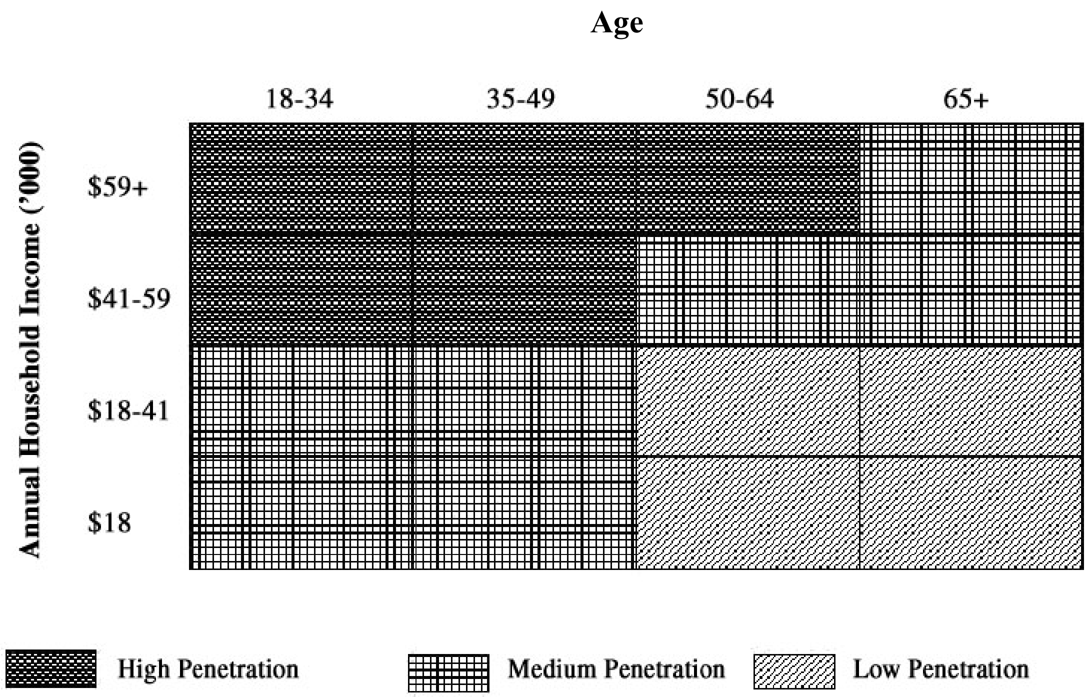


Figure 2.7: Interest in Internet Banking by Segments

(Source: BAI, 2003)

In the United States, many highly skilled professionals have been either starting their own businesses or consulting for their former corporate employers. This shift in careers is partly driven by fundamental changes whereby US companies do business in a better, faster, more creatively and cost-saving way than previously (Jahrig, 1995). This leads to such major lifestyle shifts as moving from a big city to a small town, equipping one's home as an office and employing the internet to accomplish shopping and banking needs (Levinson and Orloff, 2003). In a study of the profiles of users of online banking services in the EU, older individuals in leading positions were identified as likely to use Internet banking (Guerrero, Egea & González, 2005). One study in Finland reported that more than 30 percent of wealthy and well-educated mature males use e-banking as their primary method of making payments (Mittila, Karjaluoto & Pento, 2003).

In today's Hong Kong, professionals and business executives routinely work around the clock seven days a week. They often have to travel, carrying their laptops, for business whenever necessary. Constantly juggling work with family life seems to be their way of life. To these 'cash-rich but time-poor' computer-savvy business practitioners and professionals, performing their banking business with the click of a mouse anytime and anywhere seems to be the perfect solution to help them manage their money (Hagel et al., 1997). Statistics show that the two occupation categories of 'managers and administrators' and 'professionals and associate Professionals' in Hong Kong comprise 31.5 percent of the administrative region's working population (Hong Kong Annual Digest of Statistics, 2006a). Of all occupations, these people earn the most money (Hong Kong Annual Digest of Statistics, 2006b). Logically, these professionals and business practitioners are the potentially profitable customers for Hong Kong banks and should be target customers for retention.

2.4 Factors Affecting Customer Retention

Once they have identified the profitable customers, bank management has to find out what make these profitable customers stay. Factors affecting customer retention need to be confirmed and applied. However, factors affecting customer retention are diverse. Table 2.5 lists the different factors influencing customer retention quoted by scholars.

Factors Affecting Customer Retention	Scholarly Reference
Market orientation	Narver and Slater, 1990
Client Expectation, Perceived Risk and Need to Control	File and Prince, 1994
First Service Encounter	Bitner, 1995
Transaction, Social and Structural Bonds	Berry, 1995
Product and Service Quality Perception	Reichheld and Sasser, 1990 Oliver, Oliver & Lan, 1992 Hennig-Thurau and Klee, 1997 Sirohi et al., 1998
Trust and Commitment	Garbarino and Johnson, 1999
Involvement	Silos, 1999
Alternative Attractiveness	Bansal and Taylor, 1999 Dube and Shoemaker, 2000 Jones et al., 2000 Sharma and Patterson, 2000
Customer Satisfaction	Rust and Zahorik, 1993 Kotler, 1994 Lee, Lee & Feick, 2001 Ranaweera and Prabhu, 2003a
Switching Costs	Lee et al., 2001 Ranaweera and Prabhu, 2003a

Table 2.5: Factors Affecting Customer Retention

2.4.1 Customer Satisfaction

Of the above factors, customer satisfaction has long been recognized in marketing theory and practice as both a core concept and the main goal of business activities (Yi, 1990; Anderson, Fornell & Lehmann, 1994). Marketers take customer satisfaction as a significant determinant of positive word-of-mouth consumer loyalty and repeat purchase (Yi, 1990; Anderson and Sullivan, 1993; Rust and Zahorik, 1993; Rucci et al., 1998; Bansel and Taylor, 1999; Cronin et al., 2000; Kotler et al., 2002; Ranaweera and Prabhu, 2003b). Satisfaction is also important to consumers because it represents a positive outcome for the money spent to fulfil their needs (Day and Landon, 1977).

2.4.1.1 Concepts of Customer Satisfaction

Satisfaction is broadly dedicated to part of the confirmation or disconfirmation paradigm (Oliver and Svan, 1989). Satisfaction is defined as a post-choice evaluative judgement in reference to a specific and purposeful decision (Oliver, 1997). It is also described as 'pleasurable fulfilment' (Oliver, 1999). Consumer satisfaction is acknowledged as a consumer's subjective evaluation of the outcomes and experiences associated with consuming or using the product or service (Hunt, 1977).

The above view is controversial to emerging studies that suggest affections contribute to the explanation and prediction of customer satisfaction (Fornell and Wernerfelt, 1987; Homburg and Giering, 2001) It has been argued that: (1) satisfaction is based on a customer's cumulative experiences rather than being a transaction-specific phenomenon (Anderson et al., 1994; Bayus, 1992), and that (2) conceptualising satisfaction with a single transaction is too restrictive (Homburg and Giering, 2001).

The concept of transaction-specific satisfaction is criticised as it comes from the performance on specific attributes of the particular service encounter and provides short-term knowledge of a customer's satisfaction with products or services (Oliver, 1993; Anderson et al., 1994). Overall or cumulative satisfaction, on the other hand, is gathered from factors occurring through the transaction process (Bitner and Hubbert 1994; Oliver, 1997). This concept is more fundamental and useful when compared with transaction-specific customer satisfaction in predicting the subsequent behaviours of a consumer and the performance of a firm (Fornell, 1992; Anderson et al., 1994).

Three types of customer satisfaction construct have been identified, namely emotional state, evaluative judgment and a combination of both components. With emotional state, customer satisfaction is viewed as an emotional response to the experiences customers encounter with the products or services consumed (Day, 1983; Woodruff, Cadotte & Jenkins, 1983; Swan, 1988). With evaluative judgement, customer satisfaction can be viewed as an overall evaluative response rendered from the supposition of the purchase experience. Therefore, this is not an emotional state but the evaluation of an emotion (Czepiel, Rosenberg & Akerele, 1974; Hunt, 1977; Engel and Blackwell, 1982). For the third type, the combination of both of the other two constructs, customer satisfaction can be viewed as the incorporation of an emotional state and an evaluative judgement. This construct is taken as an evaluative response related to the perceived outcomes of customer experience during the course of acquisition, consumption and disposition of the purchase (Miller, 1977; Westbrook and Oliver, 1981). It has been reported that customers will develop positive associations with the use of a website and will report more positive affect toward a web vendor if they experience positive emotions (Oliver, 1999). Section 2.4.1.2 presents the relationship between customer satisfaction and customer retention in various business contexts.

2.4.1.2 Relationship between Customer Satisfaction and Customer Retention

Many published works consistently cite customer satisfaction as an important antecedent of customer retention (Rust and Zahorik, 1993). Customer satisfaction is regarded as the key to customer retention (Kotler, 1994) and has been taken as a fundamental determinant of long-term customer behaviour and customer retention (Oliver, 1980; Yi, 1990).

Customer satisfaction has a significant impact on repurchase intentions in a range of services (Cronin and Taylor, 1992; Patterson, Johnson & Spreng, 1997). The statement "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) is endorsed by another statement that: "The key to customer retention is customer satisfaction" (Kotler, 1994, p. 20).

Satisfying customer needs and wants ensures repeat purchase (Kotler et al., 2002). One empirical study has proved that a reduction in defections by five percent can raise profitability by between 20 and 85 percent (Reichheld and Sasser, 1990). Another study contends that the same rules of customer life-cycle economics in such e-commerce sectors as online book selling, groceries and consumer electronics, apply both online and offline (Reichheld and Schefter, 2000). In fact, the success of online companies relies on their high ratio of repeat sales (Gefen, 2002). Amazon.com, for example, has 66 percent of its sales generated by repeat purchases (The Economist, 2000).

Empirical studies, however demonstrate a different picture. A study of car buyers conducted in the 1980s revealed that only 40 percent of satisfied customers intended to buy again from the same dealer as opposed to 15 percent of unsatisfied customers intending to buy again from the same dealer (Kordick, 1988). A later large-scale study of customer satisfaction conducted by the Xerox firm also found that the relationship between customer satisfaction and customer retention was just weakly related (Heskett and Schlesinger, 1994). Figure 2.8 depicts the relationship between customer satisfaction and customer retention in the study.

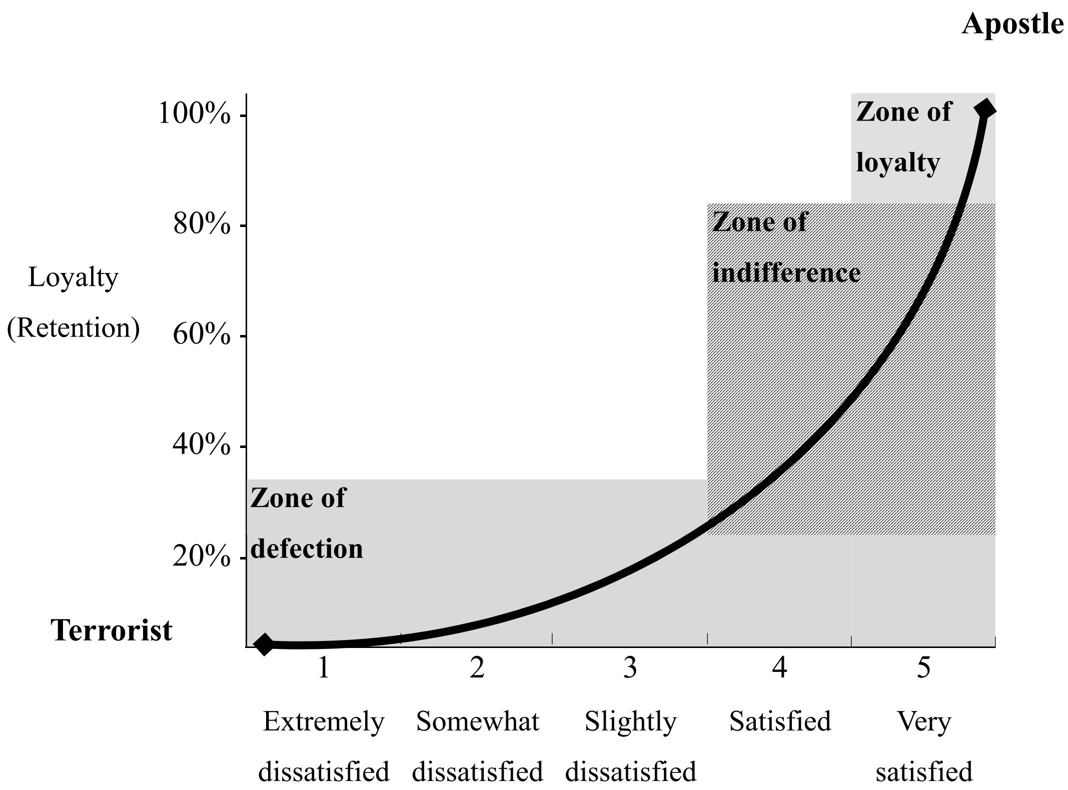


Figure 2.8: Relationship between Customer Satisfaction and Customer Retention

(Source: Heskett and Schlesinger, 1994)

The three zones in Figure 2.8 represent the relationship between customer satisfaction and customer retention. The 'zone of defection' comprises customers who are dissatisfied, those who are neutral, and those who are loyal but have had a negative experience with the service.

The ‘zone of indifference’ comprises customers who may be satisfied but show no loyalty. This group of customers is expensive to recruit and difficult to keep because they consistently look for a low lower price.

The ‘zone of loyalty’ includes customers who have confidence and are likely to repurchase whenever an opportunity presents itself. Many of this last group become loyal after they have been treated properly when things go wrong. Figure 2.8 also illustrates that even when customers rate their satisfaction at the scale of 4 (i.e. satisfied), there is a high level of indifference and a possibility of defection if a better alternative is perceived and provided (Heskett and Schlesinger, 1994). Furthermore, an experimental study found that there was no important relationship between the transaction-specific satisfaction appraisal and the length of the retention (Bolton, 1995).

The findings of these studies show that there may be a need to review the conceptual thought of the strong relationship between customer satisfaction and retention. Indeed, literature on the relationship between customers’ overall satisfaction and their repurchase intentions are controversial (Oliva et al., 1992; Brown, Churchill & Peter, 1993; Oliva, Oliver & Bearden, 1995; Mitall, Rose & Baldasare, 1998). Some researchers assume that the relationships between customer satisfaction and repurchase intentions are symmetrical and linear (LaTour and Peat, 1979; Kolter et al., 2002). This means that customer satisfaction has a direct impact on repurchase intentions (Brown et al., 1993; Mitall et al., 1998). Other researchers, however, assume that the relationships between customer satisfaction and repurchase intentions are asymmetrical and nonlinear (Oliva et al., 1995). That means that customer satisfaction has no direct impact on repurchase intentions. The conclusion is that the probability of repurchase is not isomorphic with either positive or negative consumption experience (Feinberg, Widdows, Hirsch-Wyncott & Trappey, 1990).

In fact, satisfaction alone will not cause repeat purchase if competition is keen. It actually requires the customers' resistance to change to defy offers from competitors (Jansson and Letmark, 2005). That is when there are few options to choose from, customers remain loyal even though they may be dissatisfied. On the other hand, highly satisfied customers may be disloyal if there are many choices available. Accumulated evidence indicates customer satisfaction does influence repurchase behaviour, but this evidence explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). Satisfied customers may leave a relationship and dissatisfied customers do not necessarily switch to another bank (Reichheld, 1993) especially in the Internet business mode. Firms need to go beyond mere satisfaction to retain customers in a competitive business environment (Morgan and Hunt, 1994; Bendapudi and Berry, 1997; Hart and Johnson, 1999) such as banking.

2.4.2 Customer Commitment

Customer commitment has in many cases been identified as a crucial variable in the literature of relationship marketing (Dwyer, Schurr & On, 1987; Crosby, Evans & Cowles, 1990; Cronin and Taylor, 1992; Moorman, Deshpandé & Zaltman, 1993; Morgan and Hunt, 1994; Storbacka et al., 1994; Sheaves and Barnes, 1996). The term 'relationship marketing' first appeared in a 1983 conference paper (Berry, 1983). Relationship commitment ensures the strength, stability, durability and even the profitability of a relationship (Dwyer et al., 1987; Morgan and Hunt, 1994, Wilson et al., 1995). Customer commitment is defined as "all marketing activities directed toward establishing, developing, and maintaining successful relational exchange" (Morgan and Hunt, 1994, p.22).

2.4.2.1 Concepts of Customer Commitment

As a management concept, relationship marketing describes a marketer's view of how to keep customers for life (Vavra, 1995). Commitment is the core concept in the relationship-marketing paradigm (Dwyer et al., 1987; Morgan and Hunt, 1994; Wetzels, de Ruyter & Lemmink, 2000) and it is an enduring attachment to a seller (Morgan and Hunt, 1994).

Scholarly literature views the work of relationship marketing in the consumer market in three very different ways. The enthusiastic stream, for instance, supports the use of relational marketing strategy for all firms regardless of products or services (Peppers and Rogers, 1997). The opposing stream protests that relational strategies are unsuitable and costly in an industry such as consumer retailing. One source contends that consumers have to be pretty naive for relational strategy to be successful (Egan, 1999). The middle ground bears the view that different relationship proneness exists among different groups of customers in different industries (Christy, Oliver & Penn, 1996).

In the literature, however, the interpretation of commitment is not unanimous when referring to its attitudinal and behavioural nature (Meyer and Allen, 1997). Moreover, commitment has been taken as unidimensional (Garbarino and Johnson, 1999; Sharma and Patterson, 2000; Hennig-Thurau, Gwinner & Gremeler, 2002). This view stands in contrast to viewing it as a multidimensional construct, though mostly applied to a business to business setting (Gruen et al., 2000; Wetzels et al., 2000). Therefore, it can be interpreted that the unidimensional view is referring to a customer to business context.

Despite the different views on commitment in the literature, most views support three dimensions of commitment regardless of the subject being studied (Meyer and Herscovitch, 2001). The three dimensions of commitment reflect different underlying psychological states, namely, affective commitment, continuance commitment and normative commitment. Affective commitment refers to the desire and willingness to stay with an organization. It is also found to be positively related to repurchase intentions (Fullerton, 2005). Continuance commitment is bound by the tangible and intangible costs to stay with the organization. Normative commitment is the feeling of obligation to stay with an organization (Meyer and Allen, 1997).

According to the Theory of Reasoned Action (TRA), a person's intention is determined by personal nature and the social influence (Fishbein and Ajzen, 1975). The personal factor is the individual's positive or negative evaluation of performing the behaviour. This factor is known as attitude toward the behaviour, and it refers simply to the person's internal judgment. This judgment may be based on one's past experience, belief, educational background, understanding and character. These personal belief and subjective norms make up a person's intention and its subsequent behavioural action. The TRA model posits that commitment, an attitude toward a retailer, is a direct antecedent to loyalty. Once loyalty is solidified, consumers will resist persuasion to switch to or ignore information about goods or services from alternate, more inexpensive sources (Oliver, 1999).

However, the TRA model posits that Internet trustworthiness, security beliefs, will negatively moderate the relationship between the commitment and loyalty link. The influence of commitment on loyalty and consequently repeat patronage may be moderated by situational or social factors (Dick and Basu, 1994). Actual or perceived scenarios that affect a consumer's motivation to purchase goods or services from a vendor could be moderators. One of the important moderators being identified is security beliefs, which reflect perceptions of safety or trust in the environment surrounding a transaction. This may cause inconsistency in the relationship between commitment and loyalty. That is, if an environment is unsafe or untrustworthy, committed customers will express less loyalty to the business (Hoffman, Novak & Peralta, 1998). The relationship between customer commitment and customer retention will be discussed in Section 2.4.2.2.

2.4.2.2 Relationship between Customer Commitment and Customer Retention

“Relationships are built on the foundation of mutual commitment” (Berry and Parasuraman, 1991, p.139). Commitment implies that there are mutual benefits and that the parties involved want to stay in the relationship and are prepared to put in effort and investments in terms of monetary and psychological in maintaining the relationship (Morgan and Hunt, 1994). Customers tend to commit themselves to establishing, developing, and maintaining relationships with a service provider who offers value-added benefits. These benefits can be classified as confidence, social and favourable treatment (Gwinner et al., 1998). Even though some customers perceive the core service attribute as less than optimal, they may still stay in a relationship if they are receiving desirable relational benefits (Gwinner et al., 1998).

Service providers implementing effective relationship-specific investments can increase customers’ dependency, thus inhibiting switching (Berry and Parasuraman, 1991). It has been reported that power-utility suppliers are bound to commitment and trust in a restructured environment in order to ward off customer switching (DuPont, 1998). In addition, a customer who switches to a competitor tend to lose the benefits from investments that may not be readily provided by the competitor. 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). The cost of either switching or termination has been identified as a factor contributing to maintaining a relationship (Morgan and Hunt, 1994).

Customers are believed to be more involved in a relationship if they engage in more information processing. Since personal contact can create more involvement, there is a need to increase the amount or level of human touch in order to create loyalty or commitment (Bendapudi and Berry, 1997; Bhattacharya and Bolton, 2000). Consumers play a passive role in the relationship may be due to the lack of opportunities to being active, for example, limited choice of products and services (Pels, 1999).

Marketers assume that customers are motivated by reward or greed, philanthropy or guilt and love or obligation (Seybold, 2001). The assumption that memberships automatically bring high repeat patronage and loyalty is kept by cash incentives being offered (Javalgi and Moberg, 1997). Moreover, consumers seem to have intense relationships with physical products and emotional experiences even without human contact. Exposure to advertising is one example of this (Fournier, 1998).

For intangible services, customers tend to stay in a relationship with the same service provider if they have established a high level of affective commitment to the service employees of that provider (Shernwell, Cronin & Bullard, 1994; Hansen, Sandvik & Selnes, 2003). Furthermore, clients will be committed to their financial advisers in order to obtain maximum returns on their investments (Sharma, Patterson, Cicic & Dawes, 1997). Clients do not actively look for alternative relationships if they are committed to a relationship.

In general, firms rely on trust and commitment to maintain long-term relationships with customers. In high-commitment relationships, an occasional defect in the overall quality may not pose a threat to the whole relationship. On the contrary, in a relationship based on a high level of overall quality, it is more likely that such an incident may trigger a customer's decision to terminate the relationship (Hennig-Thurau and Klee, 1997).

One empirical study suggests that strong interpersonal relationships positively influence a customer's intention to repurchase in the case of low-customer satisfaction (Jones et al., 2000). The implication is that satisfaction is a condition that contributes to a customer's opting for a product or service but satisfaction alone is not sufficient to make a customer commit to the product or service (Wilson and Mummalaneni, 1990). Even a satisfied customer may leave a relationship and a dissatisfied customer may not necessarily switch to competitors (Reichheld, 1993).

On the other hand, customer relationship management (CRM) applications are found to result in improvements in customer knowledge and customer satisfaction (Mithas, Krishnan & Fornell, 2005). When Scandinavia's largest business publisher, Dagbladet Borsen, implemented its 4-year CRM strategy, its circulation increased 40 percent, advertising revenue increased 50 percent, and its overall revenue more than doubled (Lindgreen, 2004). The concept of commitment and the connection between service quality and customer commitment is not straightforward. Commitment in a business relationship goes beyond satisfaction, and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson et al., 1995).

2.4.3 Trust

Research into trust concept originated with the analysis of personal relationships. For instance, in the area of social psychology, trust can be regarded as an inherent characteristic of any valuable social interaction (Rempel et al., 1985). In addition, the concept of trust, inspired by sociology (Lewis and Weigert, 1985), economics (Dasgupta, 1988) and management (Darney and Hansen, 1994), came into marketing literature following the relational orientation arising in marketing activities (Morgan and Hunt, 1994; Dywer et al., 1987; Ganesan, 1994; Geyskens, Steenkamp, Scheer & Kumar, 1996).

In sociology research, the emotional element of trust is highlighted whereas in marketing (Lewis and Weigert, 1985), trust is described as three-pronged: (1) Trust possesses a cognitive process - logical rational reasoning; (2) an emotional element - positive influence for the trustee and, (3) behavioural enactment - the undertaking of a risky course of action based on the expectation with confidence that all parties involved in the action will respond competently and dutifully (Moorman et al., 1993).

Previous research has emphasized cognitive trust and neglected the emotional element while focussing on the impact of awareness of the known on customer trust but overlooking the impact of awareness of the unknown (Komiak and Benbasat, 2004). Awareness of the unknown means a customer does not know everything about a trustee (Simmel, 1964). As we say ‘the unknown is daunting’, the impact of awareness of the unknown, as well as emotional trust, on customer trust is influential in e-commerce and deserves to be studied (Komiak and Benbasat, 2004). Cognitive trust and emotional trust has potentially asymmetric effects on customer reliance on entities in e-commerce (Komiak and Benbasat, 2004).

As a core component of service and relationship quality, trust has been recognised in both academia and business (Clout, 2001; Coulter and Coulter, 2002). 'Trust-worthiness' in various presentations has been created as the main message in commercial advertisements, e.g. "Don't trust your luck, trust RAA Plus"[1] and "Trust is Tampax".

2.4.3.1 Concepts of Trust

Terminology for 'trust' is varied, even confusing, when referring to someone or something being trusted. In the literature of the social sciences and psychology, such terms as 'altruism' (Frost, Stimpson & Maughan, 1978), 'benevolence' and 'honesty' (Larzelere and Huston, 1980) or 'dependability' and 'responsibility' (Rempel, Homes & Zanna, 1985) are used to describe trust. Nevertheless, these terms share the same idea that trust in an individual is a feeling of security based on the belief that the individual's behaviour will result in favourable outcomes for the exchange or relational partner (Delgado-Ballester, 2004).

Definitions of the trust construct range from 'a generalised expectancy held by an individual that the word of another can be relied on' (Rotter, 1967) to 'the extent to which a person is confident in - and willing to act on - the basis of the words, actions, decisions of others' (McAllister, 1995). In the consumer-brand domain, trust is described as the willingness of the consumers to rely on the capability of the brand to act on the promises it has claimed to fulfil (Chaudhuri and Holbrook, 2001). However, it is arguable to incorporate the behavioural intention of 'willingness' into the definition (Singh and Sirdeshmukh, 2000) as it is implied in the consumer's confidence with the brand (Morgan and Hunt, 1994).

---

[1] RAA = Royal Automobile Association

This feeling about trust is built on the two dimensions of brand reliability (Hess, 1995) and brand intention (Delgado-Ballester and Munuera-Alemán, 2002). ‘Brand reliability’ assumes that the brand is able to respond to customers’ needs by offering new products or services that customers may need or by offering a constant quality level of its products or services. However, it is arguable that the brand could be regarded as an active relationship partner responding to customers similar to people (Delgado-Ballester, 2004). Despite this scepticism, this dimension implies that the brand is a promise of future performance (Deighton, 1992) that will lead to an increase of brand-repurchase intentions by customers.

‘Brand intention’ refers to a belief that goes beyond the present evidence and experience with an assurance of making customers feel that the brand will be responsible when problems arise in the future regarding the consumption of the product or service. Brand intention is more affective and emotional in nature than the other dimensions (Michell, Reast & Lynch, 1998). Indeed, in the context of consumption, customers are subject to the vulnerability of the company’s decisions and actions. This dimension infers that the brand will not take advantage of the customers’ vulnerability in case of adverse situations and circumstances (Delgado-Ballester, 2004).

Moreover, trust in marketing studies has been reported as ‘multidimensional’ (Raimondo, 2000), and has been described as:

- involved in brand extension acceptance as part of ‘brand credibility’ (Keller and Aaker, 1992);
- claimed to be the basis of the development of loyalty (Berry, 1993; Reicheld and Schefter, 2000);

- a component of brand equity (Dyson, Farr & Hollis, 1996);
- critical in sustaining good agency-client relationships (Labahn and Kohli, 1997);
- crucial in establishing strong customer relationships on the Internet (Urban, Sultan & Qualls, 2000), and
- possibly the most powerful relationship marketing tool for firms (Berry, 1995).

Trust develops through past experience and prior interaction over time (Rempel et al., 1985; Grönroos, 1996; Curran, Rosen & Surprenant, 1998). However, 'trust' remains a term until perceived risks determine its effect (Andaleeb, 1992; Mayer, Davis & Schoorman, 1995; Rempel et al., 1985). That is to say consumers are vulnerable about any purchase, and whenever the purchasing decision is important to them, they will look for a trustworthy brand to eliminate the intrinsic risks (Delgado-Ballester and Munuera-Aleman, 2001). Therefore, trust has been interpreted as a psychological state termed as 'perceived probabilities' (Bhattacharya, Devinney & Pillutla, 1998), 'confidence' (Barney and Hansen, 1994; Garbarino and Johnson, 1999) or 'expectations' (Gambetta, 1988; Rempel et al., 1985) prescribed to positive and favourable outcomes enacted on the part of the trusting party.

2.4.3.2 Relationship between Trust and Customer Retention

While web-mediated e-commerce changes the pattern of consumer behaviours, customer trust continues to be important in the e-commerce context. Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Adapted from the definitions in conventional commerce, customer trust in e-commerce has been variously defined as:

- ‘a willingness to take risk’ (Lee and Turban, 2001; Ba and Pavlou, 2002),
- ‘a willingness to believe the trustee’ (Fung and Lee, 1999), or
- ‘a belief concerning certain characteristics of the trustee’ (Stewart, 1999).

However, there are differences in the two modes of business. The direct objects of trust are different, and the situation within which that customer trust operates, such as the information available for customers about the objects of trust, is not the same.

Online purchases depend on customer trust in the Internet, in specific websites, in the information available online, and in a firm’s delivery and service fulfilment (Urban et al., 2000). Trust in a firm’s website affects customers’ attitude towards the firm and their willingness to buy (Keen, 1997; Wetsch and Cunningham, 1999). An absence of customer trust in an online firm’s competence and integrity is the major hurdle to the enjoyment of e-commerce benefits (Keen, 1997; Ratnasingham, 1998; Ba, Whinston & Zhang, 1999; Brynjolfsson and Smith, 2000). For repurchases, customer trust in a firm is the principal mediator between product or service attributes and customer retention (Garbarino and Johnson, 1999). Customer trust significantly contributes to sales growth through customer acquisition and retention. Repeat purchases are claimed to account for more than one-half of total revenue among high-end e-commerce websites (Intermarket Group, 2004).

In the financial services market, trust, together with honesty, fairness or excellence, has been taken as one of the basic consumer needs (Bayne, 1999). In the context of Internet banking, the absence of face-to-face contact creates a feeling of uncertainty and risk for customers (Reichheld and Schefter, 2000). Since customers might need reassurance to release their personal details and preferences, banks have to prove that they deserve to be trusted (Cappelli, 1999). The development and upkeep of trust in an online environment is critically important, especially in such a highly unpredictable market with reduced product differentiation as banking (Fournier and Yao, 1997; Urban et al., 2000; Papadopoulou, Andreou, Kanellis & Martakos, 2001). Issues about privacy and security are major concerns for online shoppers, particularly unknown ones (Esch, Langner, Schmitt & Geus, 2006). It was reported that building customer trust and convenience is the most appropriate strategy for commerce-based businesses (Wirtz and Lihotzky, 2003).

2.4.4 Mediating Factors in the Relationship for Customer Retention

Trust generates associations and feelings that tend to be self-relevant and held with more certainty, and has been proposed that overall satisfaction generates trust (Ganesan, 1994; Selnes, 1998). Trust has been suggested as an antecedent to satisfaction (Singh and Sirdeshmukh, 2000). It has been hypothesized as an antecedent to commitment (Moorman et al., 1992; Morgan and Hunt, 1994). Trust being considered as an asset to a brand leads to customer loyalty (Ambler, 1999) and appears to be a key antecedent to loyalty (Chaudhuri and Holbrook, 2001; De Ruyter, Moorman, & Lemmink 2001; Fukuyama, 1995).

Trust has also been claimed to have a mediating role in the satisfaction-loyalty relationship (Hart and Johnson, 1999). Its fully mediating role for soft attributes and partially mediating role for hard attributes on loyalty has been reported (Auh, 2005). It has been cited that true customer loyalty is driven by a strong, trusting relationship between the customer and the business (Bhatty, Skinkle & Spalding, 2001) whereas commitment is found to mediate the relationships between trust and the propensity to leave (Morgan and Hunt, 1994). Commitment also mediates the relationship between repurchase intentions and various antecedent variables, including trust (Garbarino and

Johnson, 1999). Extant literature evaluation on customer satisfaction, customer commitment and trust on customer retention has posited problems for research on Internet banking, and these problems will be presented in Section 2.5.

2.5 Research Problems

Banks have been developing capabilities for providing Internet banking services for their new and existing customers for either competitive advantage or out of competitive necessity for survival (Karjaluoto et al., 2002). It has been reported that deregulation has caused previously loyal bank customers in Athens, Greece, to switch service providers (Mylonakis, Malliaris & Siomokos, 1998). Banks in Hong Kong look to the Internet to reduce their operational costs and to gain competitive advantages after the deregulation of interest rates in July 2001 (Hong Kong Monetary Authority, 2001a).

Although the main electronic delivery channel for banking today is the Internet (Karjaluoto et al., 2002), this channel possesses the following characteristics that can make it difficult for firms to retain their customers:

1. increased competition between banks (Chatterjee and Narasimhan, 1994; Makadok, 1998; Choudhury et al., 1998),
2. low differentiation (Dholakia and Rego, 1998), and commoditization of the market (Bakos, 1997).

Banks that offer the same services and products with little differentiation face a highly competitive environment (Bowen and Shoemaker, 1998). Competing on monetary return and product attribute alone may not be sufficient to retain customers (Cravens, 1995).

When referring to Internet banking, it has been predicted that the 'frictionless commerce' created by the Internet environment may raise bank customers' expectations about services and make them less satisfied and more prone to switching to competitors (Shankar et al., 2002). The research problems being identified are how Internet banks keep their customers, especially the profitable ones and what makes them stay with the same service provider and what makes them go. These problems are presented into the following eleven research questions.

2.6 Research Questions

Derived from the research problems, eleven questions have arisen for Internet banking to see if the same factors - customer satisfaction, customer commitment and brand trust – have the same impact on retaining customers in the virtual context. The questions are listed below.

Research Question 1:

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service?

Research Question 2:

Does the commitment of potentially profitable professionals and business practitioners have an effect on retaining the use of the Internet banking service of their bank?

Research Question 3:

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they trust the service?

Research Question 4:

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service and trust it?

Research Question 5:

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service and are committed to it?

Research Question 6:

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they trust the service and are committed to it?

Research Question 7:

Will potentially profitable professionals and business practitioners continue to use the Internet banking service of their bank if they are satisfied with the service, trust it, and are committed to it?

Research Question 8:

How does trust in a bank affect the level of customer commitment to the service of that bank to make potentially profitable professionals and business practitioners retain internet accounts with that bank?

Research Question 9:

How does trust in a bank affect the level of customer satisfaction with the service of that bank to make the potentially profitable professionals and business practitioners retain internet accounts with that bank?

Research Question 10:

How does customer commitment to a bank affect the level of customer satisfaction with the service of that bank to make the potentially profitable professionals and business practitioners retain internet accounts with the bank?

Research Question 11:

How does commitment to a bank affect the level of customer satisfaction with the service and trust that bank to make the potentially profitable professionals and business practitioners retain internet accounts with the bank?

2.7 Hypotheses

Guided by the research questions, eleven specific hypotheses for this research have been developed and presented below regarding customer retention decisions made in the context of Internet banking

HYPOTHESIS 1:

Satisfaction increases customer retention has been cited (Oliver, 1980; Yi, 1990; Rust and Zahorik, 1993; Kotler, 1994). Customer satisfaction has a significant impact on repurchase intentions in a range of services (Cronin and Taylor, 1992; Patterson et al., 1997). Satisfying customer needs and wants ensures repeat purchase (Kotler et al., 2002). One empirical study has proved that a reduction in defections by five percent can raise profitability by between 20 and 85 percent (Reichheld and Sasser, 1990). Satisfying customer needs may be crucial to overcome customer reluctance to shop on the Internet (Bitner, Brown & Meuter, 2000). Therefore, when looking at the relationship between customer satisfaction and customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H1: *There is a positive relationship between customer satisfaction and customer retention in the context of Internet banking.*

HYPOTHESIS 2:

Commitment is positively related to repurchase intentions (Fullerton, 2005). Commitment implies that there are mutual benefits and that the parties involved want to stay in the relationship and are prepared to put in both monetary and psychological effort and investments towards maintaining the relationship (Morgan and Hunt, 1994). Therefore, when looking at the relationship between customer commitment and customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H2: *There is a positive relationship between customer commitment and customer retention in the context of Internet banking.*

HYPOTHESIS 3:

Trust increases customer retention and for repurchases, customer trust in a firm is the principal mediator between product or service attributes and customer retention (Garbarino and Johnson, 1999). Customer trust significantly contributes to sales growth through customer acquisition and retention (Intermarket Group, 2004). Therefore, when looking at the relationship between trust and customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H3: *There is a positive relationship between trust and customer retention in the context of Internet banking.*

HYPOTHESIS 4:

Customer satisfaction results in customer-behaviour patterns that are beneficial to business outcomes have been well recognized by both practitioners and academics (Keiningham, Perkins-Munn & Evans, 2003). Customer satisfaction has been defined as a customer's overall evaluation of performance (Gustafsson, Johnson & Roos, 2005). A single satisfying transaction does not result in long term loyalty, nor does a single dissatisfying transaction lead to a customer switching. Therefore, for measuring satisfaction, a single item will be used for the overall level of satisfaction (Kettingler and Lee, 1994).

It has been proposed that overall satisfaction generates trust since trust generates associations and feelings that tend to be self-relevant and held with more certainty (Ganesan, 1994; Selnes, 1998). Therefore, when looking at the relationship between customer satisfaction and trust on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H4: *Customer retention is the function of customer satisfaction and trust in the context of Internet banking.*

HYPOTHESIS 5:

Studies have revealed that customer satisfaction has a measurable impact on purchase intentions (Bolton and Drew, 1991; Oliver, 1997; Anderson and Mittal, 2000; Estrin, 2005), customer retention (Anderson and Sullivan, 1993; Bolton, 1998; Mittal and Kamakura, 2001; Kumar, 2002; Estrin, 2005), and the financial performance of a bank (Rust and Zahorik, 1993; Leung, Li & Au, 1998; Anderson and Fornell, 1999; Keiningham, Goddard, Vavra & Iaci, 1999). As a result, customer satisfaction is taken as a basic construct for monitoring and controlling marketing activities in the concept of relationship marketing (Anderson et al., 1994; Fornell et al., 1996). It has been argued that commitment in a business relationship goes beyond satisfaction, and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson et al., 1995). Therefore, when looking at the relationship between customer commitment and satisfaction on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H5: *Customer retention is the function of customer commitment and satisfaction in the context of Internet banking.*

HYPOTHESIS 6:

Trust in a firm's website affects customers' attitude towards the firm and their willingness to buy (Keen, 1997; Wetsch and Cunningham, 1999). Online purchases depend on customer trust in the Internet, in the websites, in the information available, and in a firm's delivery and service fulfilment (Urban et al., 2000).

Commitment, when extended to consumer setting, is conceptualised as a force that binds a customer to continue to the services of the same service provider (Meyer and Herscovitch, 2001) even despite irregular influential events and marketing efforts that may cause switching behaviours (Curasi and Kennedy, 2002). Therefore, when looking at the relationship between customer commitment and trust on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H6: *Customer retention is the function of customer commitment and trust in the context of Internet banking.*

HYPOTHESIS 7:

Repeat purchase depends on satisfying customer needs and wants (Kotler et al., 2002) whereas Customer Relationship Marketing (CRM) applications are found to be positively related to improvements in customer satisfaction (Mithas et al., 2005). In the context of consumption, customers are subject the vulnerability of the company's decision and actions. This dimension infers that customers trust the company will not take advantage of their vulnerability in case of adverse situations and circumstances (Delgado-Ballester, 2004). While web-mediated e-commerce changes the pattern of consumer behaviours customer trust continues to be important in the e-commerce context. Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Therefore, when looking at the relationship between trust, customer satisfaction and commitment on customer retention in the scope of Internet banking, we can formulate the following hypothesis:

H7: *Customer retention is the function of trust, customer satisfaction and commitment in the context of Internet banking.*

HYPOTHESIS 8:

Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Adapted from the definitions in conventional commerce, customer trust in e-commerce has been defined as 'a willingness to take risk' (Lee and Turban, 2001; Ba and Pavlou, 2002), 'a willingness to believe the trustee' (Fung and Lee, 1999), or 'a belief concerning certain characteristics of the trustee' (Stewart, 1999). One empirical study has revealed that there is an indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000). Assuming that trust mediate the relationship between customer commitment and retention, specifically, customers with high level of trust are most likely to be retained. Therefore, it can be hypothesised that:

H8: *Customer commitment is mediated by trust to build customer retention in the context of Internet banking.*

HYPOTHESIS 9:

The relationship between satisfaction and customer retention has been empirically validated by many scholarly works studying the service sector (Anderson and Sullivan, 1993; Rucci et al., 1998; Bansal and Taylor, 1999; Cronin et al., 2000). However, trust has been suggested as an antecedent to satisfaction (Singh and Sirdeshmukh, 2000). It has been cited that the absence of customer trust in an online firm's competence and integrity is the major hurdle to the enjoyment of e-commerce benefits (Keen, 1997; Ratnasingham, 1998; Ba, et al., 1999; Brynjolfsson and Smith, 2000). As there is an indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000). Trust mediates the relationship between customer satisfaction and retention is assumed, specifically, customers with high level of trust are most likely to be retained. Therefore, it can be hypothesised that:

H9: *Customer satisfaction is mediated by trust to build customer retention in the context of Internet banking.*

HYPOTHESIS 10:

Customer satisfaction has no direct impact on repurchase intentions (Feinberg et al., 1990). Mere satisfaction will not result in repeat purchases if competition is keen (Jansson and Letmark, 2005). Highly satisfied customers may be disloyal if there are many choices available. Accumulated evidence indicates that customer satisfaction does influence repurchase behaviour, but this evidence explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). Satisfied customers may leave a relationship and dissatisfied customers do not necessarily switch to another bank (Reichheld, 1993).

Customer commitment, on the other hand, has in many cases been identified as a crucial variable in the literature of relationship marketing (Dwyer et al., 1987; Crosby et al., 1990; Cronin and Taylor, 1992; Moorman et al., 1993; Morgan and Hunt, 1994; Storbacka et al., 1994; Sheaves and Barnes, 1996). Relationship commitment ensures the strength, stability, durability and even the profitability of a relationship (Dwyer et al., 1987; Morgan and Hunt, 1994, Wilson et al., 1995). Customer commitment mediates the relationship between customer satisfaction and retention is assumed, specifically, customers with high level of commitment are most likely to be retained. Therefore, it can be hypothesised that:

H10: *Customer satisfaction is mediated by customer commitment to build customer retention in the context of Internet banking.*

HYPOTHESIS 11:

Satisfaction is an essential, but not a necessary, condition for a customer to become committed to a product or service provider (Wilson and Mummalaneni, 1990). It has been suggested that service providers may not necessarily be able to retain satisfied customers (Heskett, Jones, Lowan, Sasser & Schlesinger, 1994; Schneider and Bowen, 1999). It has been proposed that affective, normative and continuance commitment mediates the relationship between switching intentions and antecedents such as satisfaction (Bettencourt, 1997, Wetzels, de Ruyter & van Birgelen, 1998; Garbarino and Johnson, 1999; Wetzels et al., 2000; Hennig-Thurau et al., 2002).

The empirically proven indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000) suggests that strong interpersonal relationships positively influence a customer's intention to repurchase in the case of low customer satisfaction. If the inability to keep satisfied customers is partly due to the absence of customer commitment, then this suggests that commitment may act as a mediator to satisfaction in strengthening customer retention. In addition, trust has been claimed as having a mediating role for other variables in different research models. Trust is hypothesized as an antecedent to commitment (Moorman et al., 1992; Morgan and Hunt, 1994). Assuming customer satisfaction and trust mediate the relationship between customer commitment and retention, specifically, customers with high level of satisfaction and trust are most likely to be retained. Therefore, it can be hypothesised that:

H11: *The effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the context of Internet banking.*

These eleven hypotheses are depicted in Section 2.8 as a conceptual model mapping the relationship between the various factors.

2.8 Research Model

A conceptual research model showing the hypothesized relationship that exists between various factors, customer satisfaction, customer commitment and brand trust on customer retention in the context of Internet banking, are shown in Figure 2.9. The relationship of the factors (variables) is mapped with the headed arrows indicating the direction of one factor (independent variable) to another (dependent variable), or one factor (independent variable) going through an intervening factor (mediating variable) to the other factor (dependent variable).

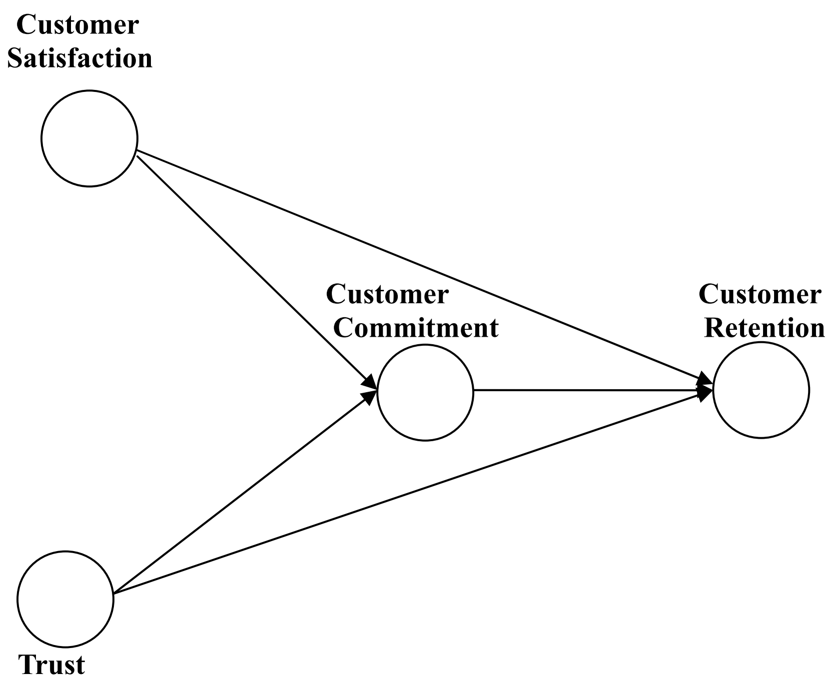


Figure 2.9: Conceptual Research Model of This Study

2.9 Conclusion

Banking has either developed, or been forced to change, from the fourteenth century through network branches to the Internet services of today. The use of the Internet banking is growing, thus confirming its acceptance all over the world. The electronic banking mode brings benefits to service users and creates opportunities for the service providers.

However, Internet banking also poses threats to the industry. It removes the industry entry barrier, crosses all geographical boundaries, and invites keen competition from banks and non-bank entities alike. Coupled with easy switching to a competitor from customers, banks are being challenged to find effective ways of retaining their customers in the virtual market place, especially profitable customers. Retaining profitable customers from the relevant segment is the basis of survival and the key to achieve profitability.

Extensive literature has been reviewed for factors leading to effective customer retention. Customer satisfaction, customer commitment and trust have been identified and empirically validated with their function in retaining customers in non-Internet contexts. The definition of the research problem is if the validated factors on customer retention will be as effective in an Internet context of banking. Research questions are then raised. The four variables, highlighted in eleven hypotheses, outlining expected relationships have been depicted in a research model as a blueprint to be tested for this study.

CHAPTER 3 RESEARCH METHODOLOGIES

3.1 Introduction

This chapter focuses on the research methodologies adopted for this research project. Section 3.1 introduces the different sections in the chapter. Section 3.2 presents the different research philosophies and paradigms and identifies which one this study falls into. Section 3.3 discusses the different research methods leading to the research design of this study. Section 3.4 analyses various measuring scales and identifies the key variables of this study. Section 3.5 highlights the significance of validity and reliability in research. Section 3.6 defines the research population and describes the sampling design for this study. Section 3.7 evaluates different data collection methods for the choice of a questionnaire for this study, as well as elaborating on the design of the questionnaire. Section 3.8 discusses the various ethical issues involve in data collection. Section 3.9 assesses different data analysis techniques and selects the tests for the raw data of this survey. Section 3.10 explains the limitations of the survey. Section 3.11 summarizes the entire chapter on research methodology.

3.2 Research Philosophies and Paradigms

A well-defined research objective can give a researcher a clear direction in which to design his/her research. The purpose of any study determines the types of research to follow since different researches demand different types of planning and handling (Ghauri, Grønhaug & Kristianslund, 1995). Research methods relate not only to differences in problem structure but also to differences in philosophy of science and perspective held by the researcher (Ghauri et al., 1995). The three major research philosophies identified as underpinning business researches are: positivist research, interpretive research and critical research (Gephart, 1999; Lincoln and Guba, 2000; Cavana, Delahaye & Sekaran, 2001).

3.2.1 Positivist Research

Positivist research assumes that people share the same meaning systems and uses precise and objective measures to collect and reveal quantitative data. Positivist researchers attempt to deny the research hypothesis. A good positivist is replicable, which means comparable results are expected when the research is conducted again in the same way (Cavana et al., 2001). Positivist research means to discover universal laws and phenomena that can be used to predict human behaviour (Gephart, 1999; Lincoln and Guba, 2000). Research methods and types of analysis include experiments, questionnaires, secondary data analysis, quantitatively-coded documents and statistical analysis.

3.2.2 Interpretive Research

Interpretive research believes that people experience physical and social reality in different ways. Interpretive research identifies what is meaningful to individuals being investigated and becomes fully involved with these individuals. This involvement allows the researcher to find out the socially constructed meaning of reality (Ghauri et al., 1995). Research methods and types of analysis include ethnography, participant observation, interviews, focus groups, conversational analysis and case studies (Gephart, 1999; Lincoln and Guba, 2000).

3.2.3 Critical Research

Critical research assumes that people have unrealised potential and can adapt and transform themselves. Critical research therefore forces change on people before they are ready and/or focuses on destroying current reality without providing processes for building a new reality. The aim of critical research is to empower people to create a better world for themselves (Ghauri et al., 1995). Critical research methods and types of analysis include field research, historical analysis and dialectical analysis (Gephart, 1999; Lincoln and Guba, 2000).

The above three different beliefs govern (1) what type of research should be chosen, (2) the ways in which the research should be conducted, and (3) the results the research should accomplish (Ghauri et al., 1995). This research falls in the positivist paradigm because the objective of the work is to discover an observed phenomenon how to retain bank customers in the Internet banking service setting through testing hypotheses to identify a set of existing universal laws. The next section presents various research methods and designs.

3.3 Research Methodologies and Designs

'Research methodology' refers to the overall approach and design of the research process from theories through to data collection and analysis (Hussey and Hussey, 1997). The key criterion when making decisions about research methodology is how useful it will be for the study (Silverman, 1994). Exploratory, descriptive and hypothesis testing based on different research paradigms can be used depending on the stage to which knowledge about the work has advanced (Cavana et al., 2001). Decisions concerning research could start with qualitative assumptions and proceed to quantitative methods of exploring new areas of interest. They could then continue with a description of the phenomenon and finish off by testing the hypotheses to either confirm or deny the relationships among variables.

3.3.1 Research Types

The first of the three main types of research, exploratory research design, is suited to research problems that are badly understood (Ghauri et al., 1995). It is also suited to looking for patterns, ideas or hypotheses when there is a lack of information about the issue being referred to (Hussey and Hussey, 1997). Qualitative studies involve the collection of data through observation, interviews, focus groups or case studies that are exploratory in nature (Cavana et al., 2001). Exploratory research is based on interpretive and critical research beliefs.

Descriptive research design is suited to research problems that are well understood and structured. The key characteristics of descriptive research are structure and precise rules and procedures (Ghauri et al., 1995). When the characteristics under investigation in a given situation already exist, descriptive studies are suitable since they can offer a profile of the factors to reveal the phenomena more clearly (Cavana et al., 2001). Descriptive research is more of a positivist paradigm.

Hypothesis testing offers a better understanding of the relationships that exist among variables. Hypothesis testing can reveal cause and effect relationships (Cavana et al., 2001). When a researcher delineates the important variables that are associated with a problem, this is called a ‘correlational study’ (Cavana et al., 2001). Hypothesis testing also belongs to the positivist philosophy.

Any research can adopt more than one type of research method (Cohen and Manion, 1994; Glaser, 1992). Nevertheless, the choice of a research design, given the constraints of time, budget and skill, is the overall strategic approach made to meet the objective of collecting meaningful information to answer the research problem being studied in the best possible way (Ghauri et al., 1995).

This study does not fall into the exploratory research type which is good for dealing with badly understood research problems and discovering patterns or ideas out of very little or no information about the study. This research centres on a problem that is well structured and clearly understood, namely the relationship between customer satisfaction, customer commitment and trust on customer retention in the context of Internet banking. Therefore, the research is of a descriptive nature.

The purpose of this research is to reveal the phenomenon of how to retain bank customers on the Internet banking service setting. Hypotheses that are developed based on the theories existing in previous researches in non-Internet setting services (Lee et al., 2001; Ranaweera and Prabhu, 2003a) can test the relationship of the variables in the Internet banking service settings of this research to see if the theories are supported in the new context. Owing to this, hypothesis testing is adopted for the purpose of this study.

3.3.2 Research Setting

Field experiment and field study are the two main study settings. The experimental approach is more appropriate for devising a new theory because of the opportunity to exert control over the phenomenon and to identify and limit the number of extraneous variables present (Hussey and Hussey, 1997). With reasonably well-formulated theories, field studies are suited to testing them in real-life settings.

A field study seems suited to the purpose of this research and is adopted since it is a correlational study of delineated variables, and the relationship between customer satisfaction, customer commitment, trust and customer retention has been reasonably well formulated in previous research in non-Internet settings (Garbarino and Johnson, 1999; Lee at al., 2001; Oliver, 1999; Ranaweera and Prabhu, 2003a).

3.3.3 Research Timing

There are two different research timings – longitudinal and cross-sectional studies. Longitudinal studies gather data from more than one point in time to meet the objectives of the research. Longitudinal studies can help to identify cause-and-effect relationships from data collected both before and after a manipulation (Cavana et al., 2001). However, longitudinal design requires more time, money and effort than cross-sectional design. Cross-sectional studies collect data only once over a period of time. Cross-sectional design is the most widely used method in business research since the administration of data collection is relatively simple. Budget and time constraints demand that a cross-sectional design be used for this research. Once a research design had been decided upon, the next step is to identify the key variables for measurement, which is covered in the next section.

3.4 Measure Designs and Key Variables

3.4.1 Measures

Several rating scales are used in business research, and each rating scale has its function and characteristics serving different purposes. Dichotomous scale serves to elicit a 'yes' or 'no' answer to questions. This scale is normally used to measure the demographic characteristics of the respondents in studies.

Ranking scale has been ruled out for this research since this scale is used to rank variables whereas this research aims to rate customer's attitudes and behaviors. A Likert scale is one of the scales most frequently used to measure attitudes and behaviours in business research (Cavana et al., 2001). The interval measurement is commonly used to examine how strongly respondents agree or disagree with statements on a five- or seven-point scale to measure variables in hypotheses.

There is a consensus that unless there are very good reasons for developing a new set of measures (such as the inadequacy of or unavailability of previous measures) it is preferable to adopt existing measures that work for one's own research (Churchill, 1979). Since sources of secondary data developed by previous researches to assess customer satisfaction, customer commitment, brand trust and customer retention are available (Berry, 2000; Davis, Buchannan-Oliver & Brodie, 2000; Morgan and Hunt, 1994; Ranawera and Prabhu, 2003a), a set of already existing measures has been adopted.

All the constructs were measured using scales that were previously established – six items were used to measure customer satisfaction (Oliver and Svan, 1989; Jones, Mothersbaugh

& Beatty, 2000; Sharma and Patterson, 2000), eight items were used to measure customer commitment (Jones, Mothersbaugh & Beatty, 2000; Sharma and Patterson, 2000; Chaudhuri and Holbrook, 2001; Colgate and Lang, 2001; Homburg and Giering, 2001), and six items were used to measure brand trust (Sharma and Patterson, 2000; Chaudhuri and Holbrook, 2001; Colgate and Lang, 2001; Delgado-Ballester and Munuera-Alema, 2001). Since these measures are for non-Internet context, modification has to be made to apply to this study.

Complex scoring systems and multiple-item scales take more time to complete than simple scales, and since there is no proof that they are more reliable assessments of validity than simple scales, it is preferable to adopt a simple approach to assessing validity that can be fully reported (Jüni, Witschi, Bloch & Egger, 1999; Cochrane Reviewers' Handbook, 2004). This research uses simple scoring systems and employs a seven-point scale to measure the perspectives of Hong Kong profitable bank customers towards retention in the context of Internet banking.

3.4.2 Key Variables

Four key variables have been identified in this research. Customer satisfaction, customer commitment, and brand trust are independent variables whereas customer retention is a dependent variable. These variables are set in the hypotheses to be tested to determine whether or not any of the independent variables, single or joint or mediate another one, have an effect on or are associated with the dependant variable. The variables are presented in a survey questionnaire to measure the relationships between them. Measurement is the assignment of numbers to objects or events according to rules

(Stevens, 1951). Measures are a means to obtain valid data for meaningful findings (Bagozzi, 1980). Section 3.5 presents the validity and reliability assessments in survey questionnaires.

3.5 Validity and Reliability Assessments

Many researchers accept the notion that research measurement is generally concerned with the quantification of concepts. However, some researchers argue that this is a very restricted concept of measurement since this concept ignores the theoretical structure that the measures are being used to test (Bagozzi, 1980). That is to say that measure is a means to an end in researches. In other words, only accurate and reliable measuring instruments can obtain valid data for meaningful findings. Studies that attempt to contribute to the theoretical development of a particular field of academic research must demonstrate sufficient reliability, validity, as well as being sufficiently general (Runyon and Stewart, 1987).

Concepts of validity and reliability are concerned with the degree to which a measuring instrument is free from measurement errors or bias. Validity and reliability tests of the measures of the questions in a survey questionnaire are crucial; these tests must be carried out rigorously in order to ensure that the data being collected is of value. Only valid and reliable data that have been analysed correctly can reveal meaningful findings.

3.5.1 Validity Testing

Validity assesses whether or not a test measures what it claims to measure (Burns, 2000). There are several types of validity measures to assess the performance of a measuring instrument: face, content, criterion and construct. Table 3.1 summarizes the five main types of validity tests and their characteristics and comments on the use of each type (Litwin, 1995). From a customer-research point of view, content validity, criterion-related validity and construct validity are of major importance (Kerlinger, 1980).

Type of Validity	Characteristics	Comments
Face	Casual review of how good an item or group of items appears	Assessed by individuals with no formal training in the subject under study
Content	Formal expert review of how good an item or series of items appears	Usually assessed by individuals with expertise in some aspect of the subject under study
Criterion: Concurrent	Measures how well the item or scale correlates with 'good standard' measures of the same variable	Requires the identification of an established and generally-accepted good standard
Criterion: Predictive	Measures how well the item or scale predicts expected future observations	Used to predict outcomes or events of significance that the item or scale might sub-sequently be used to predict
Construct: convergent & discrimnant	Theoretical measure of the meaningfullness of a survey instrument	Determined usually after years of experience by numerous investigators

Table 3.1: Major Types of Validity Tests and Their Characteristics - Modified (Source: Litwin, 1995)

‘Content validity’ refers to the degree to which a specific set of items is a representative and appropriate sample of the subject matter or content that 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).

For the questions in this survey questionnaire, negative and biased questions, derogatory statements, slang terms and prejudicial questions are avoided. In addition, questions are kept relatively short and clear with each question representing only one aspect of the variable being measured for the achievement of good content validity.

‘Criterion-related validity’ refers to the extent to which scores in a test correspond to a certain criterion. In this survey, scores are compared with one or more external variable (criteria) believed to measure the attribute in the study to ensure criterion validity. This is to check if the measurement scale can predict some future phenomenon. Criterion-related validity was formerly called ‘predictive validity’ or ‘empirical validity’ because it primarily evaluated statistically, and if the measurement scale can predict some future event, then predictive validity is established (Kerlinger, 1980). Factor analysis is a data-reduction technique used to reduce a large number of overlapping measured variables to a much smaller set of factors (Kerlinger, 1980).

Two stages of factor analysis can be performed (Green, Salkind & Akey, 2000): factor extraction and factor rotation. The objective of factor extraction is to decide preliminarily on the number of factors underlying a set of measured variables, while the objective of the factor rotation is twofold: (1) To statistically manipulate (i.e., to rotate factors) the results so that the factors can be understood, and (2) to decide finally on the number of underlying factors. In this study, factor analysis was performed to reduce several repeated measured variables to make a smaller set of factors. As a result, the final factors or constructs are refined and they succinctly represent a set of valid measures for the survey.

'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 one variable to other variables (Cronbach and Meehl, 1955). Convergent and discriminant validity are both considered subcategories of construct validity. If there is evidence demonstrating both convergent and discriminant validity, then by definition construct validity is established. However convergent and discriminant validity work together and either one alone is insufficient for establishing construct validity. The two are inter-locking propositions. Convergent validity is performed to demonstrate measures of constructs that theoretically should be related to each other and that are observed to be related to each other, that is, to show a correspondence between similar constructs (Reichardt and Coleman, 1995). Discriminant validity is performed to demonstrate measures of constructs that theoretically should not be related to each other are observed to not be related to each other, that is, to discriminate between dissimilar construct.

Convergent and discriminant validity can be viewed as differences of 'degree' instead of differences in 'kind'. To estimate the degree to which any two measures are related to each other the correlation coefficient can be used to reveal the patterns of intercorrelations among the measures (Campbell and Fiske, 1959). Correlations between theoretically similar measures should be 'high' while correlations between theoretically dissimilar measures should be 'low'. In general, convergent correlations are desired to be as high as possible and discriminant ones to be as low as possible, and the convergent correlations should always be higher than the discriminant ones.

"If the study lacks construct validity, the findings are meaningless, destroying the internal and external validity of the findings" (Ghauri et al., 1995, p.51). Internal validly refers to the question of whether or not the results obtained within the study are true whereas external validity refers to the question of whether the findings can be generalised to other populations, settings or periods (Ghauri et al., 1995).

There are threats to validity, and four of these threats are serious ones (Ghauri et al., 1995). They are explained below:

1. History – happenings outside the study that occur at the same time and that may affect the response;
2. Maturation – the processes operating within the test units in the study as a function of the passage of time or the nature progression of subject under study;
3. Test effect – the awareness of the chosen respondents may affect the observed response; and
4. Selection bias – when the respondents are not chosen randomly.

To the best knowledge of the researcher of this study, there are no noticeable happenings taking place contemporaneously with this research that may affect the response. Therefore, it was assumed that there is no threat to history. The survey of this study is a cross-sectional type operating at one time only so it avoids the maturation threats of validity. Regarding the threat on test effect, this was minimised by the statement made clearly on the information sheet attached to the questionnaire to the effect that participants will be anonymous and participation in the survey was entirely voluntary. However, because of the unavailability of a sample frame for this research to locate the subjects of survey, judgement sampling has been used for this study. Judgement sampling is one of the non-probability sampling techniques whereby respondents are not chosen randomly, therefore selection bias may exist.

All in all, every effort has been made in this research to avoid threats to validity, and the content validity, criterion-related validity and construct validity have been observed to increase the internal and external validity of the survey questionnaire, the measuring instrument, of this study.

3.5.2 Reliability Testing

'Reliability' refers to the stability, accuracy and dependability of data (Burns, 2000). The reliability of a measure offers consistent measurement across time and across the various items in the instrument (Cavana et al., 2001). The more consistent the results from a measurement instrument, the more reliable they are (Shannon and Davenport, 2001).

Reliability becomes a necessary condition of the value of research results and interpretation. To establish the reliability of the survey questionnaire of this research, recommendations from Kerlinger (1980) will be followed. Reliability is commonly assessed in the forms of test-retest, intraobserver, interobserver, alternate-form and internal consistency. Table 3.2 summarises the major types of reliability tests and their characteristics with comments (Litwin, 1995).

Type of Reliability	Characteristics	Comments
Test-retest	Measures the stability of responses over time, typically in the same group of respondents	Requires administration of survey to a sample at two different and appropriate points in time, but time points that are too far apart may produce diminished reliability estimates that reflect actual change over time in the variable of interest.
Intraobserver	Measures the stability of responses over time in the same individual respondent	Requires completion of a survey by an individual at two different and appropriate points in time, but time appoints that are too far apart may produce diminished reliability estimates that reflect actual change over time in the variable of interest.
Alternate-form	Uses differently worded stems or response sets to obtain the same information about a specific topic	Requires two items in which the wording is different but aimed at the same specific variable and at the same vocabulary level.
Internal consistency	Measures how well several items in a scale vary together in a sample	Usually requires a computer to carry out calculations
Interobserver	Measures how well two or more respondents rate the same phenomenon	This type may be used to demonstrate reliability of a survey or may itself be the variable of interest in a study

Table 3.2: Major Types of Reliability Tests and Their Characteristics
(Source: Litwin, 1995)

Of the five types of reliability tests mentioned in Table 3.2, interobserver reliability provides a measure of how well two or more evaluators agree in their assessment of a variable, so this is often used when the measurement process is less quantitative than the variable being measured.

For the survey questionnaire used in this research, a test-retest is performed for the reliability of the measuring instrument. A group of eight friends, four males and four females, formed a focus group. They were given the draft survey questionnaire in person to fill out for the researcher. A week's later; this group of people is given the same questionnaire, with questions reordered, to test the consistency of the answers of the respondents against their previous one. The result of reliability of the measuring instrument is satisfactory as the answers are exactly the same as the previous questionnaires.

Internal consistency can be tested in two ways: split-half reliability and inter-item consistency reliability. Split-half reliability shows the correlations between the two halves of a measure. However, the way the items in the measure are split may vary the split-half reliability estimates (Cavana et al., 2001). Inter-item consistency reliability is a test of the consistency of the respondents' answers to the items in a measure. Theoretically, items that are independent measures of the same concept will be correlated with one another. Cronbach's coefficient alpha (α) (Cronbach, 1946), used for multiple indicators or items, can be considered a perfectly adequate index of the inter-item consistency reliability (Cavana et al., 2001).

Inter-item consistency reliability test is conducted for the questionnaire of this research. The Cronbach's coefficient alpha for the multiple items is obtained and used to determine the reliability of the scales and results. The alpha is conceived as a measure of the intercorrelations between the various indicators used to capture the underlying construct in this survey. The higher the coefficients, the more reliable the survey questionnaire of this study is (Ghauri et al., 1995). If items are a consistent measure of the same construct after Cronbach's alpha is performed, then the variables themselves should be correlated. Variables that have low inter-item correlations may not belong to the same construct and will be dropped from the questionnaire of this survey (Nunnally and Bernstein, 1994). Using item analysis, the extent to which variables perform as consistent measures of a single construct of this research can be examined. One key objective of scientific research is to discover and determine the relationships between variables. Reliability becomes a necessary condition of the value of research results and interpretation.

There are certain strategies to establish the reliability of results. It has been identified that "the maximization of the variance of the individual differences and minimization of the error variance" is the primary principle underlying the improvement (Kerlinger, 1980, p. 454). When planning the survey of this study, the questionnaire employed as the measuring instrument was written unambiguously. Since adding more items increases the probability of accurate measurement as more items of equal kind and quality usually decreases the change error, each variable of this study has been put in several questions in the questionnaire to achieve accuracy. Additionally, clear and standard instructions for the questionnaire have been provided to avoid ambiguity and to decrease the error variance.

3.5.3 Significance and Limitations of Validity and Reliability

It has been reported that 93 research projects, representing 76 percent research of the study, neither pretest a questionnaire nor report that a pretest has been done (Pinsonneault and Kraemer, 1993). This can be interpreted as variation in validity and reliability leading to variation in results.

> "Quantitative analysis of results from studies of variable validity can result in 'false positive' conclusions if the less rigorous studies are biased toward overestimating an intervention's effectiveness. They might also come to a 'false negative' conclusion if the less rigorous studies are biased towards underestimating an intervention's effect" (Detsky, 1992).

Therefore, more rigorous studies can expect to have results closer to the 'truth' (Cochrane Reviewers' Handbook, 2004). For this survey, a pilot test and consultation with professionals in the area of Internet banking and academic researcher have been sought to ensure validity and reliability.

"There is no 'gold standard' for the 'true' validity of a trial and the possibility of validating any proposed scoring system is limited" (Cochrane Reviewers' Handbook, 2004, p.54). Principles of measurement can be applied to the development of a scale for the assessment of the validity of randomized trials. However, there is no clear evidence that the relationship between such a score and the degree to which a study is bias-free. It can then be assumed that all scales currently available for measuring the validity of trials cannot be taken as perfect (Cochrane Reviewers' Handbook, 2004). Validity and reliability tests of the measures of the questions in survey questionnaire are crucial and must be carried out rigorously in order to ensure that the data being collected is of value. Only valid and reliable data that is analysed correctly can reveal meaningful findings. The next section will define the research population and describes the sampling design for this study.

3.6 Sample and Sampling Designs

Quantitative research generally uses surveys to collect data through utilising a sample of the population to be studied (Pinsonneault and Kraemer, 1993). The sample design should result in valid and reliable inferences for the population at a low cost (Ghauri et al., 1995).

3.6.1 Population

Population refers to a whole group of people or things of interest the research intends to investigate (Cavana et al., 2001). The target population of this research is the professionals and business practitioners currently using Internet banking services in Hong Kong.

3.6.2 Sample

A sample is a portion of the population and is formed by selecting some members from a population (Cavana et al., 2001). A perfect representative sample would be a microcosm of the population from which it is drawn and is identical to the population in every way. This would enable inferences to be made about any aspect of the population from the sample (Hussey and Hussey, 1997). However, no sample selection method is perfectly random, so it is unlikely to have a perfect representative sample (Cavana et al., 2001). Therefore, during sampling design, the most important attributes under investigation have to be observed to ensure that the most representative sample population to the study is used.

3.6.3 Sample Size

The following equation can be used to determine the suitable sample size (Narins, 1994). This equation is ideally used for dichotomous variables but it is also suitable for Likert scales if *Py and Pn* are both set at 0.5.

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

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

For this research, this equation was not used to calculate the sample size as the size of the true population is unknown. It has been suggested that a sample of between 200 and 1,000 respondents for populations of 10,000 or more is preferable (Alreck and Settle, 1985). After taking into account such resources as budget, time and accessibility to respondents, this survey targeted 200 respondents in order to provide sufficient power for the statistical analyses.

3.6.4 Sampling Designs

There are two main types of sampling designs: probability sampling and non-probability sampling. With probability sampling, the subjects of the population have some known chance of being selected as a sample whereas non-probability sampling does not have any known chance of being selected as a sample (Cavana et al., 2001).

3.6.4.1 Probability Sampling Methods

Probability sampling is essential to ensuring a high degree of generalisation or external validity. Probability-sampling methods include simple random sampling and complex probability-sampling designs.

Simple random sampling involves randomly drawing samples with a known and equal chance from a population (Cavana et al., 2001). Selection bias poses a serious threat to the validity of the representativeness of the sample, which is when the respondents are not chosen randomly (Ghauri et al., 1995). This method is easy to understand and apply (Ghauri et al., 1995), and its design has the least bias and offers the most general sample. However, this method could turn out to be both costly and cumbersome and an updated list of the population may not be available (Cavana et al., 2001). A complete frame is needed and the standard errors of the estimators will typically be large, resulting in a wide confidence interval (Ghauri et al., 1995). For these reasons, simple random sampling is not often chosen for business research.

The three most common complex probability-sample designs are systemic sampling, stratified random sampling and cluster sampling. ‘Systemic sampling’ involves obtaining a sample by drawing every nth unit in an orderly population with a randomly chosen unit between 1 and n (Cavana et al., 2001). The advantages of this method lie in its simplicity and no sample frame is required, although the probability of a hidden systematic bias may exist (Ghauri et al., 1995).

‘Stratified random sampling’ involves a process of dividing the population into subgroups (strata) followed by a random selection of subjects from each stratum. Each stratum bears different characteristics for better representations. Stratified sampling requires determination of how the total sample should be allocated between the strata (Ghauri et al., 1995). This design achieves higher precision, provides separate results for each stratum and simplifies data collection. The drawbacks are that it needs a complete frame with such additional information as standard deviation and costs for each stratum (Ghauri et al., 1995).

Cluster-sample design involves selecting one group (or cluster) as the sample from a population that is split into heterogeneous groups (De Veaux, Velleman & Bock, 2005). That is to say that the clusters are similar in almost every way. Cluster samples offer more heterogeneity within groups and more homogeneity among groups. However, a definition of clusters is required (Cavana et al., 2001). The advantages of this design are that it does not require the inclusion of a sample frame, is convenient and cheap to run and, in the case of an interview, can be geographically centred. The disadvantages are poor precision (Ghauri et al., 1995) and low confidence in the results (Cavana et al., 2001).

3.6.4.2 Non-Probability Sampling Methods

Non-probability sampling designs can be categorized into two main types: convenience sampling and purposive sampling. The objective of these designs is for the sample to be as general as possible but also to be a quick and inexpensive way to seek important guides to potentially useful information regarding the population (Cavana et al., 2001).

In convenience sampling, subjects are taken wherever and whenever they are handy (De Veaux et al., 2005). This method is the least reliable of all the sampling designs in terms of generalisability (Cavana et al., 2001). However, this method is a good way of obtaining preliminary information during the exploratory phase of a research project in a quick an inexpensive way if generalisability is not an issue in the study.

In purposive sampling, subjects are predetermined because they either meet the criteria of the researcher or they simply possess that specific information (Cavana et al., 2001). Three main categories of purposive sampling can be identified: snowball sampling, quota sampling and judgement sampling.

Snowball sampling is particularly useful for gaining access to information from people who are very difficult to locate and contact under normal circumstances. Despite the initial sample group being selected by probability or non-probability methods, new subjects can be recruited based on recommendations of the initial subjects. Consequently, bias can occur as subjects may refer people who share similar views as theirs.

Quota sampling can ensure that different groups in a population are adequately represented in a study through the assignment of a quota. Quota sampling can be taken as a form of proportionate stratified sampling in which a predetermined proportion of subjects are sampled from different groups but on a convenient basis. As a result, the quota samples are basically stratified samples selected non-randomly. By and large, the main drawback to any kind of non-probability sampling design is that it may not be sufficiently general (Cavana et al., 2001).

Judgement-sampling design is employed when a limited category of people possesses the requisite information. This sampling requires special efforts to locate and contact these people, and the method may curtail the generalisability of the findings because the subjects being studied are conveniently available to the researcher.

The subjects under study in this research project are professionals and business practitioners who currently use Internet banking services available in Hong Kong. The lists of these people are neither disclosed by banks nor can they be retrieved on any government websites. The subjects under study were assumed to be widely dispersed around Hong Kong. Despite samples from probability sampling having a higher representativeness of the population being investigated, judgement sample design (one of the non-probability sampling methods) was adopted to reach these specific targets. Section 3.7 evaluates the different methods employed in collecting data.

3.7 Data Collection and Administration Methods

It has been suggested that survey research uses a set of orderly procedures that specify what information is to be obtained, from whom the information is to be obtained and how the information is to be obtained (Backstrom and Hursh-Cesar, 1981). This concerns the administration methods covering the production of the measuring instrument used to obtain the responses. The hypotheses in this research are interpreted into questionnaires to measure the variables of interest (Cavana et al., 2001).

3.7.1 Structure of the Questionnaire

Question sequencing and layout are two important aspects of any questionnaire structure. The principle underlying the sequencing of the questions in a questionnaire is to group them by the subject to which they refer. Within each subject group, the questions tend to be grouped into relatively straightforward factual questions followed by the measure relevant to that area. The factual questions in this research have been included to help the respondents think about that particular aspect of perception of Internet banking services and to provide a context for the appropriate measures. Such sensitive questions as age and income are placed at the end of the questionnaire.

Thought was given to the overall layout of the questionnaire so as to give it a neat and orderly appearance, thus making it easier for respondents to read as well as encouraging them to respond. A small graphic of 'e-money' was pasted at the top of the questionnaire to direct the respondents' attention to the theme of the research. A bunch of flowers was at the end of the questionnaire to express the researcher's gratitude for the respondent's effort in responding to the questionnaire. The questionnaire in this survey was divided into two parts: Part I consisted of twenty questions focusing on questions relating to customer perceptions of Internet banking service. Part II consisted of seven demographic questions (Appendix I).

During the development of the survey questionnaire for this study, established sources of the type and with the same constructs of this study were referenced and examined. Modification was then made on the established measures to fit the specific aim of this study and lead to the formation of the twenty questions investigating customer perceptions of Internet banking service (Appendix II).

3.7.2 Translation of the Language of the Questionnaire

Were this research to be conducted in a predominantly non-English speaking city or country, the survey questionnaire would be translated from English into the local language by taking Brislin's (1980) recommendation for minimizing the problems between the two language versions. However, since English is the second language of Hong Kong and the target respondents of this survey are professionals and business practitioners in Hong Kong with a high level of competence in English, the questionnaire was prepared solely in English.

3.7.3 Survey Questionnaire Pilot Test

When the survey questionnaire was drafted, there were many assumptions and pre-judgments about what respondents were both able and willing to do. Accordingly, there was a need to pilot-test the questions with non-target respondents to gain objective views. Pilot-testing a questionnaire can help to guard against faulty assumptions and detect flaws in the questionnaire and identify and correct potential impediments before the survey instrument is used for collecting data of value. Pilot testing can also help to check the time taken to complete the questionnaire.

Consultation with professional experts and cultural insiders often helps to reduce deliberate bias and broaden the scope of an instrument before it is used (Converse and Presser, 1986). The aim of such consultations is (1) to determine whether or not the structure of the composite questionnaire is appropriate, (2) to ascertain whether the format and wording of the questions is understandable to the respondents, and (3) to check that no additional problems might arise by the compilation of different questions into a single questionnaire.

The professional experts and cultural insiders, which included two bank managers, one lecturer in research methodology, and one IT expert, were consulted during the drafting stage of the questionnaire in this study. Twenty Doctor of Business Administration students were asked to complete the draft questionnaire to detect any problems in answering the questions and to test the time for completion. Their comments, on the content and structure of the questionnaire, were taken seriously in the revision and finalizing of the questionnaire. The average time for completing the questionnaire was twelve minutes.

3.7.4 Data Collection Methods

There are three commonly used data collection methods: interviews, observation and questionnaires. Sections 3.7.4.1 to 3.7.4.3 discuss the strengths and weaknesses for each of them and conclude with the methods being adopted for this study.

3.7.4.1 Interview

Interviews provide rich data and allow complex issues to be uncovered. This method is ideal during the exploratory stage of a research in order to understand the concepts or situational factors. However, this method could introduce interviewer bias, as well as prove expensive if a large-scale survey involved personally interviewing many subjects. It is also essential that interviewers receive specialised training.

3.7.4.2 Observation

Observational studies are conducted through direct observation. An observer can seek clarification on complex issues by asking questions on the spot. The data obtained are rich and original and this method is best for research requiring non-self-report descriptive respondents. The main drawback to this method is that it is drawn-out and could prove expensive to run.

3.7.4.3 Questionnaires

Questionnaires are an efficient data-collection mechanism for measuring the variables of interest. Questionnaires can be administered personally and mailed to the respondents or electronically distributed.

A personally-administered questionnaire can be a good tool for collecting data since a researcher can introduce the research topic face to face with the respondents and encourage them to answer. The researcher can, at the same time, clarify any doubts about answering the questions and quickly collect the completed questionnaires.

Mail questionnaires are suited to surveys that cover a wide geographical area. Respondents can complete the questionnaires in the location of their preference and at their own pace. Despite these merits, the researcher has no chance of clarifying any doubts respondents may have. Furthermore, the return rate of mail questionnaires is low, with a return rate of 30 percent being considered acceptable (Cavana et al., 2001). With such a low response rate, the representativeness of the sample in generalizing the results to the population is questionable. The response rate may be augmented by such means as pictures being added to illustrate the questionnaires, keeping the questionnaire brief, sending follow-up letters, offering small incentives or gifts to respondents, and providing self-addressed, stamped-return envelopes.

Electronic questionnaires are easy to design and administer with ready-made programmes. Mailing computer disks to potential subjects is cheap. Questionnaires inviting responses can also be posted on free-of-charge websites. The key advantages to running an Internet survey questionnaire are accuracy, convenience, speed and reduced costs (Black, Efron, Ioannou & Rose, 2005; McMellon and Schiffman, 2001). Furthermore, the usual lead-time involved in distributing and collecting a survey questionnaire by mail is eliminated. At the same time, respondents are more likely to respond if they can save on the time and effort involved in mailing their responses. It has also been claimed that data collected by electronic mode is more reliable than on printed mode because respondents can check and change their answers before submitting them (Cavana et al., 2001). The disadvantages to this method lie in it requiring respondents to be computer literate and to have access to computers and emails. Furthermore, a print-out form could serve the purpose better since some information may not be immediately accessible to the respondents.

This study used multi-methods comprising personally-administrated, mail and Internet modes. These methods together with the multiple sources to collect data lend rigours to the research (Cavana et al., 2001) as the combination of methods minimizes the specific bias associated with each method of data collection.

3.7.5 Getting Respondents

Initial contacts with various organisations having access to professionals and business practitioners were made by telephone, email or letter. The purpose of the research was explained and a request was made for permission to invite participants from the organisation's members, employees or associates for voluntary participation in the survey. Follow-up phone calls requesting a verbal agreement or refusal to participate were made to the management of these organisations and companies. Each organisation or company agreeing to distribute the survey questionnaires to their employees, associates and members was asked to provide a formal letter of consent. Consent for their members, employees or associates to participate in the survey were sought from the management of the following ten organisations and companies. The main business of each organisation appears after its name:

1. Hong Kong Management Association (HKMA) - a non-profit-making professional organization with a membership of over 11,000 executives that aims to improve the effectiveness and efficiency of management in Hong Kong;
2. Hong Kong Quality Management Association (HKQMA) – a non-profit-making organisation with members in various businesses that promotes quality-circle activities and quality-management practices in Hong Kong;
3. Topmond Limited – an ISO 9001:2000, printing services company;
4. WK Taxation Management Limited – practising certified public accountants;
5. Global-semic Information Technology Limited - software design and application consultation services;
6. Brånemark Osseointegration Center Hong Kong - oral & maxillofacial surgery;
7. Charles K. M. Chan & Co. - practising certified public accountants;

8. Margaret Tang Management Consulting - management consultation services;
9. May’s Touch Artistic Hairdressing - professional hairdressers;
10. Wui Po Kok – a company trading in antiques.

HKMA preferred the researcher to meet its members face to face to collect data in order to save the organisation’s administration effort while HKQMA preferred the questionnaires to be mailed to their members. Several companies preferred to have the questionnaires emailed to their members whereas others preferred to have the questionnaires delivered to their offices for completion and collected in person by the researcher.

Since the subjects of investigation were or had been Internet banking users, it was reasonable to assume that they had access to the Internet, and so it was logical to post the questionnaire on an Internet public website. The questionnaire, together with a covering letter, was posted on the free Internet survey server of www.my3q.com from 15th September 2006 to 14th October 2006 for them to respond. Respondents were asked in the survey questionnaire to anonymously answer an survey of twenty-seven questions, including some personal data, relating to their perceptions of Internet banking. It took approximately fifteen minutes to complete the survey either on screen or on paper.

The respondents returned the survey questionnaire in one of three ways:

1. The management of the organisations or companies involved handed the survey questionnaires in person to the respondents and then collected the completed questionnaires for final collection by the researcher;
2. The management of the organisations or companies involved handed the survey questionnaires in person to the respondents. When the respondents completed the surveys, the management put the questionnaires in a pre-addressed stamped

envelopes prepared by the researcher, and mailed them back to the researcher;

3. The respondents returned the completed survey questionnaire by clicking the 'submit' button on the webpage.

The survey questionnaire, together with a covering letter, (1) explained the purpose of the survey, (2) reassured potential respondents of the ease in answering the questionnaire, and (3) provided an undertaking of anonymity. Participation in the research is voluntary, but an assurance is made to the respondents that: (1) stated that respondents would be notified of the research findings, (2) that a brief report of the findings would be provided to the management of the organisations accepting the invitation to participate, and (3) the researcher would recommend to the management of the organisation that the report be made available to all staff.

It was felt that these assurances would encourage respondents to feel they would derive a positive benefit from their participation in the survey as they could learn about others' attitudes to Internet banking. A month was scheduled to collect the responses, after which they were checked and coded. Section 3.8 presents the various ethical issues involve in data collection.

3.8 Ethical Issues

Since this research involved members of the public, certain ethical issues had to be observed when preparing this survey for participants. In the first place, no sensitive questions were asked or private information collected. The information sheet explicitly stated that participation was entirely voluntary. The research did not involve any payments, rewards or inducements to respondents for completing the questionnaire. In the case of HKQMA, the researcher paid an administrative and handling fee of HK$1,500 (the amount includes envelopes, mailing labels and postage stamps) for distributing the questionnaires with the covering letter (information sheet) and returning envelopes to its 320 members.

Consent had to be obtained from senior management of the targeted organisations to distribute the survey questionnaires to their members, employees or associates, and the return the survey questionnaire to the distributor or sender implied the informed consent of the participants. Anonymity was observed as no respondents' names or other inferences or identification were recorded in the survey questionnaire. There were no potential conflicts of interest for the researcher because the researcher works in a publishing company whereas this research into the behaviour of bank customers using Internet banking was not relevant to the researcher's occupation. The researcher has no commercial or financial interests in conducting this study, nor will the researcher gain any benefits from any outcomes of the work.

The researcher and the project supervisor treated all data as strictly confidential. Printouts of the completed questionnaires were stored securely in a locked drawer in the researcher's office. All data (accessible only by passwords) was stored on the Personal Computer (PC) of the researcher and her supervisor. Once the data was analysed and the study completed, all printed completed questionnaires were destroyed through shredding. The soft copy of the raw data will be erased five years after the project has been completed. Section 3.9 assesses different data analysis techniques and selects the tests for the raw data of this survey.

3.9 Data Analyses

Completed questionnaires were checked and coded before the raw data was entered for analysis. A number of statistical techniques were applied to test and interpret the results of the data analysis.

The chi-square test was performed to analyse nominal data. Tests that make inferences about population parameters are called 'parametric tests'. The chi-square test is a nonparametric test because it does not use means or standard deviations to infer population parameters. The assumptions of the chi-square test are that the data are in the form of a frequency count, the sample represents the population of interest, and each observation is independent and separate from other observation (Grimm, 1993).

The independent-samples *t* test can be used to test for a statistically significant difference between two means. This test is to compare the means of the two samples to make an inference about whether the population means from which the samples are chosen are different. When there are more than two samples or groups to be studied and compared, multiple t tests can be used. However, this raises a serious tactical problem whereas analysis of variance (ANOVA) will be more suitable (Grimm, 1993).

In the case of evaluating the interaction among independent variables and the ways in which the interaction produces behaviour effect (Edgington, 1974), a factorial design can be taken since this combines at least two independent variables. The design can reveal the effect (main effects) of each independent variable separately and the join effect (the interaction) of the independent variables.

A one-way ANOVA can be performed when there are two or more levels of one independent variable in a study. It is assumed that the *k* populations are normally distributed with equal variance. Minor violations of these assumptions are not of importance, but it is essential that each subject's score on the dependent variable be independent of every other subject's score (Grimm, 1993).

The assumptions for the two-way ANOVA are the same as those for the one-way ANOVA. Firstly, the population distributions are normal; secondly, the variances of the populations are homogeneous; and lastly, observations are independent of one another. The *F* test is robust and can be performed when the first two assumptions are not strictly met (Grimm, 1993). Linear regression is a statistical method used to predict the value of one variable when information about another, correlated variable is available. This test is conducted to interpret the relationship between the variables in the questions of a survey in order to test or deny the hypotheses (Grimm, 1993). Univariate linear regress has one independent variable and one dependent variable whereas multivariate linear regress has two or more independent variables and one dependent variable.

In this research, data collected was analysed using SPSS version 14.0 for purposes of descriptive statistics on the demographic characteristics of the subjects. Partial Least Square (PLS) Graph (version PLS-graph 03.00) was utilised to determine the interactions between the various constructs, namely customer satisfaction, customer commitment, trust and customer retention, for ascertaining the various structured equation models. The Beta in the reports is interpreted in terms of the relationship between the variables. The R-square in the reports tells the amount of variance explained in the dependent variable by the predictors (Cavana et al., 2001).

Inter-item consistency reliability was performed to test the consistency of respondents' answers to the items in a measure. Theoretically, items that are independent measures of the same concept will correlate with one another. Cronhach's coefficient alpha (α) (Cronbach, 1946) (used for multiple indicators or items) can be considered a perfectly adequate index of the inter-item consistency reliability (Cavana et al., 2001). The alpha can be conceived as a measure of the inter-correlations between the various indicators used to capture the underlying construct. If items are a consistent measure of the same construct after Cronbach's alpha is performed, 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 measuring 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.

The alpha is used to determine the reliability of the scales and results and the standard is 0.7 (Nunnally, 1978) and the higher the coefficients, the more reliable the measuring instrument (Ghauri et al., 1995). The results of the analysis were reported in words for comprehension. The next section will explain the limitations of the survey.

3.10 Limitations

In research, "there is no 'gold standard' for the 'true' validity of a trial, as the possibility of validating any proposed scoring system is limited" (Cochrane Reviewers' Handbook, 2004, p. 54). Principles of measurement can be applied to the development of a scale for the assessment of the validity of randomized trials. However, there is no clear evidence that the relationship between such a score and the degree to which a study is bias-free. It is then assumed that all currently available scales for measuring the validity of trials cannot be taken as perfect (Cochrane Reviewers' Handbook, 2004).

Cross-sectional data being collected in this study is biased, making it difficult to infer strongly on cause and effect whereas longitudinal studies can do a better job (Ghauri et al., 1995). Owing to the seldom static nature of relationships that are likely to change with time and moods, participants in the survey may react differently depending on different phases in the relationship formation and development process. This will inevitably have an impact on the overall relational commitment quality.

The main weakness of the judgement-sampling method, one of the non-probability sampling designs, being adopted for this study is that the subjects being chosen do not have a known chance of being selected, and this may lead to low representation of the population. Thus the findings may not be sufficiently general (Cavana et al., 2001). Similarly, non-response bias refers to the skew in the analysis and interpretation of the data owing to a large percentage of respondents not completing the survey, thus causing low generalisability of the results to the population (Bhaskaran, 2006).

In addition, the researcher does not have an opportunity to meet the respondents through the Internet to check if they have fully understood the questions and are clear about the sort of response required (Converse and Presser, 1986) in completing the electronic questionnaire. Thus, it can be assumed that interpretive error may occur if a respondent interprets a question in a way different from that of the researcher. This emphasises how vital it is to ensure that the questionnaire is as clear and concise as possible, and that appropriate answers are elicited. The next section will summarise the entire chapter on research methodology.

3.11 Conclusion

This research falls into the positivism paradigm and the research objective governs the research methodologies and designs to be selected. After detailed evaluation and assessment of different research nature and methods, a quantitative research with a highly structured survey questionnaire was designed for data collection. The questionnaire was checked by professionals and insiders and pilot-tested to detect faulty assumptions and minimize bias and errors. A seven-point Likert scale was used to measure variables of customer behaviours in the questions. Owing to time and budget, the one-off cross-sectional design was used.

Respondents were obtained through multi-methods sampling design which is through the Internet, personally administrated and mailed out to two non-profit making management organisations and eight private business firms that had consented to have their members, employees and associates participate in the survey.

The questions in the questionnaire underwent validity and reliability assessment to ensure meaningful findings. SPSS version 14.0 was used for purposes of descriptive statistics on the demographic characteristics of the subjects. Partial Least Square (PLS) Graph (version PLS-graph 03.00) was used to determine the interactions between the various constructs, namely customer satisfaction, customer commitment, brand trust and customer retention, for ascertaining the various structured equation models and testing the hypotheses of the research. Limitations of the research methods have been stated as a recommendation of improvement for future work.

CHAPTER 4 DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter describes the data analysis of the survey and presents the results of the hypotheses testing. Section 4.1 introduces the different sections of the chapter. Section 4.2 describes the demographic characteristics of the respondents in this survey. Section 4.3 presents the measurement model of this study and summarises it with the correlation of the constructs in a table. Section 4.4 explains the hypotheses tests carried out and reports the results of the statistical analysis which include the impact of independent variable on the dependent variable and the mediating effects of various independent variables on the dependent variable in the context of Internet banking. Section 4.5 summarises the hypotheses testing and reports on the results of the statistical analysis of the study, and Section 4.6 concludes the chapter.

4.2 Analysis on Demographic Characteristics

There were two main reasons for analysing the demographic characteristics of the respondents of the research. First, a clear profile of the characteristics of the respondents had to be established, and second, the representativeness of the samples to the population being studied had to be accessed (Lawley and Perry, 1998). The demographic characteristics of the respondents who are Hong Kong professionals and business practitioners were analysed and are summarized in the following sections.

4.2.1 Respondent Profile

As presented in Chapter Three (Research Methodology), samples were drawn from non-probability judgement methods to reach the specific target of Hong Kong professionals and business practitioners. Before the management of the companies or organisations agreed to participate in the survey, the survey questionnaire covered with an Information Sheet was sent to them. From the Information Sheet, the management was informed that Internet banking users were the subjects of study, so should the questionnaires be distributed to.

In the case of HKQMA, the management sent the questionnaire by mail to its members. The participants of the survey had the opportunity to read the Information Sheet and were informed that they had to be Internet banking users in order to participate in the survey. In the case of HKMA, the researcher personally distributed the questionnaires to those participants who were students of HKMA's Professional Diploma, MBA and DBA courses and explained the criterion for participation.

An earlier study found that the demographic profile of Internet banking users in Hong Kong was similar to the demographic profile of Hong Kong general population (Iamasia, 2002). Based on this reference, the demographic profile of the respondents of this research was compared with that of Hong Kong population.

SPSS 14.0 was used for descriptive analysis of the demographic characteristics of the 208 respondents. Frequency tests were performed to determine demographic characteristics of the sample.

The personal data includes gender, marital status, age, education, income, working experience and occupation which are presented in the following sections.

4.2.1.1 Gender

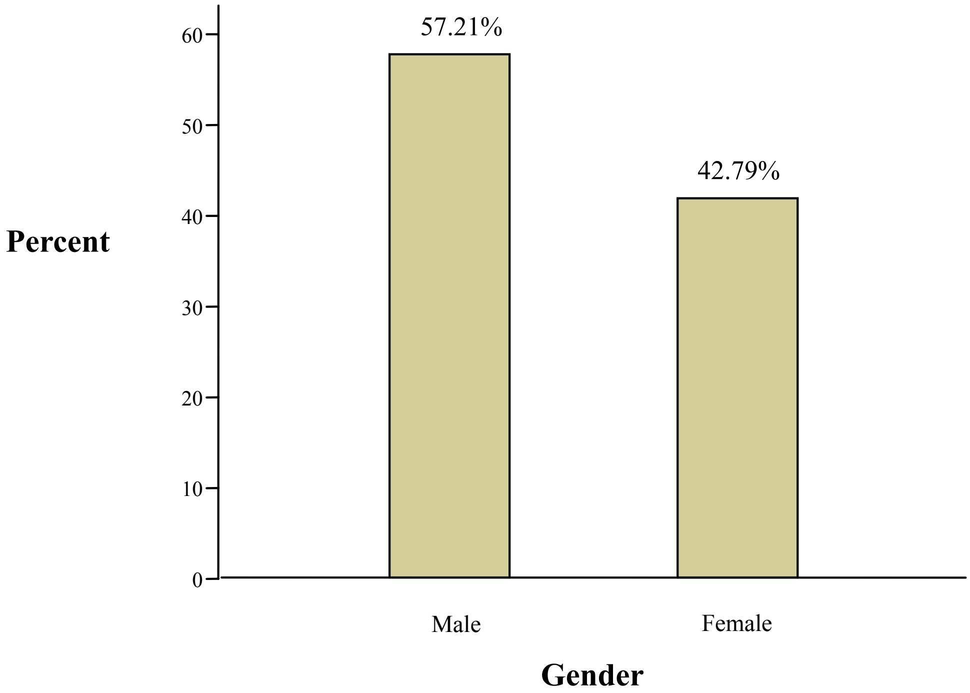


Figure 4.1: Gender of the Sample

Data shows that 57 percent of the respondents were males and 43 percent were females. That is 119 out of the 208 respondents were male and 89 female. The difference between the number of males and females can be interpreted as there are more men working as professionals and business practitioners in Hong Kong than women. The ratio of males to females in this sample is 57 to 43. The finding showed that the sample is similar to the ratio of males and females (61 to 39) combining the occupation groups ‘Professionals’, ‘Associated professionals’ and ‘Managers and administers’ in Hong Kong (Hong Kong Annual Digest of Statistics, 2006a). As such this sample is representative of the population of Hong Kong.

4.2.1.2 Marital Status

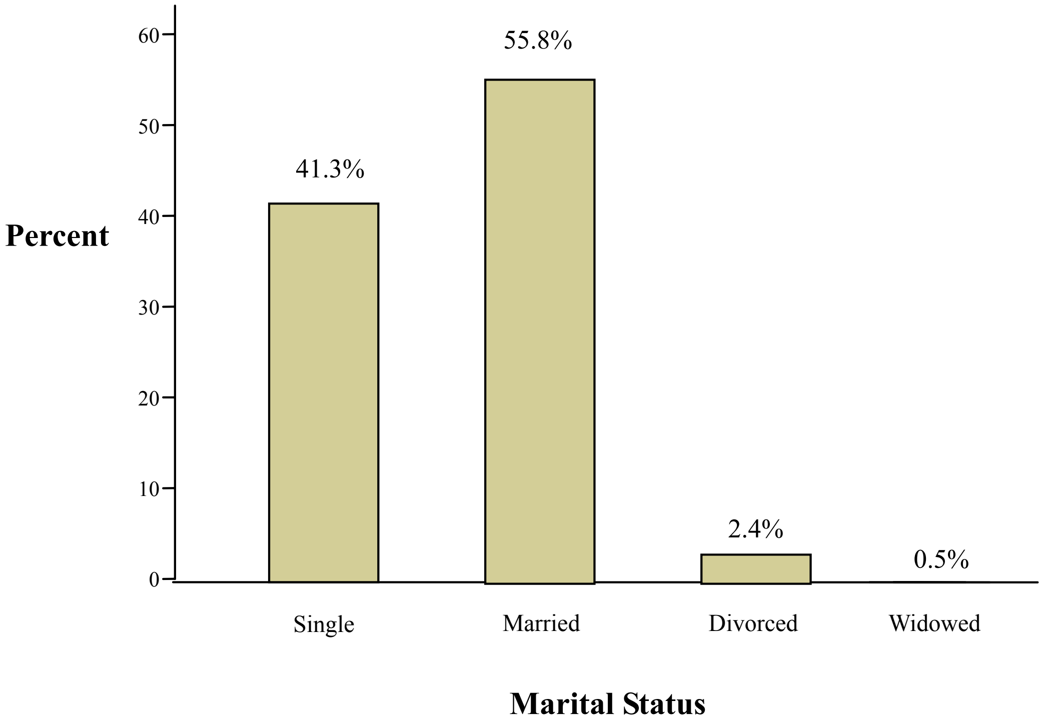


Figure 4.2: Marital Status of the Sample

Data showed that the majority of respondents are married, scoring 56 percent of subjects; singles account for 41 percent. Divorced and widowed, took up less than 3 percent of the total respondents with 2 percent and 0.5% percent respectively. No respondents indicated that they were separated or specified their marital status in other terms.

Since there were no statistics on marital status for occupations available, the government survey on marital status of the general labour force in Hong Kong was used to compare the figures of this item. The survey revealed 36 percent had never married and 64 percent are ever married (including married, widowed and divorced/separated) (Hong Kong Annual Digest of Statistics, 2006b), which is similar to this study, the ratio of married to single is 41 to 59 (including married, widowed and divorced). As such the sample of this survey can be generalized for the population of Hong Kong.

4.2.1.3 Age Group

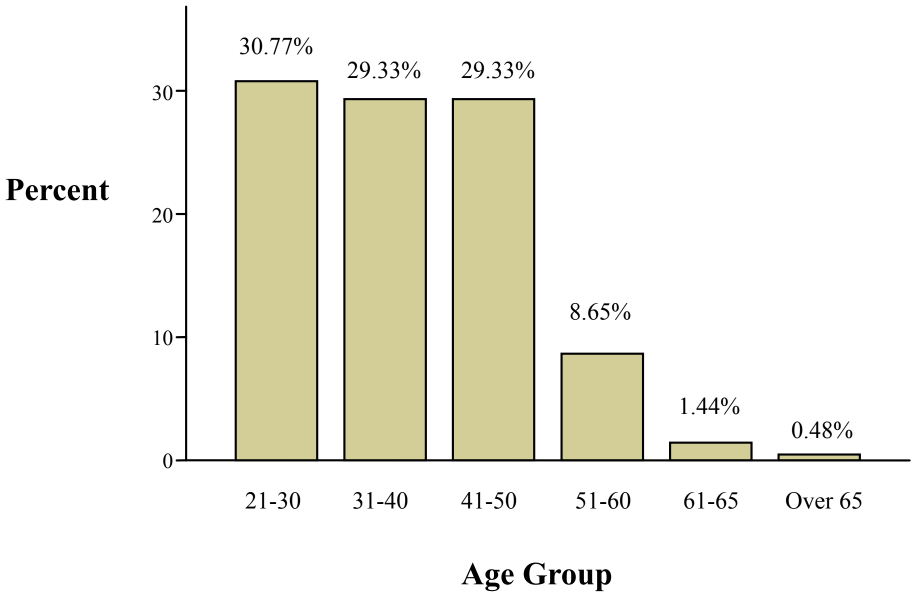


Figure 4.3: Age of the Sample

The range of respondents' age was between 21 or under and over 65 years old. There were no respondents younger than 21 years old. The age groups 21 to 30, 31 to 40 and 41 to 50 scored the same percentage, 31. Nine percent of the respondents were between the age of 51 and 60 whereas 1.5 percent of the respondents were between the age of 61 and 65. Only 0.5 percent of the respondents were over 65.

The government statistics of the age of employed persons combining the occupation groups 'Professionals', 'Associated professionals' and 'Managers and administers' in Hong Kong (Hong Kong Annual Digest of Statistics, 2006a) revealed that 52 percent are below 40 years old (60% are 40 or below in this study), and 48 percent are 40 or above (40% are 41 or above in this study). The finding showed that the sample is not too different from the government statistics. Therefore the sample of this survey is a fair and adequate representation of the population of Hong Kong.

4.2.1.4 Education

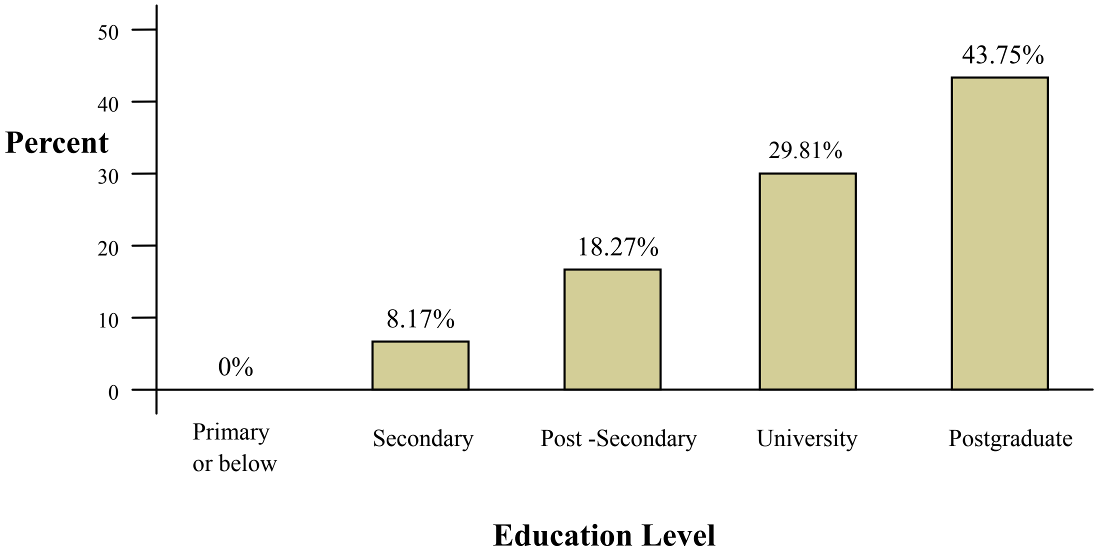


Figure 4.4: Education Levels of the Sample

Five groups of education levels were chosen for the survey questionnaire. The figures show that the higher the education level, the higher the percentage in the groups was recorded. The five groups of education levels were: primary or below, secondary, post-secondary, university and postgraduate or above. Their respective scoring percentages were 0, 8, 18, 30 and 44. Among the groups, university and postgraduate accounted for the majority (over 74 %) of the respondents whereas primary or below scored zero percent in the samples being studied.

Since there are no statistics on educational attainment for occupations available in Hong Kong, a government survey on educational attainment of employed people in Hong Kong was used to compare the figures of this item. The survey revealed 57 percent had secondary education and 29 percent had territory level education (Hong Kong Annual Digest of Statistics, 2006c). The statistics are not consistent with the education level of the professionals and business practitioners in this study. The finding could be interpreted that the sample of this study, Hong Kong professionals and business practitioners, had education well above the overall standard.

4.2.1.5 Income

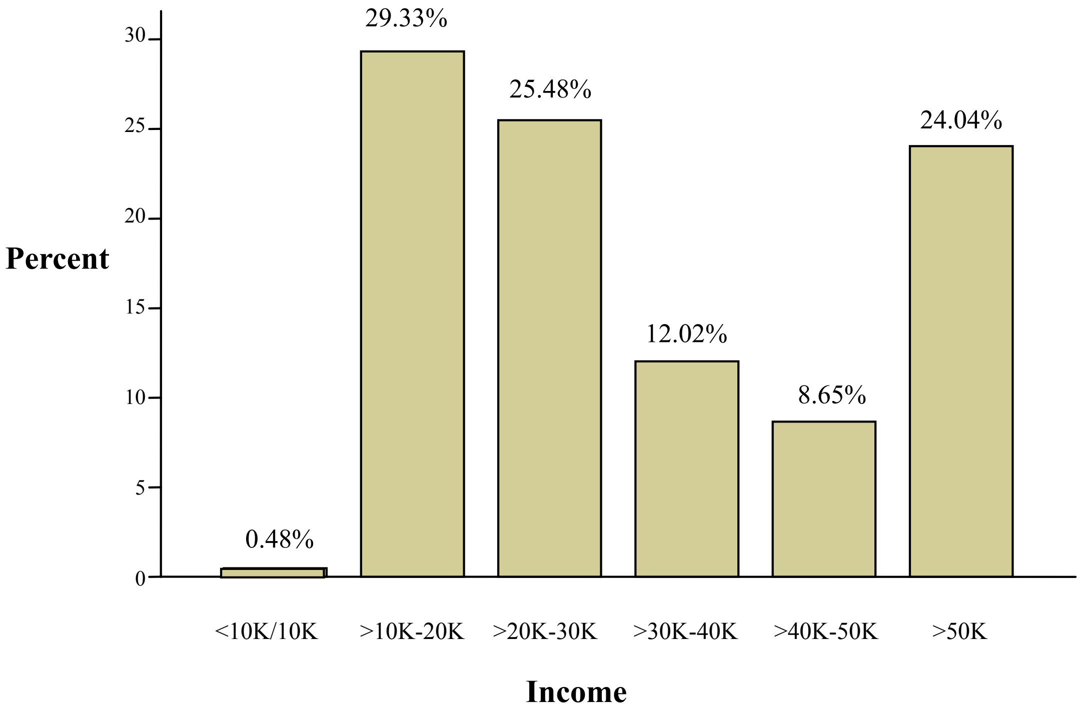


Figure 4.5: Income of the Sample

The monthly income of the respondents of between HK$10,001 and HK$20,000 scored the highest percentage, 29 percent, among all the six categories. Next was the range of HK$20,001 to HK$30,000, scoring 25.5 percent which was close to the range HK$50,001 or above which scored 24 percent. The income range of HK$30,001 to HK$40,000 accounted for 12 percent whereas the income range of HK$40,001 to HK$50,000 took up 9 percent. The remaining 0.5 percent fell in the range of HK$10,001 or below.

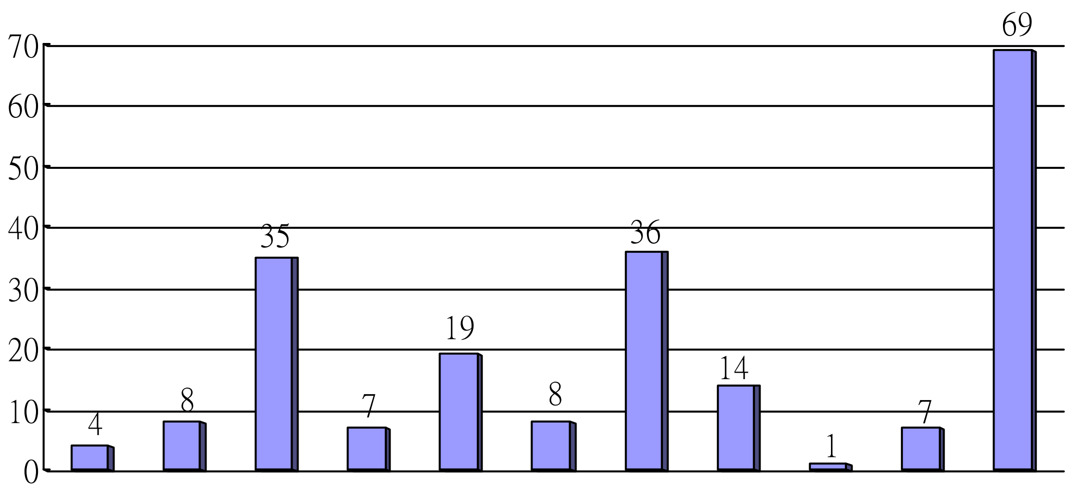
Since there is no statistics on income for occupations available in Hong Kong, a government survey on monthly employment earnings of the employed persons in Hong Kong was used to compare the figures of this item. The survey revealed the median monthly earning of employed persons in Hong Kong is HK$10,000. Thirty percent earn an income between HK$10,000 and HK$19,999 (29% in this study); ten percent earn between HK$20,000 and HK$29,999 (25.5% in this study); five percent earn between HK$30,000 and HK$39,999 (12% in this study); two percent earn between HK$40,000 and HK$49,999 (9% in this study); and fewer than four percent earn over HK$50,000 (24% in this study) (Hong Kong Annual Digest of Statistics, 2006d). The statistics were not consistent with the income of the professionals and business practitioners in this study. The finding could be interpreted that the sample of this study, Hong Kong professionals and business practitioners, earns well above the overall income standard.

4.2.1.6 Working Experience

The respondents had an average of 15.25 years of working experience. The median, the middle number, is 15 and the standard deviation is 8.97. About 67 percent of the sample had an age ranging from 6 to 24 years. This indicated that there was a wide spread of participants in the sample. The minimum working experience was three months and the maximum was 42 years.

4.2.1.7 Occupation

The question on occupation was an open-ended question in which respondents wrote their occupation in the space provided on the questionnaire. One respondent was retired and seven did not answer the question. Sixty-nine respondents could not be identified as to what occupations they held as they confused the industry with the occupation and wrote down the industry instead. The occupations of the sample 208 respondents and the percentage of each category are presented in Figure 4.6.



Occupation	No. of respondents	Percentage
Business owner	4	1.92%
Director	8	3.85%
Senior Manager	35	16.83%
Consultant	7	3.37%
Engineer	19	9.13%
Teaching professionals (lecturers, teachers, tutors)	8	3.85%
Executives (officers, co-coordinator, assistance, etc.)	36	17.30%
Professionals (surgeon, CPA, surveyor, analyst, etc.)	14	6.73%
Retired	1	0.48%
Unanswered	7	3.37%
Occupations not specified	69	33.17%
Total respondents	**208**	**100%**

Figure 4.6: Occupations of the Sample

4.3 Measurement Model

The measurement model presented in Figure 4.7 is evaluated by item loadings, scale reliabilities and construct's validity. PLS assists to assess reliability and validity to calculate each scale's indicators composite reliability (ICR) and average variance extracted (AVE) (Barclay, Thompson & Higgins, 1995; Chin, 1998). Composite reliability is computed by squaring the sum of loadings and then dividing it by the sum of squared loadings plus the sum of error terms (Werts, Linn & Joreskog, 1974). A composite reliability of 0.7 is sufficient for research; the same interpretation as using Cronbach's alpha (Nunnally, 1978).

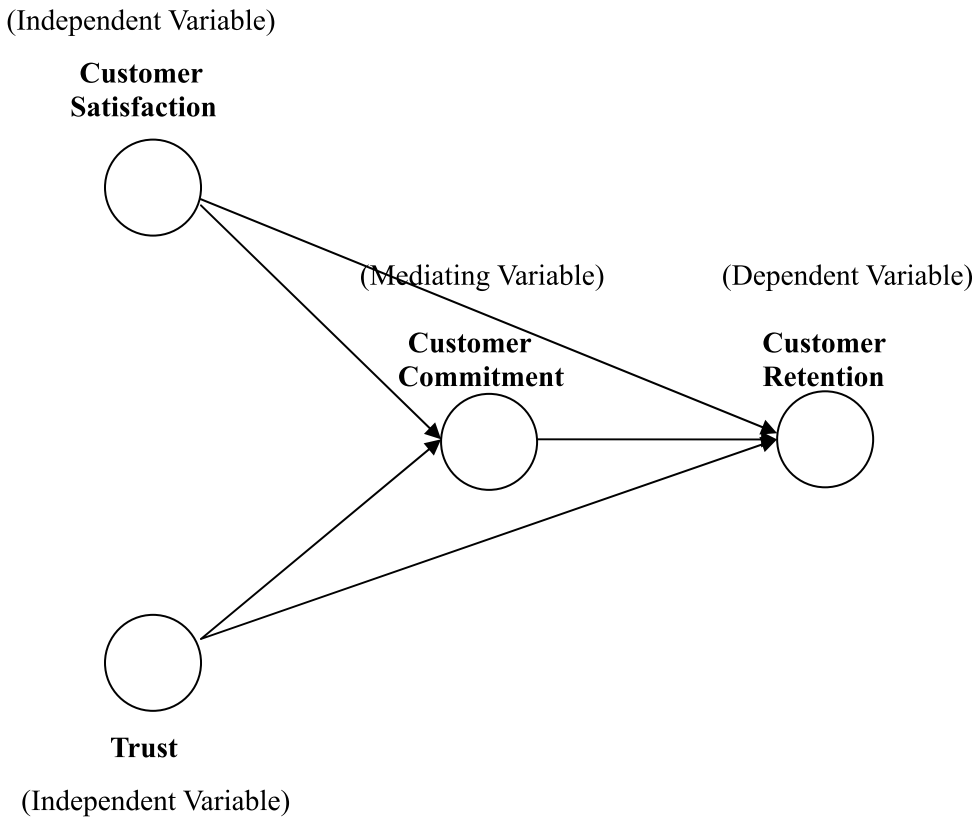


Figure 4.7: Measurement Model of This Study

Convergent and discriminant validity suggests that measures of the constructs are distinct and that indicators load on the appropriate construct (Messick, 1980). They are both considered subcategories of construct validity. If there is evidence demonstrating both convergent and discriminant validity, then by definition construct validity is established. However convergent and discriminant validity work together and either one alone is insufficient for establishing construct validity. The two are inter-locking propositions. Convergent validity is performed to demonstrate measures of constructs that theoretically should be related to each other and that are observed to be related to each other, that is, to show a correspondence between similar constructs (Reichardt and Coleman, 1995). Discriminant validity is performed to demonstrate measures of constructs that theoretically should not be related to each other are observed to not be related to each other, that is, to discriminate between dissimilar construct.

Convergent and discriminant validity can be viewed as differences of 'degree' instead of differences in 'kind'. To estimate the degree to which any two measures are related to each other the correlation coefficient can be used to reveal the patterns of intercorrelations among the measures (Campbell and Fiske, 1959). Correlations between theoretically similar measures should be 'high' while correlations between theoretically dissimilar measures should be 'low'. In general, convergent correlations are desired to be as high as possible and discriminant ones to be as low as possible, and the convergent correlations should always be higher than the discriminant ones (Sarkar et al., 2001).

However, for this research the correlation between similar measures is low. This has negated the rationale to carry out discriminant validity tests. The correlation matrix in Table 4.1 provides evidence of the low correlations between measures.

Correlations

		If I had to do it all over again, I would choose the same Internet banking service of my bank.	In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.	I am very satisfied with my choice of the Internet banking service.	I feel good about my decision to choose this bank with regards to its Internet banking service.	Internet banking at my bank has really pleased me.
If I had to do it all over again, I would choose the same Internet banking service of my bank.	Pearson Correlation	1	.649(**)	.653(**)	.705(**)	.714(**)
	Sig. (2-tailed)		.000	.000	.000	.000
In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.	Pearson Correlation	.649(**)	1	.541(**)	.605(**)	.626(**)
	Sig. (2-tailed)	.000		.000	.000	.000
I am very satisfied with my choice of the Internet banking service.	Pearson Correlation	.653(**)	.541(**)	1	.748(**)	.652(**)
	Sig. (2-tailed)	.000	.000		.000	.000
I feel good about my decision to choose this bank with regards to its Internet banking service.	Pearson Correlation	.705(**)	.605(**)	.748(**)	1	.661(**)
	Sig. (2-tailed)	.000	.000	.000		.000
Internet banking at my bank has really pleased me.	Pearson Correlation	.714(**)	.626(**)	.652(**)	.661(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	
I feel a sense of loyalty to my bank with regards to its Internet banking service.	Pearson Correlation	.603(**)	.651(**)	.489(**)	.542(**)	.554(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
My bank holds me in high regard as a customer.	Pearson Correlation	.338(**)	.365(**)	.362(**)	.404(**)	.390(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
My bank can be relied upon to keep their promises and service pledge	Pearson Correlation	.336(**)	.416(**)	.295(**)	.471(**)	.352(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
I trust this bank.	Pearson Correlation	.447(**)	.469(**)	.354(**)	.500(**)	.451(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
My bank is interested in my satisfaction.	Pearson Correlation	.204(**)	.216(**)	.194(**)	.233(**)	.215(**)
	Sig. (2-tailed)	.003	.002	.005	.001	.002
I feel like there is a 'bond' between my bank and myself.	Pearson Correlation	.264(**)	.380(**)	.159(**)	.294(**)	.287(**)
	Sig. (2-tailed)	.000	.000	.022	.000	.000
I am very committed to my relationship with my bank.	Pearson Correlation	.272(**)	.395(**)	.155(*)	.269(**)	.292(**)
	Sig. (2-tailed)	.000	.000	.026	.000	.000
I should put maximum effort to maintain the relationship with my present bank.	Pearson Correlation	.233(**)	.312(**)	.067	.135	.178(*)
	Sig. (2-tailed)	.001	.000	.339	.052	.010

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

I feel a sense of loyalty to my bank with regards to its Internet banking service.	My bank holds me in high regard as a customer.	My bank can be relied upon to keep their promises and service pledge.	I trust this bank.	My bank is interested in my satisfaction.	I feel like there is a 'bond' between my bank and myself.	I am very committed to my relationship with my bank.	I should put maximum effort to maintain the relationship with my present bank.
.603(**)	.338(**)	.336(**)	.447(**)	.204(**)	.264(**)	.272(**)	.233(**)
.000	.000	.000	.000	.003	.000	.000	.001
.651(**)	.365(**)	.416(**)	.469(**)	.216(**)	.380(**)	.395(**)	.312(**)
.000	.000	.000	.000	.002	.000	.000	.000
.489(**)	.362(**)	.295(**)	.354(**)	.194(**)	.159(**)	.155(**)	.067
.000	.000	.000	.000	.005	.022	.026	.339
.542(**)	.404(**)	.471(**)	.500(**)	.233(**)	.294(**)	.296(**)	.135
.000	.000	.000	.000	.001	.000	.000	.052
.554(**)	.390(**)	.352(**)	.451(**)	.215(**)	.287(**)	.292(**)	.178(*)
.000	.000	.000	.000	.002	.000	.000	.010
1	.515(**)	.423(**)	.502(**)	.367(**)	.521(**)	.555(**)	.416(**)
	.000	.000	.000	.000	.000	.000	.000
.515(**)	1	.705(**)	.536(**)	.670(**)	.527(**)	.600(**)	.473(**)
.000		.000	.000	.000	.000	.000	.000
.423(**)	.705(**)	1	.720(**)	.616(**)	.455(**)	.525(**)	.414(**)
.000	.000		.000	.000	.000	.000	.000
.502(**)	.536(**)	.720(**)	1	.489(**)	.437(**)	.524(**)	.400(**)
.000	.000	.000		.000	.000	.000	.000
.367(**)	.670(**)	.616(**)	.489(**)	1	.539(**)	.583(**)	.466(**)
.000	.000	.000	.000		.000	.000	.000
.521(**)	.527(**)	.455(**)	.437(**)	.539(**)	1	.772(**)	.581(**)
.000	.000	.000	.000	.000		.000	.000
.555(**)	.600(**)	.525(**)	.524(**)	.583(**)	.772(**)	1	.683(**)
.000	.000	.000	.000	.000	.000		.000
.416(**)	.473(**)	.414(**)	.400(**)	.466(**)	.581(**)	.683(**)	1
.000	.000	.000	.000	.000	.000	.000	

Table 4.1: Correlation of the Constructs of This Study

4.4 Hypotheses Testing and Results Reporting

Founded on soft modelling philosophy, Partial Least Square (PLS) analytical technique can identify the mediators and provide multiple indices for the evaluation of the model rather then giving merely one fit index (Falk and Miller, 1992). Examples of fit indices are r-squared (R^2), average variance explained (AVE), averaged variance accounted (AVA) for regressions, weights and loadings (O'Cass, 2000). PLS is a powerful instrument for analysing structural models involving multiple constructs and multiple indicators, and it is increasingly popular for analysing and explaining different organisational phenomena in the marketing literature (Brock and Barclay, 1997; Sarkar, Echambadi, Cavusgil & Aulakh, 2001; O'Cass and Julian, 2003; White, Varadarajan & Dacin, 2003). In addition, it is advantageous for non-experimentalists owing to its ability to avoid multivariate normality assumptions (Kroonenberg, 1990), and the practicality of its application is recognised (Fornell and Bookstein, 1982).

The PLS technique is adopted in this research for rigorous analysis of the data collected from the survey. Justification for applying the PLS technique is that the method is good for understanding complex relationship (Fornell, Lorange & Roos, 1990). In this study, the joint effect and the mediating effect on different perceptions of customer behaviour in the context of Internet banking needed to be addressed and explained. Additionally, most covariance-based techniques require a sample size of over 200 whereas PLS is good for sample size ranges from 30 to 100 (Chin and Newstead, 1999). The sample size of this study, 208, which is relatively small, therefore PLS is chosen.

The survey questionnaire for this study contained a mixture of seven-point Likert-type scale questions on customer satisfaction, customer commitment and trust and questions on demographics. The items from 1 (strongly disagree) to 7 (strongly agree) on variables being tested were adapted to this context from established scales (Appendix II). The typical limitations are expressed about the advisability of deriving means from Likert-type scales, about inferring attitudinal dispositions as precursors to behaviour being researched, and about non-sampling errors created in the data collection stage. Sections 4.4.1 and 4.4.2 will present the analysis of these constructs and their results are summarised in Figure 4.8.

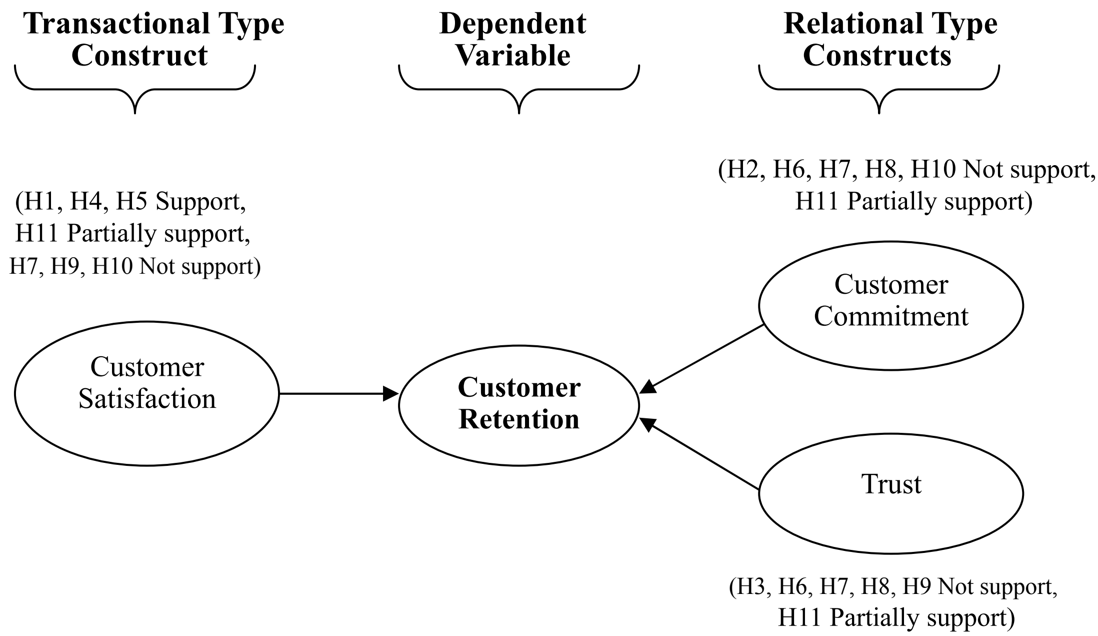


Figure 4.8: Test Results of Constructs of This Study

The sequence of the hypotheses took the pedagogical approach of commencing with single relationships and culminating with the overall final model for this thesis. All the hypotheses were tested by using PLS approaches due to its versatility of performing simultaneous relationships from a single path to in a holistic path analysis model.

4.4.1 Analysis on Independent Variable on the Dependent Variable

Hypothesis 1:

There is a positive relationship between customer satisfaction and customer retention in the context of Internet banking.

Hypothesis 1 determines to find out if satisfaction has an impact on Hong Kong professionals and business practitioners that would lead to customer retention in the context of Internet banking.

Customer satisfaction has a significant impact on repurchase intentions in a range of services (Cronin and Taylor, 1992; Patterson et al., 1997). Satisfaction increases customer retention (Oliver, 1980; Yi, 1990; Rust and Zahorik, 1993; Kotler, 1994). Satisfying customer needs and wants ensures repeat purchase (Kotler et al., 2002).

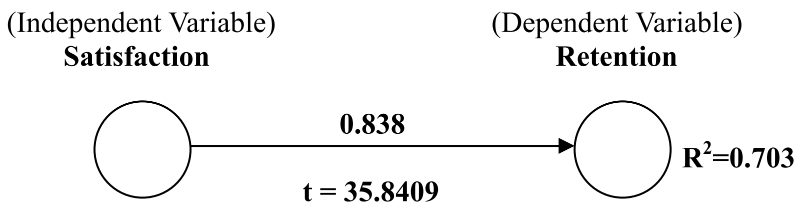


Figure 4.9: Relationship between Customer Satisfaction and Customer Retention (H1)

The PLS results in Figure 4.9 shows that satisfaction has a significant positive (path coefficient of 0.838) effect on customer retention in the context of Internet banking. The result confirmed that customer satisfaction has a positive impact on retention in the context of Internet banking. Thus, hypothesis 1 is supported.

This supports previous studies that show the importance of how satisfaction has a positive relationship with customer retention (Oliver, 1980; Yi, 1990; Rust and Zahorik, 1993; Kotler, 1994; Cronin and Taylor, 1992; Patterson et al., 1997; Kotler et al., 2002). With Internet banking, customers interact with a screen designed to offer various banking services via the Internet from their bank. The only thing customers can evaluate from Internet banking is how satisfied they are with the service. In other words, the importance of this exchange-based type of attribute overrides relational quality (such as personal relationship) in keeping customers with their bank (Anderson and Sulivan, 1993; Rucci et al., 1998; Bansal and Taylor, 1999; Cronin et al., 2000).

Hypothesis 2:

There is a positive relationship between customer commitment and customer retention in the context of Internet banking.

Hypothesis 2 proposes to find out if commitment has an impact on Hong Kong professionals and business practitioners that would lead to customer retention in the context of Internet banking.

Commitment implies that there are mutual benefits and that the parties involved want to stay in the relationship and are prepared to put in effort and investments in terms of monetary and psychological in maintaining the relationship (Morgan and Hunt, 1994). Commitment is positively related to repurchase intentions (Fullerton, 2005) and it was empirically proved to have a substantial negative effect on the propensity to leave (Norton, Gudergan & Young, 2004).

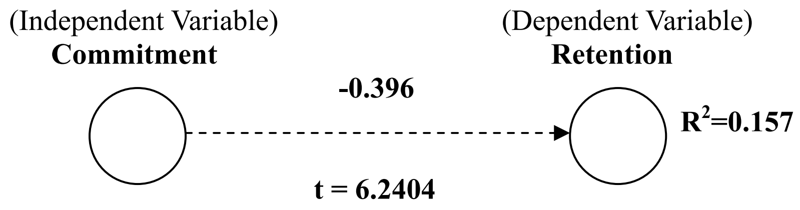


Figure 4.10: Relationship between Customer Commitment and Customer Retention (H2)

From the above negative significant path coefficient (-0.396) between customer commitment and retention depicted in Figure 4.10, it can be seen that the hypothesis (2) does not support previous findings that suggests customer commitment, as feelings of attachment to a vendor, helps to resist attempts at counter-persuasion from other vendors (Kiesler, 1971), and it is positively related to repurchase intentions (Fullerton, 2005).

Unlike the result of Hypothesis 1, customer commitment has no influence on customer retention. The result suggested that customer commitment has a negative impact on customer retention in the context of Internet banking. Thus, hypothesis 2 is not supported.

The influence of commitment on loyalty (and consequently repeat patronage) may be moderated by situational factors (Dick and Basu, 1994). That is to say even committed customers may not exert their loyalty to purchase goods or services from the firm if they have perceived that the environment is unsafe for a transaction. In addition, commitment, as a relational-type of attribute, may not function as effectively as a transactional-specific attribute (such as satisfaction) in retaining customer on the virtual marketing place.

Hypothesis 3:

There is a positive relationship between trust and customer retention in the context of Internet banking.

Hypothesis 3 is to test if trust has an impact on Hong Kong professionals and business practitioners that would lead to customer retention in the context of Internet banking.

Trust in a brand name has been cited as a crucial determiner when buying online (Sultan and Mooraj, 2001). In a low-customer-contact, mass-service setting, trust is regarded as an important driver of customer retention (Ranaweera and Prabhu, 2003a). Trust increases customer retention and repurchases; customer trust in a firm is the principal mediator between product or service attributes and customer retention (Garbarino and Johnson, 1999). Customer trust significantly contributes to sales growth through customer acquisition and retention (Intermarket Group, 2004).

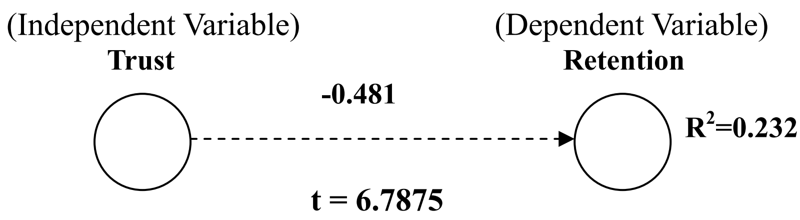


Figure 4.11: Relationship between Trust
and Customer Retention (H3)

The PLS results testing hypothesis 3 depicted in Figure 4.11 indicate that the trust factor does not lead to customer retention in the context of Internet banking (significant negative path coefficient of -0.481). The result suggested that trust has a negative impact on customer retention. This indicates that the hypothesis (3) does not support previous findings that trust has a positive relationship with customer retention towards using the Internet banking service (Garbarino and Johnson, 1999). Thus, hypothesis 3 is not supported.

Trust generates feelings that tend to be self-relevant and is more an intrinsic quality that comes from within an individual who makes his or her own judgment (Ganesan, 1994; Selnes, 1998). Trust may not be appropriate for every situation (Nissenbaum, 2001), and from the results of this study, trust is suggested to be ineffective in retaining customers in Internet banking. This agrees with the arguments that it is impossible to build trust between virtual strangers because of the lack of evidence about one another which prevents the imputation of trustworthiness (Petit, 1999). Similar to commitment, trust is another type of relational attribute that may not function as effective as a transactional-specific attribute such as satisfaction in retaining customer on the virtual marketing place for banking.

Hypothesis 4:

Customer retention is a function of customer satisfaction and trust in the context of Internet banking.

Hypothesis 4 is designed to test the function of customer satisfaction and trust on customer retention.

Accumulated evidence indicates customer satisfaction does influence repurchase behaviour, but this evidence explains only a quarter of the variance in behavioural intentions (Szymanski and Henard, 2001). A single satisfying transaction does not result in long term loyalty, nor does a single dissatisfying transaction lead to a customer switching (Reichheld, 1993). On the other hand, trust develops through past experience and prior interaction over time (Rempel et al., 1985; Grönroos, 1996; Curran et al., 1998). Consumers are vulnerable about the purchase especially when the purchasing decision is important to them, they will go for a trustworthy brand to eliminate the intrinsic risks (Delgado-Ballester and Munuera-Aleman, 2001).

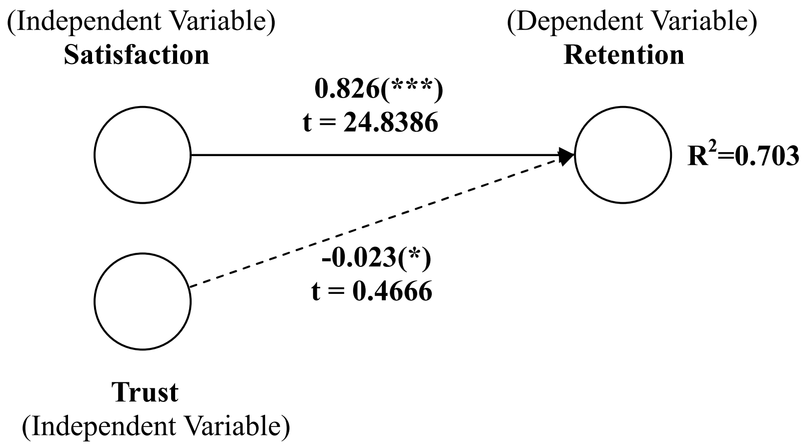


Figure 4.12: The Function of Customer Satisfaction and Trust on Customer Retention (H4)

If both satisfaction and trust are placed together leading to the considerations of customer retention (Figure 4.12), customer satisfaction, with a significant positive path coefficient of 0.826, would consider being a more important factor than trust leading to customer retention. Trust, with a negative coefficient of -0.023, indicates that it has a negative impact in the relationship on customer retention.

In the context of Internet banking, satisfaction plays an important role in retaining customers (proven in H1), and trust demonstrates that it decreases the importance of satisfaction in keeping customers using Internet banking. However, the overall effect of customer satisfaction and trust has a positive influence on customer retention. Thus, hypothesis 4 is supported.

This finding agreed with an empirical study indicating that the effect of satisfaction on retention was much stronger than the effect of trust among the UK fixed line telephone users (Ranaweera and Prabhu, 2003b). In the context of Internet banking the absence of face-to-face contact creates a feeling of uncertainty and risk for the customers (Reichheld and Schefter, 2000). Customers might need reassurance to release their personal data and preferences, and so banks have to provide evidence to show that they deserve to be trusted (Cappelli, 1999).

Hypothesis 5:

Customer retention is a function of customer commitment and satisfaction in the context of Internet banking.

Hypothesis 5 is designed to test the function of customer commitment and satisfaction on customer retention.

Studies have revealed that customer satisfaction has a measurable impact on purchase intentions (Bolton and Drew, 1991; Oliver, 1997; Anderson and Mittal, 2000; Estrin, 2005), customer retention (Anderson and Sullivan, 1993; Bolton, 1998; Mittal and Kamakura, 2001; Kumar, 2002; Estrin, 2005), and the financial performance of a bank

(Rust and Zahorik, 1993; Leung et al., 1998; Anderson and Fornell, 1999; Keiningham et al., 1999). As a result, customer satisfaction is taken as a basic construct for monitoring and controlling marketing activities in the concept of relationship marketing (Anderson et al., 1994; Fornell, Johnson, Anderson & Bryant, 1996). It is argued that commitment in a business relationship goes beyond satisfaction, and commitment in a buyer-seller relationship is a crucial predictor of retention (Wilson et al., 1995).

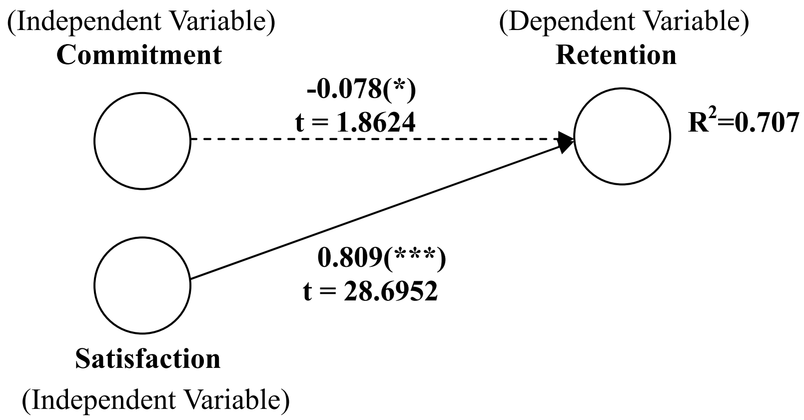


Figure 4.13: The Function of Customer Commitment and Customer Satisfaction on Customer Retention (H5)

If both customer commitment and satisfaction are placed together leading to the considerations of customer retention (Figure 4.13), customer satisfaction (significant positive path coefficient of 0.809) proved (H1) to have significant influence on customer retention, would consider being a more important factor than commitment. Commitment (negative coefficient of -0.078) indicates that it has a negative impact on the relationship on customer retention. Indeed, it decreases the influence of satisfaction on retention. However, the overall effect of customer commitment and satisfaction has a positive influence on customer retention in the context of Internet banking. Thus, hypothesis 5 is supported.

Commitment leading to loyalty and consequently repeat patronage may be moderated by situational or social factors (Dick and Basu, 1994). These factors may cause inconsistency in the commitment-loyalty relation. Since commitment differs from loyalty in that it refers solely to attitudes not behaviour (Kelly, Donnelly & Skinner, 1990), so even consumers are committed to a vendor, an unsafe or untrustworthy environment will decrease loyalty and inhibit consumers from repurchasing (Thatcher and George, 2004).

Hypothesis 6:

Customer retention is a function of customer commitment and trust in the context of Internet banking.

Hypothesis 6 is designed to test the function of customer commitment and trust on customer retention.

Trust in a firm's website affects customers' attitudes towards the firm and their willingness to buy (Keen, 1997; Wetsch and Cunningham, 1999). Online purchases depend on customer trust in the Internet, in specific websites, in the information available online, and in a firm's delivery and service fulfilment (Urban et al., 2000). Commitment, when extended to consumer setting, is conceptualised as a force that binds a customer to continue to the services of the same service provider (Meyer and Herscovitch, 2001) even despite irregular influential events and marketing efforts that may cause switching behaviours (Curasi and Kennedy, 2002).

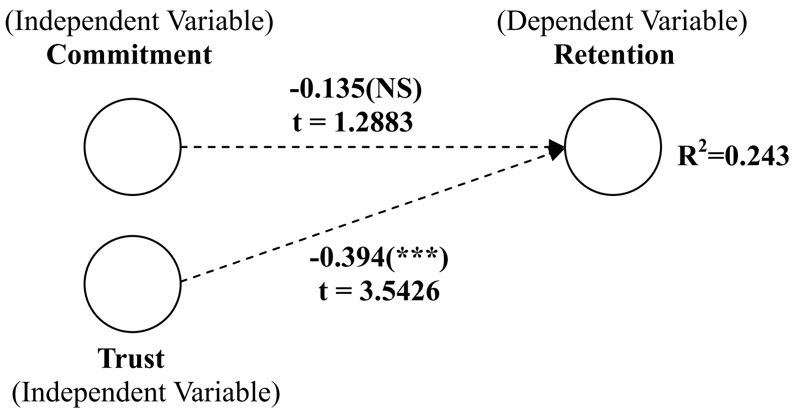


Figure 4.14: The Function of Customer Commitment and Trust on Customer Retention (H6)

If both commitment and trust are placed together leading to the considerations of customer retention (Figure 4.14), both factors indicate a negative impact on customer retention. Trust, with a negative coefficient of -0.394, indicates a highly negative impact in the effect on customer retention. Commitment, with a negative coefficient of -0.135, also shows a negative impact in the effect on customer retention. Commitment and trust does not demonstrate any effect on retaining customers. In fact, both factors decrease the intention to stay with the bank with trust decreasing the overall effect. Internet banking customers do not need commitment and trust, in particular, to stay with the service provider. Thus, hypothesis 6 is not supported.

Trust online expressed by technical experts in security was a concern over the fragility of technical systems. These experts were concerned that the networked information system including the Internet is vulnerable to technical failure as well as malicious attack (Nissenbaum, 2001). Trust may not be appropriate for every situation and relationship. For example in dealing with a used-car salesman we may prefer strategies other than trust. So as in the selection of a bank, trust may not be crucial (Nissenbaum, 2001).

Hypothesis 7:

Customer retention is a function of trust, customer satisfaction and commitment in the context of Internet banking.

Hypothesis 7 is designed to test the function of trust, customer satisfaction and commitment on customer retention.

Repeat purchase depends on satisfying customer needs and wants (Kotler et al., 2002) whereas customer relationship marketing (CRM) applications are found to be positively related to improvements in customer satisfaction (Mithas et al., 2005). In the context of consumption, customers are subject to the vulnerability of the company's decision and actions. This dimension infers that customers trust the vendor will not take advantage of their vulnerability in case of adverse circumstances (Delgado-Ballester, 2004).

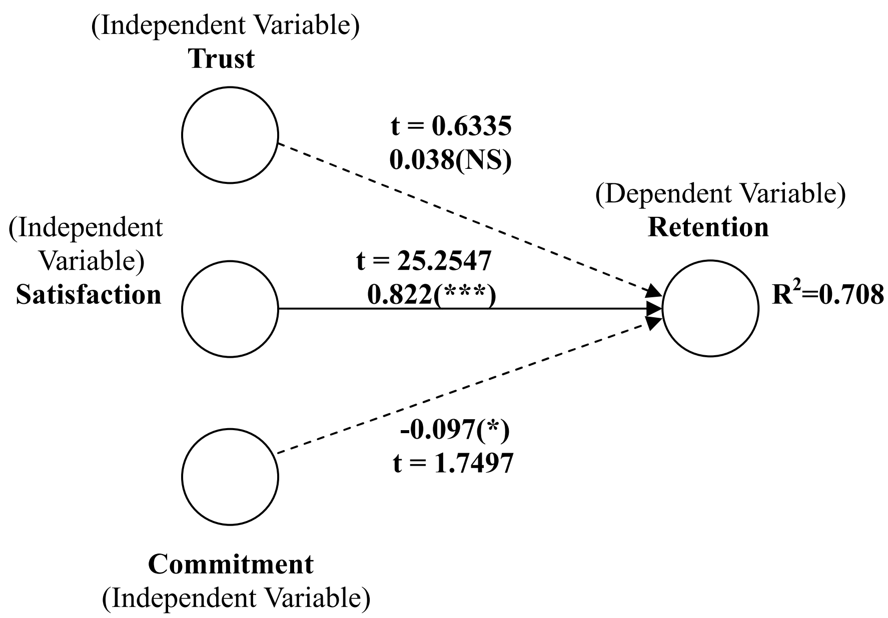


Figure 4:15: The Function of Trust, Customer Satisfaction and Customer Commitment on Customer Retention (H7)

If the three factors of trust, satisfaction and commitment are placed together leading to the considerations of customer retention (Figure 4.15), satisfaction with a coefficient of 0.822 becomes the most significant component leading to customer retention. Commitment (with a path coefficient of -0.097) and trust (with a low coefficient of 0.038) indicate a negative significant impact on customer retention.

Regarding the factors trust, satisfaction and commitment in relation to customer retention, only satisfaction shows its effectiveness in retaining Internet banking customers. Trust does not influence the intention of customers to retain with the bank, whereas commitment has a significant negative impact on customer retention. Thus, hypothesis 7 is not supported.

The model of the theory of reasoned action (TRA) posits that commitment is a direct antecedent to loyalty and Internet trustworthiness will negatively moderate the commitment-loyalty relation (Fishbein and Ajzen, 1975). This may explain the results of H7 that customer commitment does not make customers loyal in retaining with the same Internet banking service provider, and why trust does not help in customer retention.

4.4.2 Analysis on the Mediating Effects of Independent Variables on the Dependent Variable

Moderation occurs when the effect of one variable on another variable varies with different levels of a third variable whereas mediation occurs when the effect of one variable on another variable occurs via a third intervening variable (Judd and Kenny, 1981; Baron and Kenny, 1986). In this study, mediation is used to test the relationships between the exogenous variables (in turns, customer satisfaction, customer commitment and trust) going through an intervening variable (in turns, customer satisfaction, customer commitment and trust) to the endogenous variable (customer retention). Mediation effects can be claimed if three conditions are met:

1. the independent variable significantly predicts the dependent variable;
2. the independent variable significantly precuts the mediator variable; and
3. when the dependent variable is regressed on both the mediator and the independent variable, the mediator significantly predicts the dependent variable, while the predictive utility of the independent variable is reduced.

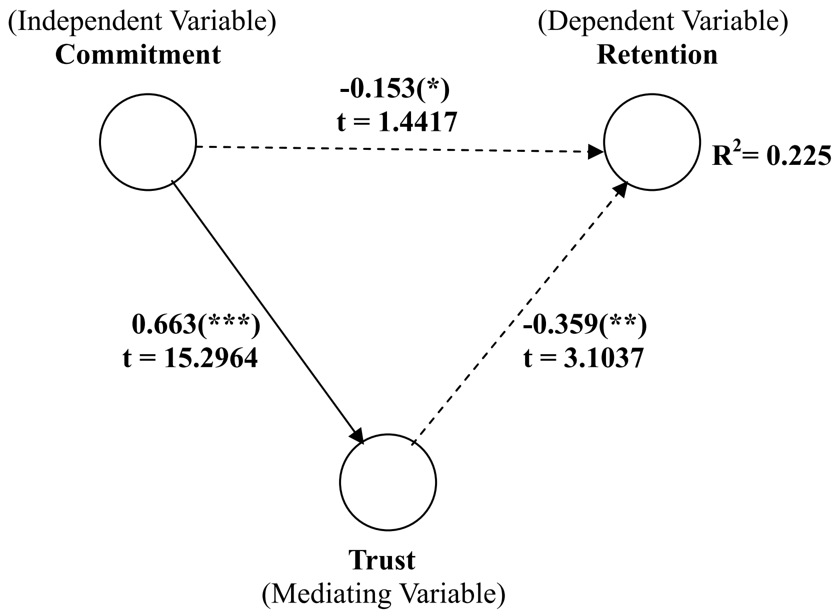
However, only Conditions 2 and 3 are essential for the demonstration of mediation effects (Kenny, Kashy & Bolger, 1998). The correlation between the mediator and the dependent variable is not sufficient evidence of mediation because both may be caused by the independent variable (Kenny et al., 1998).

Hypothesis 8:

Customer commitment is mediated by trust to build customer retention in the context of Internet banking.

Hypothesis 8 is designed to investigate if customer commitment depends on trust to build customer retention.

Customer trust holds the key mediating role in successful relationship marketing (Morgan and Hunt, 1994). Adapted from the definitions in conventional commerce, customer trust in e-commerce has been defined as ‘a willingness to take risk’ (Lee and Turban, 2001; Ba and Pavlou, 2002), ‘a willingness to believe the trustee’ (Fung and Lee, 1999), or ‘a belief concerning certain characteristics of the trustee’ (Stewart, 1999).



Direct Effect (DE) = -0.153 (not significant)

Indirect Effect (IE) 0.663 * -0.359 = -0.238 (not significant)

Total Effect (TE) -0.153 + -0.238 = -0.391 (not significant)

Figure 4.16: Customer Commitment Depends on Trust
to Build Customer Retention (H8)

The PLS results in Figure 4.16 indicate that trust weakly mediates commitment to enhance customer retention. This is evidenced by the direct effect with the path coefficient of -0.153, which is greater than the indirect effect with the path coefficient of -0.238. The result is further indicated by the total effect with the path coefficient of -0.391 which is lesser than the direct effect (-0.153).

The finding suggests that commitment cannot influence customer retention in the context of Internet banking. When trust is built between commitment and customer retention regarding Internet banking with the objective in enhancing the relationship, it does not shed positive light. By mediating trust in the relationship, the total effect becomes further negative. This shows that trust does not provide an effective mediation between commitment and retention. As such, trust does not enhance the relationship between a committed customer and retention. Thus, hypothesis 8 is not supported.

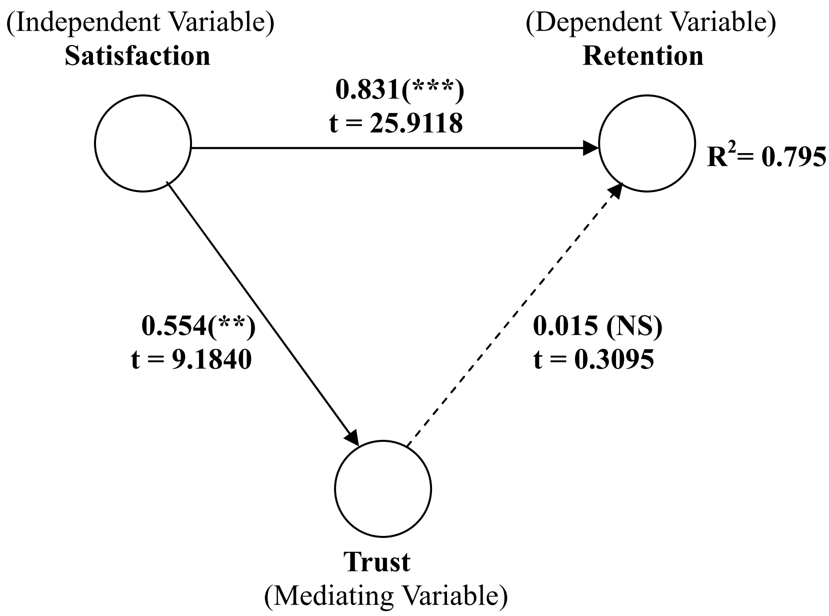
Commitment leading to loyalty and resulting in repeat purchases may be moderated by situational or social factors (Dick and Basu, 1994). Security beliefs as one of the moderators reflect perceptions of safety or trust in the environment encompassing a business transaction. This may cause inconsistency in the commitment-loyalty relationship (Hoffman et al., 1998). Consequently committed customers may not repurchase if they do not feel safe in an unfavourable environment.

Hypothesis 9:

Customer satisfaction is mediated by trust to build customer retention in the context of Internet banking.

Hypothesis 9 is designed to investigate if customer satisfaction depends on trust to build customer retention.

The relationship between satisfaction and customer retention has been empirically validated by many scholarly works studying the service sector (Anderson and Sullivan, 1993; Rucci et al., 1998; Bansal and Taylor, 1999; Cronin et al., 2000). However, trust has been suggested as an antecedent to satisfaction (Singh and Sirdeshmukh, 2000). It has been cited that the absence of customer trust in an online firm's competence and integrity is the major hurdle to the enjoyment of e-commerce benefits (Keen, 1997; Ratnasingham, 1998; Ba et al., 1999; Brynjolfsson and Smith, 2000).



Direct Effect (DE) = 0.831 (significant)

Indirect Effect (IE) 0.554 * 0.015 = 0.00831 (not significant)

Total Effect (TE) 0.831 + 0.00831 = 0.83931 (significant)

Figure 4.17: Customer Satisfaction Depends on Trust to Build Customer Retention (H9)

The finding depicted in Figure 4.17 suggests that satisfaction has a positive impact on customer retention (path coefficient of 0.831). Satisfaction also has influence on trust (significant positive coefficient of 0.554). However, when trust is built between satisfaction and customer retention in the regards of Internet banking with the objective in enhancing the relationship, it does not shed positive light. The result suggested that trust does not provide an effective mediation between satisfaction and retention. Indeed, trust, with a path coefficient of 0.015, has a negative impact in enhancing the relationship between a satisfied customer and retention. Thus, hypothesis 9 is not supported.

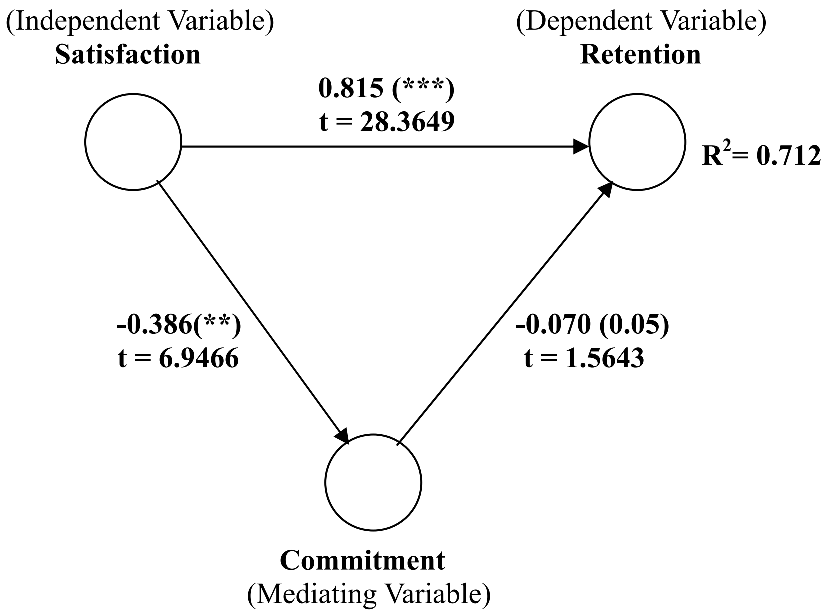
In the context of Internet banking, the absence of face-to-face contact creates a feeling of uncertainty and risk for customers (Reichheld and Schefter, 2000). Research suggests that when the context is uncertain, individuals demonstrate less attitude-behaviour consistency (Gross, Holtz & Miller, 1995). That is to say even though customers trust Internet banking they may not continue to use the service.

Hypothesis 10:

Customer satisfaction is mediated by customer commitment to build customer retention in the context of Internet banking.

Hypothesis 10 is designed to investigate if customer satisfaction depends on customer commitment to build customer retention.

An empirical study reveals that strong interpersonal relationships positively influence a customer’s intention to repurchase in the case of low-customer satisfaction (Jones et al., 2000). The implication is that satisfaction is a condition that contributes to a customer’s opting for a product or service but satisfaction alone is not sufficient to make a customer commit to the product or service (Wilson and Mummalaneni, 1990). In addition, customer relationship management applications have been suggested to result in improvements in customer knowledge and customer satisfaction (Mithas et al., 2005).



Direct Effect (DE) = 0.815 (significant)

Indirect Effect (IE) -0.368 * -0.07 = 0.02576 (not significant)

Total Effect (TE) 0.815 + 0.02576 = 0.84076 (significant)

Figure 4.18: Customer Satisfaction Depends on Customer Commitment to Build Customer Retention (H10)

In Figure 4.18 satisfaction alone has a significant impact on customer retention (path coefficient of 0.815). However, it has negative influence on commitment (path coefficient of -0.386). However, when satisfaction is mediated by commitment for customer retention regarding Internet banking with the objective of enhancing the relationship, it does not shed positive light. The indirect effect is much smaller than the direct effect. Indeed, commitment, with a path coefficient of -0.07, decreases the impact in enhancing the relationship between a satisfied customer and retention. The result suggested that commitment does not provide an effective mediation between satisfaction and retention. Thus, hypothesis 10 is not supported.

The result indicates that the hypothesis (10) does not support previous findings (Jones et al., 2000) that commitment has a positive relationship with customer retention towards using an Internet banking service. The result suggested that commitment has a negative impact on customer retention. Repurchasing behaviour may be more a function of such environmental constraints as happenstance or convenience rather than loyalty (Jacoby and Chesnut, 1978). Moreover, commitment differs from loyalty in that it refers solely to attitudes; it does not involve behaviour (Kelly, Donnelly & Skinner, 1990).

Hypothesis 11:

The effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the content of Internet banking.

The objective of hypothesis 11 is to identify whether trust and satisfaction mediated by commitment has an impact on Hong Kong professionals and business practitioners in enhancing customer retention in the context of Internet banking.

Satisfaction is a condition that contributes to a customer's opting for a product or service but satisfaction alone is not sufficient to make a customer commit to the product or service (Wilson and Mummalaneni, 1990). It has been proposed that affective, normative and continuance commitment mediates the relationship between switching intentions and antecedents such as satisfaction (Bettencourt, 1997, Wetzels et al., 1998; Garbarino and Johnson, 1999; Wetzels et al., 2000; Hennig-Thurau et al., 2002).

One empirical study has revealed that there is an indirect link between interpersonal relationships and repurchase intentions (Jones et al., 2000). This link suggests that strong interpersonal relationships positively influence a customer's intention to repurchase in case of low customer satisfaction. If the inability to keep satisfied customers is partly due to the absence of customer commitment, then this suggests that commitment may act as a mediator to satisfaction in strengthening customer retention. Commitment also mediates the relationship between repurchase intentions and various variables, including trust (Garbarino and Johnson, 1999). In addition, trust has been claimed to have a mediating role for other variables in different research models.

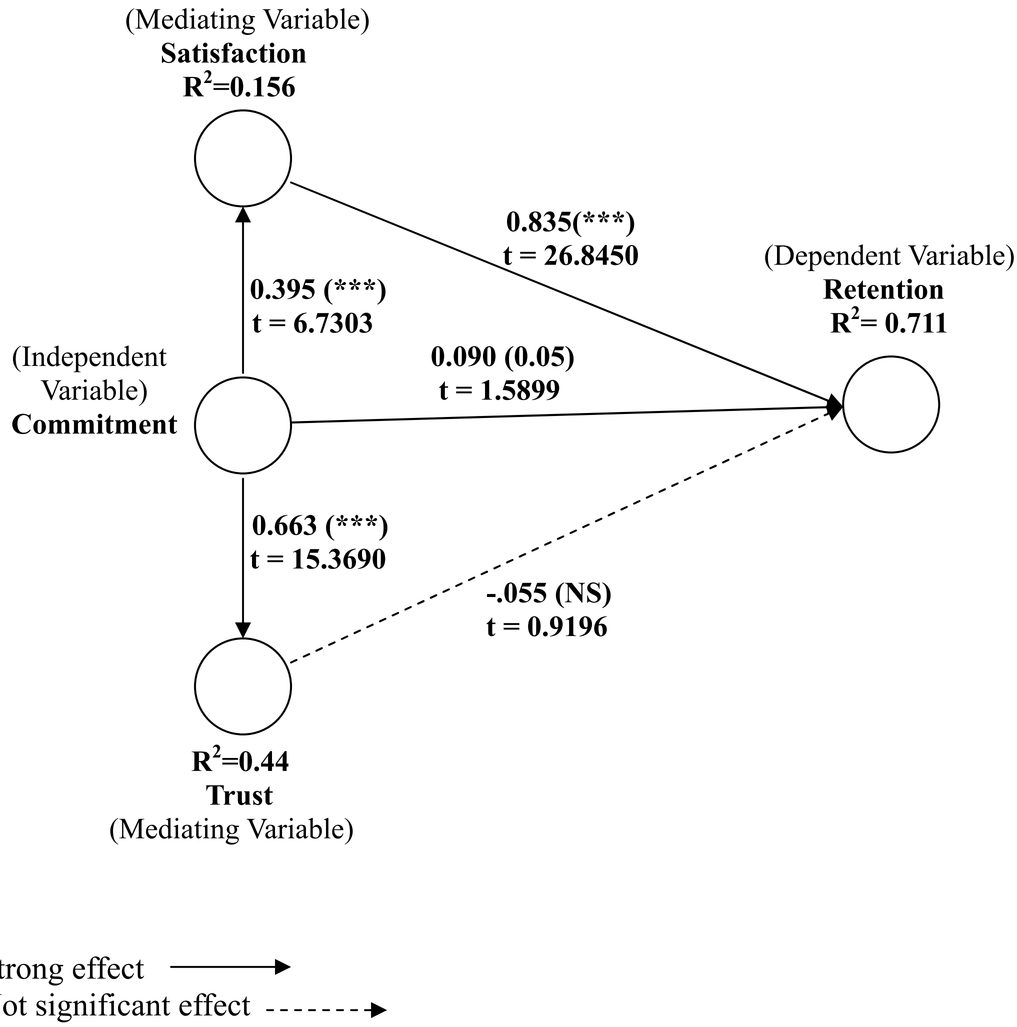


Figure 4:19: Customer Satisfaction and Trust via Customer Commitment on Customer Retention (H11)

Figure 4.19 demonstrates that satisfaction has a significant positive path coefficient towards retention (0.835). Commitment on satisfaction also has a significant path coefficient of 0.395. The mediation of satisfaction for commitment seems to have a significant path towards customer retention.

Commitment on trust has a significant path coefficient of 0.663; and commitment itself has a positive path coefficient of 0.090 towards customer retention. However, when mediated by trust, commitment demonstrates a non-significant impact on customer retention, with a path coefficient of -.055.

The R^2 is indicated next to each construct. All links are found to be significant except for the one between trust and retention. It is interesting to note that the overall model explains 71.1 percent of the variance in retention and, as such, providing strong evidence of its explanatory power.

The observation has been made that customer satisfaction is a very effective mediator for customer commitment on customer retention in the context of Internet banking. However, on the other hand, trust demonstrates its ineffectiveness as a mediator for customer commitment on customer retention. In fact, trust decreases the impact of customer commitment on customer retention. The hypothesized effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the context of Internet banking partially stands. Thereby **H11** is partially supported.

Customer satisfaction can be viewed as the incorporation of an emotional state and an evaluative judgement. Evaluative responses related to the perceived outcomes of customer experience during the course of acquisition, consumption and disposition of the purchase (Miller, 1977; Westbrook and Oliver, 1981), and customers develop feelings of positive affect through experience with a vendor (Dick and Basu, 1994). Overall satisfaction is gathered from factors occurring through the transaction process (Bitner and Hubbert 1994; Oliver, 1997). Therefore, satisfaction for Internet banking is an inward experience of the customers.

Customer commitment and trust, however, are values that could be affected by external factors or environments. Even though customers may have experience with a vendor, the continual concerns about the 'atmosphere' surrounding a transaction will moderate relations between emotions, beliefs, and attitudes (Long, Hogg, Hartley & Angold, 1999). Empirical results support that trust and other security beliefs have an effect on consumers' intent to purchase goods over the web (Jones and Vijasarathy, 1998). To committed customers, an unsafe or untrustworthy environment will reduce their expression in loyalty (Thatcher and George, 2004), that is the behaviour of repeating purchase from the same vendor.

The professionals and business practitioners in this study may also possess certain characteristics that make them sceptical about commitment and trust in the continued use of a service or product. A recent finding of a study on mobile Internet adopters in Japan suggested that highly educated professionals working freelance had the most negative perception of mobile Internet adoption (Okazaki, 2006). This may explain why trust does not have an effect on customer retention in the context of Internet banking among Hong Kong professionals and business practitioners.

In addition, a study identified that households who value time the most, have higher education and earn higher incomes were expected to have more cards; well-educated, high-income and time-poor Hong Kong professionals and business practitioners may have several Internet banking accounts in use. This could imply that Hong Kong professionals and business practitioners have no solidified commitment. This phenomenon agrees with a study reporting that some customers are not naive towards relational strategies launched by firms (Egan, 1999).

4.5 Summary of Hypotheses Testing

Table 4.2 summarises the results of the testing of the eleven hypotheses and identifies the path coefficients between the exogenous and endogenous variables, p-value, t-value and r-square ratios. Out of the eleven hypotheses, three are fully supported, one partially supported and seven are not supported after rigorous analysis with SPSS and PLS techniques on the data collected from the survey.

Hypothesis	Statistical Test	p-value / t-value / R^2	Result
H1: Internet banking is positively perceived by satisfied customers who will continue to use the service of their bank.	Significant path coefficient	P = 0.000 **S-R = 0.838** **(t = 35.8409)** **R^2=0.703**	Supported
H2: Internet banking is positively perceived by committed customers who will continue to use the service of their bank.	Significant path coefficient	P = 0.000 **C-R = -0.396** **(t = 6.2404)** **R^2=0.157**	Not supported
H3: Internet banking is positively perceived by customers who trust the service and will continue to use the service of their bank.	Significant path coefficient	P = 0.000 **T-R = -0.481** **(t = 6.7875)** **R^2=0.232**	Not supported
H4: *The function of customer satisfaction and trust has a positive influence on customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **S-R = 0.826(***)** **(t = 24.8386)** **T-R = -0.023(*)** **(t = 0.4666)** **R^2=0.703**	Supported
H5: *The function of customer commitment and satisfaction has a positive influence on customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **C-R = -0.078(*)** **(t = 1.8624)** **S-R = 0.809(***)** **(t = 28.6952)** **R^2=0.707**	Supported
H6: *The function of customer commitment and trust has a positive influence on customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **C-R = -0.135(NS)** **(t = 1.2883)** **T-R = -0.394(***)** **(t = 3.5426)** **R^2=0.243**	Not supported
H7: *The function of trust, customer satisfaction and commitment has a positive influence on customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **T-R = 0.038(NS)** **(t = 0.6335)** **S-R =0.822(***)** **(t = 25.2547)** **C-R =-0.097(*)** **(t = 1.7497)** **R^2= 0.708**	Not supported

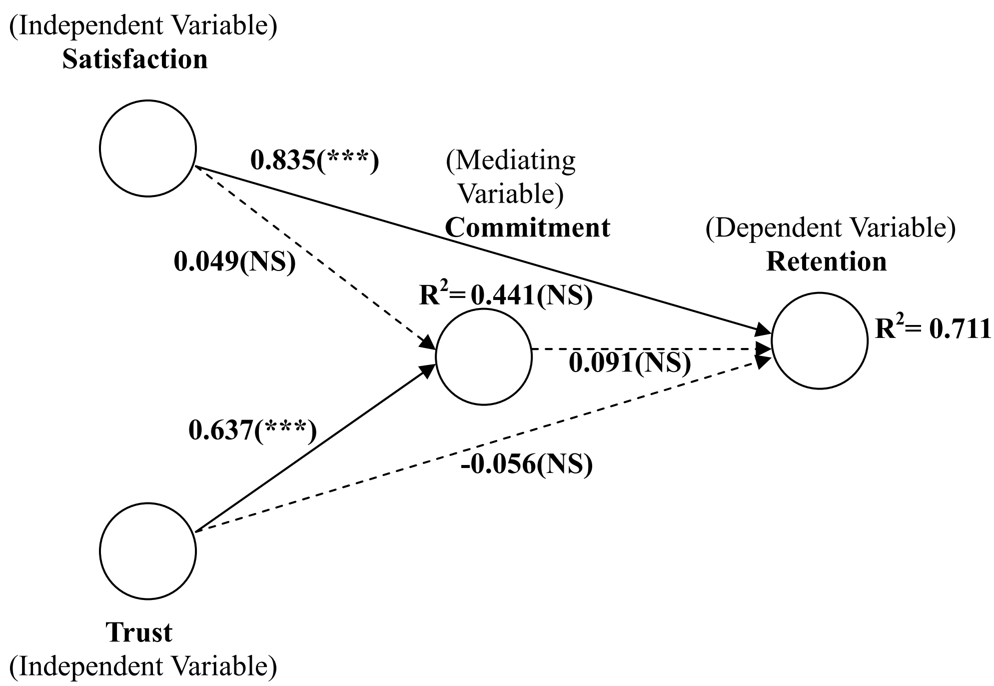
H8: *Customer commitment is mediated by trust to build customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **C-R = -0.153(*)** **(t = 1.4417)** **C-T=0.663(***)** **(t = 15.2964)** **T-R=-0.359(**)** **(t = 3.1037)** **R^2= 0.225**	Not supported
H9: *Customer satisfaction is mediated by trust to build customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **S-R=0.831(***)** **(t = 25.9118)** **S-T=0.554(**)** **(t = 9.1840)** **T-R=0.015(NS)** **(t = 0.3095)** **R^2= 0.795**	Not supported
H10: *Customer satisfaction is mediated by customer commitment to build customer retention in the context of Internet banking.*	Significant path coefficient	P = 0.000 **S-R=0.815***)** **(t = 28.3649)** **S-C=-0.386(**)** **(t = 6.9466)** **C-R=-0.07(0.05)** **(t = 1.5643)** **R^2= 0.712**	Not supported
H11: *The effect of customer commitment on customer retention is mediated by customer satisfaction and trust in the content of Internet banking.*	Significant path coefficient	P = 0.000 **S-R= 0.835(***)** **(t = 26.8450)** **C-S = 0.395(***)** **(t = 6.7303)** **C-T= 0.663(***)** **(t = 15.3690)** **T-R = -.055(NS)** **(t = 0.9196)** **C-R= 0.090(0.05)** **(t = 1.5899)** **R^2 for R= 0.711** **R^2 for S= 0.156** **R^2 for T= 0.44**	Partially supported

* significant at 0.05
** significant at 0.01
*** significant at 0.001

Table 4.2: Summary of Hypotheses Testing

4.5.1 The Final Model of This Research with PLS Results

The exogenous variables (customer satisfaction and trust) going through an intervening variable (customer commitment) to the endogenous variable (customer retention) are depicted in Figure 4.20. It also diagrammatically represents the final model of this research with PLS results. The construct of the overall Internet banking model was conceptualised as reflective measurement model. The loadings from the figure below and critical ratios obtained from bootstrapping were used to understand this construct.



NS non-significant
* significant at 0.01
** significant at 0.05
*** significant at 0.001

Figure 4.20: Final Model with PLS Results

A direct effect of an exogenous variable on an endogenous variable is represented by a coefficient computed from cause to effect following the arrows in the headed direction, whereas an indirect effect is the effect of an exogenous variable on an endogenous variable through the effect on a third intervening (mediating) variable. The indirect effect is represented by a coefficient obtained by multiplying the coefficients along an indirect route from cause to effect following the path of arrows in the headed direction. As the conceptual model is one-tailed in nature, the critical ratios, determined by the Bootstrap Method are as follows:

- 1.645 is significant at the .05 level
- 2.326 is significant at the 0.01 level
- 3.090 is significant at the 0.001 level

The construct of overall customer commitment was conceptualized as a reflective measurement model. The loadings from Figure 4.20 and critical ratios obtained from bootstrapping were used to understand this construct.

4.5.2 Data Analysis Reporting

The data analysis for this survey was conducted and completed in a holistic manner following the PLS procedure (Wold, 1989) and using PLS Graph (Chin, 1994). PLS tested how well the measures relate to each construct simultaneously with whether the hypothesized relationships at the theoretical level are empirically confirmed. Tests of significance for all paths were conducted using the bootstrap re-sampling procedure (Cotterman and Senn, 1992) and the standard approach for evaluation that requires path loadings from construct to measures to exceed 0.70. Internal consistency test was performed using composite reliability measures (ρ) (Chin, 1998) and average variance extracted (AVE) (Fornell and Larcker, 1981).

Several tests on the measurement model to examine its validity and reliability were performed and the results were satisfactory. Table 4.3 presents the loading of the measures to their respective constructs along with the composite reliability scores, AVE scores, standard errors and t-statistics. All items are significant at the 0.01 level with high loading (all above 0.79), therefore demonstrating convergent validity. Moreover, all AVE scores exceed 0.7. The composite reliability scores of all constructs are higher than the recommended value of 0.80 (Nunnally, 1978), demonstrating internal consistency.

Factors	Variables	Load-ings	Std. Error	T-statistics
Satisfaction	Item 1: Satisfied with the choice	0.8410	0.0281	29.8916
Composite	Item 2: Good choice	0.8720	0.0330	26.4104
Reliability = 0.905	Item 3: Pleased me	0.8548	0.0251	34.0644
AVE = 0.706	Item 4: Sense of loyalty	0.7902	0.0346	22.8110
Retention	Item 1: Do it all over again	0.9153	0.0156	58.6501
Composite	Item 2: Recommend to friends	0.9004	0.0207	43.4885
Reliability = 0.904				
AVE = 0.824				
Trust	Item 1: High regard	0.8625	0.0201	42.9236
Composite	Item 2: Keep their promise	0.8984	0.0148	60.5488
Reliability = 0.910	Item 3: Trust this bank	0.8166	0.0299	27.2779
AVE = 0.718	Item 4: Interested in my satisfaction	0.8090	0.0384	21.0514
Commitment	Item 1: Bond between my bank	0.8904	0.0204	43.6006
Composite	Item 2: Committed to my relationship	0.9335	0.0096	97.3875
Reliability = 0.917	Item 3: Put maximum effort	0.8334	0.0595	14.0087
AVE = 0.786				

Table 4.3: Measurement Model Statistics

The results of the PLS analysis are illustrated in Figure 4.20 (Final Model). The test of each link is mapped with each specific path in the structural model. The estimated path coefficients are provided with their respective t-statistics. Solid lines represent significant links between constructs and dotted lines denote insignificant relationships between the variables.

4.6 Conclusion

The finding of the demographic characteristics (gender, marital status, age, education, income, working experience and occupation) of the respondents in this survey revealed that the sample closely represents the population under study. However, the sample of Hong Kong professionals and business practitioners had attained an education well above the overall standard and earned more than the average worker.

The relationships between constructs being tested in this study with the help of diagrams are presented. It was found that satisfaction has a significant positive impact on customer retention, customer commitment and trust do not have or have negative effect on customer retention nor they can mediate customer satisfaction on customer retention in the context of Internet banking in Hong Kong. This chapter finishes with the summaries of the hypotheses testing and depicts the final structural research model demonstrating the interacting effects of all the constructs involved in this study.

CHAPTER 5 CONCLUSIONS

5.1 Introduction

This chapter concludes the research project. Section 5.1 introduces the sections in the chapter. Section 5.2 focuses on the discussion and interpretation of the findings. This is followed in Section 5.3 by the implications for research results. The implications for practitioners are in Section 5.4. Section 5.5 presents the limitations of this study whereas Section 5.6 recommends directions for future studies. Section 5.7 concludes the chapter.

5.2 Discussion and Interpretation of the Findings

The final research model in Figure 4.20 of this study was postulated using PLS graph (Chin and Frye, 1996). With 208 respondents, the sample size satisfied the indicator to case ratio required to use PLS (Barclay, Thompson & Higgins, 1995). The findings were interpreted in two stages - demographics of the sample and structural.

5.2.1 Demographics of the Sample

An earlier study found that the demographic profile of Internet banking users in Hong Kong was similar to the demographic profile of Hong Kong general population (Iamasia, 2002). Based on the reference, the demographic profile of the respondents of this research was compared with that of Hong Kong population. The demographic data demonstrated adequate representation of the population regarding gender, marital status, age range, and education level of Hong Kong. However, the government statistics were not consistent with the income of the professionals and business practitioners in this study. This finding could be interpreted as the sample Hong Kong professionals and business practitioners in this study earn well above the overall income standard. As such the sample of this survey is a fair and adequate representation of the population of Hong Kong.

5.2.2 Structural Model

Results revealed in Figure 4.20 provide limited empirical support for the theoretical model. PLS structural model results may be interpreted as regression analysis. Each R^2 indicates the amount of variance explained in the latent construct (Barclay, Thompson & Higgins, 1995). Path coefficients can be taken as standardized betas deriving from ordinary least squares regression. To test the statistical significance of the path coefficients, a bootstrapping procedure was used to generate 100 samples of the 208 respondents. Followed by a *t* test for differences (degrees of freedom = 99) between the full sample and mean of sub-samples was performed (Chin, 1998). Path coefficients between the constructs and their significance are shown in Figure 4.20. Overall, the model explained a large amount of the variance in customer retention (R^2 = 0.711). Hypotheses will be discussed next.

5.2.2.1 Customer Retention and Its Antecedents

The research model proves strong empirical support for how satisfaction leads to customer retention. The satisfaction factor explained large amounts of variance in customer retention (R^2=0.703). A hypothesized relation from satisfaction to customer retention was supported (**H1**: $p>.01$). When compared to commitment and trust, customer satisfaction demonstrated a much stronger relation to the two factors. This analysis suggests that customer satisfaction with Internet banking services is an important antecedent to customer retention.

Commitment did not demonstrate a positive relation to customer retention. A hypothesized relation from customer commitment to customer retention was not supported (**H2**: $p<.01$). The analysis showed that customer commitment has a negative influence on customer behaviour in terms of keeping them using an Internet banking service. This finding is inconsistent with prior marketing research suggesting the implementation of effective relationship-specific investments can increase customers' dependency and inhibiting switching (Berry and Parasuraman, 1991).

Similarly, trust has a negative impact on customer behavior in the context of Internet banking. A hypothesized relation from trust to customer retention was not supported (**H3**: $p<.01$). The result was not consistent with prior marketing research suggesting that the upkeep of trust in an online environment is critically important, especially in a highly unpredictable market with reduced product differentiation such as banking (Fournier and Yao, 1997; Urban et al., 2000; Papadopoulou et al., 2001).

5.2.2.2 Effect on Customer Retention

Hypotheses 4, 5, 6 and 7 predicted a positive effect of satisfaction and trust on customer retention (H4), commitment and satisfaction on customer retention (H5), commitment and trust on customer retention (H6) and trust, satisfaction and commitment on customer retention (H7).

The satisfaction factor explained large amounts of variance in customer retention in all the three models it involved in (H4: R^2 = .703, p>.01; H5: R^2= .707, p>.01; H7: R^2 =.708, p>.01). Trust and satisfaction, exercised a negative influence (H4: p<0.01, R^2 = .703). However, the influence of the satisfactory factor was so strong, leading to a positive overall effect, thereby lending support to **H4**.

Similarly, commitment and satisfaction exercised a negative influence (H5: p<0.1). Again, the influence of the satisfactory factor was very strong, leading to a positive overall effect, and thereby giving support to **H5** (R^2 = .707).

Commitment (p<0.1) and trust (p<0.1) showed a negative influence on customer retention. Thereby a hypothesized relation from trust and commitment on customer retention proposed in **H6** is rejected. In addition, these two factors explained small amounts of variance in customer retention (R^2= .243).

Trust (p<0.1), satisfaction (p>.01) and commitment (p<0.1) on customer retention revealed an overall negative influence despite the satisfaction factor alone exerting a positive influence. Thereby **H7** is rejected. In addition, the model explained large amounts of variance in customer retention (R^2 = .708).

5.2.2.3 Interaction Terms on Customer Retention

Interaction terms were calculated for the effect on customer retention from commitment via a mediating factor, trust (H8); from satisfaction via a mediating factor, trust (H9); satisfaction via a mediating factor, commitment (H10), and commitment via mediating factors, satisfaction and trust (H11).

A direct effect of an exogenous variable on an endogenous variable is represented by a coefficient computed from cause to effect following the arrows in the headed direction whereas an indirect effect is the effect of an exogenous variable on an endogenous variable through the effect on a third (media) intervening (mediating) variable. The indirect effect is represented by a coefficient obtained by multiplying the coefficients along an indirect route from cause to effect following the path of arrows in the headed direction. The total effects of the exogenous variables on the endogenous variable are reflected by the sum of the direct and indirect effect.

In H8, the direct effect is positive, however the indirect effect becomes negative and the total effect is further negative. This indicates that trust weakly mediates commitment to enhance customer retention. Thereby **H8** is not supported.

In H9, the direct effect is greater than the indirect effect and the total effect bounced back to more or less the same value of the direct effect. The observation was made that trust did not have an effective mediation between satisfaction and customer retention. Thereby, **H9** is not supported.

In H10, the direct effect is greater than the indirect effect and the total effect has the smallest value. The observation is made that satisfaction alone has a more important impact on customer retention whereas commitment, as a media, decreases satisfaction's positive impact on customer retention. This indicates that commitment negatively mediates satisfaction to enhance customer retention. Thereby **H10** is not supported.

In H11, commitment has a positive influence on customer retention; it has a significant effect on satisfaction as well as on trust. The mediation of satisfaction for commitment has a significant effect on customer retention. However the mediation of trust for commitment demonstrates a negative impact on customer retention. The observation is made that customer satisfaction is very effective in mediating customer commitment in retaining customers in the context of Internet banking. However, on the other side, customer commitment becomes negative when mediated by trust on customer retention. Thus, the effect of customer commitment on customer retention is mediated by customer satisfaction and brand trust in the context of Internet banking partially stands. Thereby **H11** is partially supported.

5.3 Implication for Research

Grounded in the marketing literature, a theoretical model of customer retention in the context of Internet banking was developed for research. Exploratory analysis did not support the model's hypothesized relations in the context of Internet banking. Trust did not augment the relation to customer retention; commitment demonstrated a weak, insignificant relation to customer retention; and the sole factor, satisfaction, performs significantly on customer retention in the context of Internet banking. Satisfaction can be viewed as an evaluation judgement and a response rendered from the supposition of the purchase experience (Czepiel et al., 1974; Engel and Blackwell, 1982). The findings suggested that research investigates what antecedents lead to satisfying customers for banking online.

The findings have several implications for research. A major implication of this study concerns the relational attributes of commitment and trust on retaining customers for Internet banking. Previous studies on Internet banking have focused on such transaction-specific attributes as satisfaction and switching costs for customer retention (Lee et al., 2001; Ranaweera and Prabhu, 2003a). In this study, the scope of research was extended beyond transactional type of attributes to examine relationship-specific attributes, namely commitment and trust. This finding suggested that commitment and trust as relationship-specific attributes may not apply for banking over the Internet.

Commitment leading to loyalty (and consequently repeat patronage) may be moderated by situational or social factors (Dick and Basu, 1994). Actual or perceived conditions were moderators influencing a consumer's motivation to buy goods or services from a vendor. Security beliefs were important moderators being identified and they reflected perceptions of safety or trust in the environment encompassing a business transaction, and may be the rationale of inconsistency in the commitment-loyalty relation. Even if consumers are committed to a vendor, an unsafe or untrustworthy environment will decrease loyalty and influence behaviour accordingly.

In the consumer-brand domain, trust has been described as the willingness of consumers to rely on the capability of the brand to act on the promises it has pledged to fulfil (Chaudhuri and Holbrook, 2001). However, it was arguable to incorporate the behavioural intention of 'willingness' of consumers to reply on the capability of the brand to act on the promises it has claimed to fulfil (Morgan and Hunt, 1994). In addition, the brand could not be regarded as an active relationship partner responding to customers similar to people (Delgado-Ballester, 2004).

The ignorance of trust on the part of customers may be due to the fact that they take Internet banking only as a function whereas the intent to retain with the service provider is not involved. It was revealed in a longitudinal research that loyalty intentions are a function of perceived value in early customer life cycle. Only in the later stages of the customer life cycle, more affective attitudes (willingness to retain with a company) toward the brand and the relationship with the company come to mediate the effects of value on intentions (Johnson, Herrmann & Huber, 2006). The findings suggested research into measuring relationships and brands online should be observed from the introduction to the growth stage of the customer life cycle. This is to say, cross-sectional research may not be able to reveal the true phenomenon of customer behaviour towards a company.

The findings of this study have only supported customer satisfaction related to customer retention in the scope of Internet banking. However, it was argued that the customer satisfaction programs should be accompanied by switching costs management for early detection and prevention of switching behaviour (Lee et al., 2001). Although research into the adoption and uses of Internet banking has grown widely, the focus was on determinants of the adoption rather than on users' satisfaction with use (Pikkaraineen, Pikkarainen, Karjaluoto & Pahnila, 2006). Therefore, the implication for research on the components of customer satisfaction may build a firmer foundation for customer retention in the context of Internet banking.

Overall, results of this study overthrew the relevance of well established commitment-trust theory in marketing that commitment has a substantial negative effect on propensity to leave (Norton, Gudergan & Young, 2004). Since studies into the segmentation in personal financial service have been inadequate (Harrison, 1994) and on how to successfully retain customers in the context of Internet banking remains limited (Gallaugher, 1999), the empirical findings of this study has provided new insight into identifying the profitable customers of Internet banking in Hong Kong. This study has indicated the critical factor of satisfaction on customer retention in conventional business mode still applies in Internet commerce.

The results have suggested that commitment has a weak effect and trust has a negative influence on customer retention in the scope of Internet banking in Hong Kong. These findings have contributed new knowledge to an understanding of factors affecting customer retention in a technology-based self-service business mode for finance in an Asian context. For theoretical support, research on customer retention in an Internet setting of financial products or services may draw on the limited online consumer marketing literature.

5.4 Implication for Practitioners

Practical implications refer to strategies pursued by financial institutions offering Internet banking service. It has been reported that only a few banks used customer-segment and profitability information to focus their marketing efforts (Donner and Dudley, 1996). Interestingly enough, a study on the perceptions of Internet banking services has found that profitable bank customers are easy to please as they prefer basic Internet banking services (Mäenpää, 2006).

The demographics of the respondents of this study revealed that the profile of a typical profitable online banking customer is highly educated, between 21 to 50 years old, and earns more than HK$10,000 a month. The implication for bank management is that they can identify the profitable customers in their database and actively develop appropriate strategies to retain them (Shapiro et al., 1987; Slywotzky and Shapiro, 1993; Jones and

Sasser, 1995) in the virtual market place to enjoy cost saving and increased efficiency in transaction and delivery (Peterson et al., 1997; Furash, 1999), and more important, profitability (Fornell and Wernerfelt, 1988; Anderson and Sullivan 1990).

The empirical results of this study have revealed that an Internet banking service that satisfies customers will retain them. The findings have suggested that if customers experience positive emotions, they will develop positive associations with the use of a website and will report a more positive effect toward a web vendor (Oliver, 1999). Customer satisfaction in traditional business modes holds true as an important predictor in electronic commerce (Oliver, 1997). Since satisfaction is such an important element in retaining customers as online bankers, bank management may consider the need to conduct regular satisfaction surveys with customers in the profitable segment to detect proactively if anything dissatisfies them and could trigger them into switching to a competitor.

The findings of this study, however, challenge the conventional wisdom in marketing literature that supports using such a strategy as a frequent-buyer programme to foster customer loyalty. When companies build Internet strategies around incentives and fail to address basic service issues, they may not win a sustainable market share (Basu, Basu & Batra, 1995). The research findings draw an implication to bank management that they may need to go back to the basic of improving the transactional-type of exchange to make customers satisfied with the service.

The results of this study have suggested that trust has a negative influence on customer retention in the scope of Internet banking. This is in line with an empirical study supporting the notion that trust and other security beliefs influence consumers' intent to purchase goods over the Internet and that perception of Internet security influence potential purchasing behaviour (Jones and Vijasarathy, 1998). Even though consumers may have experience with a vendor, the lingering concerns about the 'atmosphere' surrounding a transaction will moderate relations between emotions, beliefs, and attitudes (Long et al., 1999). However, trust research revealed that as experience with a situation or individual grows, the moderating influence of trust in the environment will diminish (McKnight, Cummings & Chervany, 1998). In addition, Internet shoppers' lack of trust in the Internet does not influence their intent to revisit and purchase goods from a website (Thatcher and George, 2004).

An empirical study in India on online banking found that opportunistic behaviour has a significant negative effect on building trust (Mukherjee and Nath, 2003). Boston University Law Review wrote "trust is not appropriate for every situation and relationship. In negotiating with a used-car salesman or with a sworn enemy … we prefer strategies other than trust. In choosing a bank, trust also may not be crucial" (Nissenbaum, 2001). From the above, several implications have become clear for bank management. First, they may need to develop strategies to restore customers' confidence in security when banking on the Internet. Second, their marketing programmes should foster positive experiences with customers over time to mitigate the concern of trust using the Internet for banking. Third, bank management may have to reconsider their initiatives to build trust for retaining customers online as these initiatives may not be the best marketing strategies for the context.

The findings of this study also have indicated that commitment also has a negative influence on customer retention in the context of Internet banking. This may agree with the arguments stating that repurchasing behaviour may be more a function of such environmental constraints as happenstance or convenience rather than loyalty (Jacoby and Chesnut, 1978). Commitment is an essential element for distinguishing between lasting and transitory loyalty (Jacoby and Kyner, 1973), and it refers to attitudes not behaviour (Kelly, Donnelly & Skinner, 1990). In addition, it requires the customers' resistance to change to defy offers from competitors (Jansson and Letmark, 2005). That means that customers remain loyal if there are few options for them to choose from. The implication for bank management is that there is always competition in the marketing arena. To retain customers, they may have to be alert of any environmental circumstances that may influence the attitude of committed customers and retain them.

Since convenience was cited as an environmental constraint, bank management may need to rethink the strategy of bank branches to cope with the changing business environment (Mendoncas and Nackache, 1996; Moutinho et al., 1997). For example, they can transform their branches with technology to serve their customers better (Wah, 1999). This could strengthen the bond with customers and make them more committed to continuing to use the Internet banking service.

5.5 Limitations

Certain limitations inherent in this study need to be acknowledged. First, the temporal customer e-behaviours including satisfaction, which has proved to be affecting customer retention, are relatively new in studies and often undergo changes over time. Indeed, few researchers have investigated potential changes in customer satisfaction and preferences over time (Mittal et al., 2002; Severin et al., 2002; Sultan and Henrichs, 2000). Internet banking is undoubtedly a changing phenomenon. Prior research indicated that customers' attitudes and perceptions do change over time (KPMG, 1997). Therefore, the research should be conducted at different time intervals to understand the customers' changing attitudes towards customer retention.

The survey of this research adopted a cross-sectional type of survey which the sample was examined once for analysis. The method can be biased if an incident affects the degree of satisfaction before or during this survey. The cross-sectional research is then unable to infer on cause and effect. However, it is useful in identifying patterns of relationships among relevant factors. Longitudinal research is essential to confirm the causal linkages among the study factors (Igbaria, Nancy, Paul & Angele, 1997). Longitudinal surveys run more than once with the same sample (Ghauri, Grønhaug & Kristianslund, 1995), and may reveal a clear picture before and after an environmental change, thus reflecting better on the overall relational commitment and trust quality.

This research is limited to the study of professionals and business practitioners in Hong Kong through ten organisations which agreed to participate in the survey. The results may not apply to professionals and business practitioners outside these organisations. If the research is collaborated with a bank using its Internet banking users, it will definitely offer more true results in explaining the relationship between different variables under study. In addition, "the possibility of validating any proposed scoring system is limited" (Cochrane Reviewers' Handbook, 2004, p. 54). There is no proof that the relationship between such a score and the degree to which a study is bias-free. Therefore, it is assumed that the established scales for measuring the validity of trials of this survey instrument cannot be taken as perfect (Cochrane Reviewers' Handbook, 2004).

The judgement-sampling method used in this study has its weaknesses. As one of the non-probability sampling designs, judgement-sampling chooses subjects who do not have a known chance of being selected, which could mean low representation of the population. The sampling method for this study may lead to insufficient generalizability of the research findings (Cavana et al., 2001).

A common problem in all field survey is non-response bias. Despite it being generally desirable that the respondents of the survey in this study be the representative of the sample in terms of demographic characteristics, a problematic area of response bias may occur if only those subjects of the sample responding were very satisfied or very dissatisfied. However, non-response bias was not a significant factor (Armstrong and Overton, 1977). Finally, interpretive error could have occurred through the responses gathered from the Internet owing to a misinterpretation of the questions in the questionnaire since the researcher could not meet and explain the questions to the respondents (Converse and Presser, 1986). Statistically, only 2.4 percent of the total respondents were from the Internet, which should not have a significant effect on the research findings.

5.6 Recommendations for Future Research

Despite these limitations, this research provides a theoretical framework for testing customer retention in Internet banking. There are opportunities to extend this work. Further research is recommended to be conducted in this area to validate the model across other web-based industries, such as online auctions, in order to assess its general stability. Having a case-based research with Internet banking customers from the profitable segment of a bank can uncover in-depth perception on the effect of attitudinal attributes, such as commitment and trust, on customer retention.

Moreover, since this research was carried out in Hong Kong the data collected represents only Hong Kong. Duplicating this research in other Asian cities could test the truth of the findings when applied to other regions. Similarly, researching and conducting the same topic in a Western city, such as London, where the financial services and products are more advanced, could then be compared with the Hong Kong situation. This may contribute to an understanding of different cultural perceptives affecting behaviour towards customer retention in the context of Internet banking.

5.7 Conclusion

The sample of this survey, Hong Kong professionals and business practitioners, is a fair and adequate representation of the profitable bank-customer population of Hong Kong despite the fact that they earn more than the average customer.

Partial Least Square (PLS) analytical technique showed that the four constructs of this study of customer satisfaction, customer commitment, trust and customer retention reported adequate reliability and validity. However, the findings lend limited empirical support for the theoretical model.

The findings have revealed that customer satisfaction well supported customer retention whereas customer commitment and trust both have negative influences on customer retention in the context of Internet banking in Hong Kong among professionals and business practitioners.

The implications for research include the investigation of what antecedents lead to satisfying customers when banking online, the examination of what types of situational or social factors influence consumers' commitment to perform Internet banking, and the measurement of relationships and brands online from the introduction to the growth stage of customer life cycle.

The implications for bank management include the identification of the profitable customers in their database for the development of the appropriate strategies with the objective of retaining them, the running of regular satisfaction surveys with profitable customers to detect switching intention, the development of strategies to restore customers' confidence of security over banking on the Internet, the fostering of positive experience with customers over time to mitigate the concerns of trust using the Internet for banking; the reconsideration of the best marketing strategy for the relevant context, and the alertness of environmental happenings that may influence the attitude of the committed customers.

Limitations of the study are identified. Research timing, sampling technique and non-response bias can be improved for the generalizability of the research findings. Recommendations for future research are made. It is possible to validate the model across other web-based industries, replicate the research in different Asian regions to test how true the findings are, conduct the same research in a western city to compare the effect of different cultural perspectives on switching behaviour, and carry out case-based research to uncover such in-depth perceptions of attitudinal attributes as commitment and trust on customer retention in the context of Internet banking.

REFERENCES

ACNielsen Financial Services Study (2004/5) *ACNielsen News Release – 14 July 2005: Internet Banking – An Increasing Trend in Hong Kong,* accessed April 30, 2006 http://www2.acnielsen.com/news/20050714_ap.shtml.

ACNielsen (2002) *Taking it to the Bank Online: ACNielsen Looks at Internet Banking in South Korea, Hong Kong, Singapore, China, and Taiwan,* accessed April 30, 2006 http://www.acnielsen.com.sg/news_archive.asp.

ACNielsen/NetRatings (2003) *Over Half A Million Hong Kong People Visited An Internet Banking Site in January 2003,* accessed May 11, 2006 http://www.nielsen-netratings.com/pr/pr_030227_hk.pdf.

ACNielsen/NetRatings (2006) *Hong Kong Internet Usage Stats and Market Report*, accessed April 30, 2006 http://www.internetworldstats.com/asia/hk.htm.

Aladwani, A. M. (2001) Online Banking: A Field Study of Drivers, Development Challenges, and Expectations, *International Journal of Information Management*, **21**, pp. 213-225.

Alreck, P. and Settle, R. (1985) *The Survey Research Handbook,* p. 45, US: Irwin.

Al-Sabbagh, I. and Molla, A. (2004) Adoption and Use of Internet Banking in the Sultanate of Oman: An Exploratory Study, *Journal of Internet Banking and Commerce,* **9**, 2, assessed July 26, 2006 http://www.arraydev.com/commerce/jibc/0406-07.asp.

Amber, T. (1997) Do Brands Benefit Consumers?, *International Journal of Advertising*, **16,** 3, pp. 167-198.

Andaleeb, S. S. (1992) The Trust Concept: Research Issues For Channels Of Distribution, *Research In Marketing,* **11**, pp. 1-34.

Anderson, E. W. and Fornell, C. (1999) The Customer Satisfaction Index as a Leading Indicator, in *Handbook of Services Marketing and Management* (Eds, Swartz, T. A. and Lacobucci, D.), Sage, Thousand Oaks, CA. pp. 255-267.

Anderson, E. W. and Mittal, V. (2000) Strengthening the Satisfaction-Profit Chain, *Journal of Service Research*, **3,** 2, pp. 107-120.

Anderson, E. W. and Sullivan, M. W. (1990) Customer Satisfaction and Retention Across Firms, *Presentation at the TIMS College of Marketing Special Interest Conference on Services Marketing* (September), Nashville, Tennessee.

Anderson, E. W. and Sullivan, M. W. (1993) The Antecedents and Consequences of Customer Satisfaction for Firms, *Marketing Science*, **12**, 2, pp. 125-145.

Anderson, E. W., Fornell, C., and Lehmann, D. R. (1994) Customer Satisfaction, Market Share, and Profitability: Findings From Sweden, *Journal of Marketing*, **58**, pp. 53-66.

Anonymous (1997) Assessing brand loyalty in The Netherlands, *Strategic Direction*, **135**, pp. 6-8.

Armstrong, S. J. and Overton, T. S. (1977) Estimating Nonresponse Bias in Mail Surveys, *Journal of Marketing Research*, **14**, August, pp. 396-402.

Athanassopoulos, A. D. (2000) Customer Satisfaction Cues to Support Market Segmentation and Explain Switching Behavior, *Journal of Business Research,* **47**, 3, pp. 191-207.

Auh, S. (2005) The Effects of Soft and Hard Service Attributes on Loyalty: The Mediating Role of Trust, *Journal of Services Marketing*, **19**, 2, pp. 81-92.

Ba, S. and Pavlou, P. A. (2002) Evidence of the Effect of Trust Building Technology In Electronic Markets: Price Premiums And Buyer Behavior, *MIS Quarterly,* **26**, 3, pp. 243-268.

Ba, S. Whinston, A. B. and Zhang, H. (1999) Building Trust in The Electronic Market Through an Economic Incentive Mechanism, in *The 20th International Conference on Information Systems (ICIS) Conference*, Charlotte, North Carolina, US.

Backstrom, C. H. and Hursh-Cesar, G. (1981) *Survey Research,* Second Edition, Macmillan Publishing.

Bagozzi, R. P. (1980), *Causal Models in Marketing,* New York: John Wiley & Sons.

BAI (2004) Interest in Internet Banking by Segments, JP Morgan Interviews, in Perumal, V. and Shanmugam, B. (2004) Internet Banking: Boon or Bane, *Journal of Internet Banking and Commerce*, **9**, 3, pp. 1-6.

Bakos, J. Y. (1991) A Strategic Analysis of Electronic Marketplaces, *MIS Quarterly,* **9**, pp. 295-310.

Bakos, J. Y. (1997) Reducing Buyer Search Costs: Implications for Electronic Marketplaces, *Management Science,* **43**, 12, pp. 176-192.

Bansal, H. S. and Taylor, S. F. (1999) The Service Provider Switching Model (SPSM): A Model of Consumer Switching Behaviour in The Service Industry, *Journal of Service Research,* **2**, 2, pp. 200-218.

Barclay, D., Thompson, R. and Higgins, C. (1995) The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use An Illustration, *Technology Studies*, **2**, 2, pp. 285-309.

Barney, J. B. and Hansen, M. H. (1994) Trustworthiness as A Source Of Competitive Advantage, *Strategic Management Journal*, **15**, Winter, pp. 175-190.

Baron, R. and Kenny, D. (1986) The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations, *Journal Personality and Social Psychology*, **51**, pp. 1173-1182.

Basu, A. K., Basu, A. and Batra, R. (1995) Modeling the Response Pattern to Direct Marketing Campaigns, *Journal of Marketing Research*, **32**, May, pp. 204-212.

Bayne, T. (1999) Financial Frogs and Global Princes, *Admpa,* July.

Bayus, B. L. (1992) Brand Loyalty and Marketing Strategy: An Application to Home Appliances, *Marketing Science,* **11**, 1, pp. 21-38.

Bednar, D. A., Reeves, C. A. and Lawrence, R. C. (1995) The Role of Technology in Banking: Listen to the Customer, *Journal of Retail Banking*, **17**, 3, pp. 35-41.

Bendapudi, N. and Berry L. L. (1997) Customers' Motivations for Maintaining Relationships with Service Providers, *Journal of Retailing*, **71**, 3, pp. 223-247.

Berger, A. N., Kashyap, A. K., and Scalise, J. M. (1995) The Transformation of the US Banking Industry: What a Long, Strange Trip It's Been, Brookings Papers on Economic Activity, *The Brookings Institution: Washington,* DC, pp. 55-218.

Berry, L. L. (1993) Relationship Marketing, in *Emerging Perspectives on Services Marketing,* (Eds, Berry, L. L., Shostack, G. L. and Dupah, G.)*, American Marketing Association (AMA),* Chicago, IL, pp. 25-28.

Berry, L. L. (1995) *On Great Service: A Framework for Action,* Free Press, New York, NY.

Berry, L. L. (2000) Cultivating Service Brand Equity, *Journal of the Academy of Marketing Science*, **28**, 1, pp. 128-137.

Berry, L. L. and Parasurama, A. (1991) *Marketing Service: Competing through Quality,* The Free Press, New York, NY.

Bettencourt, R. (1998) A Dynamic Model of The Duration of the Customer's Relationship with A Continuous Service Provider, *Marketing Science*, **17**, 1, pp. 45-66.

Bhaskaran, S. (2006) Incremental Innovation And Business Performance: Small And Medium-Size Food Enterprises In A Concentrated Industry Environment, *Journal of Small Business Management,* **44**, 1, pp. 64-72.

Bhattacharya, C. B. and Bolton R. N. (2000) Relationship Marketing in Mass Markets, in *The Handbook of Relationship Marketing* (Eds, Sheth, J. N and Parvatiyar, A.), pp. 327-354.

Bhattacharya, R., Devinney, T. M. and Pillutla, M. M. (1998) A Formal Model Of Trust Based On Outcomes, *The Academy of Management Review,* **23**, 3, pp. 459-572.

Bhatty, M., Skinkle, R. and Spalding, T. (2001) Redefining Customer Loyalty, The Customer's Way, *Ivey Business Journal,* **65**, 6, (January/February), pp. 13-17.

Bird, A. (1997) *Super Community Banking Strategies: Winning the Ware for the Customer Relationship,* Irwin Professional Publishing, Chicago, IL.

Bitner, M. J. (1995), Building Service Relationship: It's all about Promises, *Journal of Academy of Marketing Science*, **23**, pp. 246-251.

Bitner, M. J. and Hubbert, A. R. (1994) *Encounter Satisfaction versus Overall Satisfaction versus Quality,* in Service Quality: New Direction in Theory and Practice, Sage Publication.

Bitner, M. J., Brown, S. W. and Meuter, M. L. (2000) Technology Infusion into Service Encounters, A*cademy of Marketing Science*, **28,** 1, pp. 139-149.

Black, I. R., Efron A., Ioannou, C. and Rose, J. M. (2005) Designing and Implementing Internet Questionnaires Using Microsoft Excel, *Australasian Marketing Journal,* **13**, 2, pp. 61-73.

Bolton, R. N. (1995) *Linking Customer Satisfaction to be Duration of Customer-provider Relationships and to Revenues* (Unpublished Working Paper), Waltham, MA, GTE Laboratories.

Bolton, R. N. (1998) A Dynamic Model of the Duration of the Customer's Relationship with A Continuous Service Provider: The Role of Satisfaction, *Marketing Science,* **17**, 1, pp. 45-66.

Bolton, R. N. and Drew, J. H. (1991) A Multistage Model of Customers' Assessments of Service Quality and Value, *Journal of Consumer Research*, **17**, pp. 375-384.

Bone, P. F. (1991) Identifying Mature Segments, *Journal of Services Marketing*, **5**, 1, pp. 47-60.

Booz-Allen & Hamilton (2003) Processing Cost Per Transaction, JP Morgan, in Perumal, V. and Shanmugam, B. (2004) Internet Banking: Boon or Bane?, *Journal of Internet Banking and Commerce*, **9**, 3, pp. 1-6.

Boulding, K. D., Kalbra, A., Staeling, R., and Zeithaml, V. A. (1993) A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions. *Journal of Marketing Research*, **30**, 2, pp. 7-27.

Bowen, J. T. and Shoemaker, S. (1998) Loyalty: A Strategic Commitment, *Cornell Hotel and Restaurant Administration Quarterly*, **39**, 2, pp. 12-25.

Brislin, R. (1980) Translation and Content Analysis of Oral and Written Materials, in *Handbook of Cross-Cultural Psychology* (Eds, Triandis, H. C. and Berry, J. W.), **2**, Metholodogy, Boston: Allyn and Bacon.

Brock, S. J. and Barclay, D. W. (1997) The Effects of Organisational Differences and Trust on the Effectiveness of Selling Partner, *Journal of Marketing*, **61**, 1, pp. 3-22.

Brogdon, C. (1999) *Banking and the Internet: Past, Present and Possibilities, assessed August 10, 2006* http://www-db.stanford.edu/pub/gio/CS991/banking.html.

Brown, T. J., Churchill, G. A. and Peter, J. P. (1993) Improving the Measurement of Service Quality, *Journal of Retailing*, **69**, 1, pp. 127-139.

Brynjolfsson, E. and Smith, M. D. (2000) Frictionless Commerce? A Comparison of Internet and Conventional Retailers, *Management Science*, **46**, 4, pp. 563-585.

Buchanan, R. W. T. and Gillies, C. S. (1990) Value Managed Relationships: The Key to Customer Retention and Profitability, *European Marketing Journal,* **8**, 4, pp. 523-526.

Burns, P. P. (2000) Service Consistency across Channels is Key to Success, *American Banker*, **165**, 68, pp. 4-6.

Campbell, D. T. and Fiske, D. W. (1959) Convergent and Discriminant Validation by the Multitrait-multimethod Matrix, *Psychological Bulletin,* **56**, pp. 81-105.

Cappelli, P. (1999) The New Deal at Work: Managing the Market-Driven Workforce, Harvard Business School Press, Boston.

Cavana, R., Delahaye, B. and Sekaran, U. (2001) *Applied Business Research: Qualitative and Quantitative Method,* John Wiley & Sons Australia Ltd.

Ceaparu, I., Demner, D., Hung, E., Zhao, H. and Shneiderman, B. (2002) In Web We Trust: Establishing Strategic Trust among Online Customers, in *e-Service: New Directions in Theory and Practice,* (Eds, Roland T. R. and Kannan, P. K.), New York: M E. Sharpe.

Chatterjee, P. and Narasimhan, A. (1994) *The Web as a Distribution Channel,* Owen Doctoral Seminar Paper.

Chaudhuri, A. and Holbrook, M. B. (2001) The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty, *Journal of Marketing*, **65**, 2, pp. 81-93.

Chin, W. W. (1994) *PLS Graph Manual,* Unpublished Manuscript.

Chin, W. W. (1998) The Partial Least Squares Approach to Structural Equation Modeling in *Modern Methods for Business Research*, (Ed, Marcoulides, G. A.), Mahwah, NJ: Lawrence Erlbaum Associates, Inc., pp. 295-336.

Chin, W. W. and Frye, T. (1996) *PLS Graph,* (Ed, 2.91.03.04), Calgary, Alberta, Canada: University of Calgary.

Chin, W. W. and Newstead, P. R. (1999) Structural Equation Modelling Analysis With Small Sample Research, in *Strategies for Small Sample Research* (Ed, Hoyle, R. H.), Thousand Oaks, CA.

Choudhury, V., Harzel, K. S. and Konsynski, B. R. (1998) Uses and Consequences of Electronic Markets: An Empirical Investigation in the Aircraft Part Industry, *MIS Quarterly*, **22**, 4, pp. 471-507.

Christy, R., Oliver, G. and Penn, J. (1996) Relationship Marketing in Consumer Markets, *Journal of Marketing Management*, **12**, pp. 175-187.

Churchill, G. A. (1979) A Paradigm for Developing Better Measures of Marketing Constructs, *Journal of Marketing Research*, **16**, pp. 64-73.

Clarke, K. (2001) What Price on Loyalty When a Brand Switch is Just a Click Away, *Qualitative Market Research*, **4**, 3, pp. 160-169.

Clout, J. (2001) Winning Trust is the Key to Getting Ahead, *Financial Review,* **29**, August.

Cochrane Reviewers' Handbook 4.2.2 (2004) *The Cochrane Collaboration,* 2004.

Cohen, L. and Manion, L. (1994) *Research Methods in Education*, Fourth Edition, Routledge.

Colgate, M. and Lang, B. (2001) Switching Barriers in Consumer Market: An Investigation of the Financial Services Industry, *Journal of Consumer Marketing,* **18**, 4, pp. 332-347.

Colgate, M., Stewart, K., and Kinsella, R. (1996) Customer Defection: A Study of the Student Market in Ireland, *International Journal of Bank Marketing,* **14**, 3, pp. 23-29.

comScore Study (2005) Study Reveals Trends in Online Bill Payment, High-Yield Savings, Customer Loyalty and Satisfaction, assessed August 10, 2006 http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY-/www/story/04-10-2005.

Converse, J. M. and Presser, S. (1986) *Survey Questions: Handcrafting the Standardised Questionnaire, Series: Quantitative Applications in the Social Sciences*, Sage Publications, London.

Cotterman , W. and Senn, J. (1992) Challenges and Strategies for Research in Coulter, K. S. and Coulter, R. A. (2002) Determinants of Trust in a Service Provider: The Moderating Role of Length of Relationship, *Journal of Services Marketing,* **16**, 1. pp. 35-50.

Coyne, K. P. and Dye, R. (1998) The Competitive Dynamics of Network-based Businesses, *Harvard Business Review,* **1-2**, pp. 99-109.

Cravens, D. W. (1995) The Changing Role of the Sales Force, *Marketing Management*, **4**, 2, pp. 48-57.

Crede, A. (1997) International Banking and the Internet, in *Banking and Finance on the Internet* (Ed, Cronin, J. J.), Van Nostrand Reinhold, New York, NY, pp. 271-305.

Cronbach, L. J. (1946) Response Sets and Test Validating, *Educational and Psychological Measurement,* **6**, pp. 475-94.

Cronbach, L. J. and Meehl, P. (1955) Construct Validity of Psychological Tests, *Psychological Bulletin,* **52**, pp. 281-302.

Cronin, J. J. (1997) *Banking and Finance on the Internet*, John Wiley & Sons, New York, NY, pp. 107-136.

Cronin, J. J. and Taylor, S. A. (1992) Measuring Service Quality: A Reexamination and Extension, *Journal of Marketing*, **56**, pp. 55-68.

Cronin, J. J., Brady, M. K. and Hult, G. T. M. (2000) Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioural Intentions in Service Environments, *Journal of Retailing*, **76**, 2, pp. 193-218.

Crosby, L. A., Evans, K. R. and Cowles, D. (1990) Relationship Quality in Services Selling: An Interpersonal Influence Perspective, *Journal of Marketing,* **54**, July, pp. 68-81.

Curasi, C. F and Kennedy, K. N. (2002) From Prisoners to Apostles: A Typology of Repeat Buyers and Loyal Customers in Service Businesses, *The Journal of Services Marketing,* **16**, 4, pp 322-342.

Curran, J. M., Rosen, D. E. and Surprenant, C. (1998) The Development Of Trust: An Alternative Conceptualization, in *EMAC Proceedings, Annual Conference* (Ed, Anderson, P.), *European Marketing Academy*, Stockholm, pp. 110-130.

Czepiel, J. A., Rosenberg, L. J., and Akerele, A. (1974) Conference Proceedings: Perspectives on Consumer Satisfaction, *American Marketing Association (AMA)*, Chicago, IL, pp. 119-123.

Daniel, E. (1999) Provision of Electronic Banking in the UK and the Republic of Ireland, *International Journal of Bank Marketing*, **17**, 2, pp. 72-82.

Dasgupta, P. (1988) Trust as a Commodity, in *Trust: Making and Breaking Cooperative Relations,* (Ed, Gambetter, D.), Basil Blackwell, New York, NY. pp. 49-72.

Davies, H. (2000) Speech by the Chairman of Financial Services Authority (FSA): The Year Ahead, *BBA Banking Supervision Conference*, London, 19 June, 2000, assessed September 10, 2006 http://www.fsa.gov.uk/Pages/Library/Communication/Speeches/2000/sp51.shtml.

Davis, R., Buchanan-Oliver, M. and Brodie, R, J. (2000) Retail Service Branding in Electronic Commerce Environments, *Journal of Service Research,* **3**, 2, pp. 178-186.

Day, R. L. (1983), The Next Step: Commonly Accepted Constructs for Consumer Satisfaction Research in *International Fare in Consumer Satisfaction and Complaining*, Bloomington, Indiana University, pp. 113-117.

Day, R. L. and Landon, E. L. (1977) Toward a Theory of Consumer Complaining Behavior, in *Consumer and Industrial Buying Behaviour,* (Woodside, A. G.., Sheth, J. N. and Bennett, P. D.), New York, North Holland, pp. 425-437.

De Armas Assoicates (1998) Survey of 121 Bank Websites in the US, *KPMG,* White Paper.

De Ruyter, K., Moorman L. and Lemmink, J (2001) Antecedents of Commitment and Trust in Customer Supplier Relationship in High Technology Markets, *Industrial Marketing Management,* **30**, pp. 271-286.

De Veaux, R. D., Velleman, P. F. and Bock, D. E. (2005) *Stats: Data and Models,* Pearson Education, Inc.

Deighton, J. (1992) The Consumption Of Performance, *Journal of Consumer Research,* **19**, December, pp. 362-372.

Delgado-Ballester, E. (2004) Applicability of a Brand Trust Scale across Product Categories: A Multigroup Invariance Analysis, *European Journal of Marketing,* **38**, 5/6, pp. 573-592.

Delgado-Ballester, E. and Munuera-Alemán, J. L. (2002) *Conference Proceedings:* Development and Validation of a Brand Trust Scale across Product Categories: A Confirmatory and Multigroup Invariance Analysis, *2002 American Marketing Association (AMA) Winter Educator's Conference,* Chicago, IL, **13**, p. 519.

Delgodo-Ballester, E. and Munuera-Alemán, J. L. (2001) Brand Trust in the Context of Consumer Loyalty, *European Journal of Marketing,* **35**, 11/12, pp. 1238-1258.

Detsky, A. S., Naylor, C. D., O'Rourke, K., McGeer, A. J., L'Abbe, K. A. (1992) Incorporating Variations In the Quality of Individual Randomized Trails into Metra Analysis, *J Clin Epidemiol,* **45**, pp. 255-265.

Dholakia, U. M. and Rego, L. L. (1998) What makes Commercial Web Pages Popular?, *European Journal of Marketing*, **3z**, 7/8, pp. 724-736.

Dick, A. S. and Basu, K. (1994) Customer Loyalty: Toward an Integrated Conceptual Framework, *Journal of the Academy of Marketing Science*, **22**, 2, pp. 99-113.

Diniz, E. (1998) Web Banking in the USA, *Journal of Internet Banking and Finance,* assessed August 10, 2006 http://www.arraydev.com/commerce/JIBC/9806-06.htm.

Donner, S. and Dudley, C. (1996) The Search For Profitable Customers, *American Bankers Association ABA Banking Journal*, **88**, 8, pp. 19-21.

Dowling, G. R. and Uncles, M. (1997) Do Customer Loyalty Programs Really Work? , *Sloan Management Review,* **38**, 4. pp. 71-82.

Dube, L. and Shoemaker, S. (2000) Brand Switching and Loyalty for Services, In *Handbook of Services Marketing and Management*, (Eds., Swartz T. A. and Lacobucci, D.), Sage, Thousand Oaks, CA. pp. 381-400.

DuPont, R. (1998) Relationship Marketing: A Strategy for Consumer-owned Utilities in a Restructured Industry, *Management Quarterly*, **38**, 4, pp. 11-16.

Dwyer, R. F., Schurr P. H. and Oh, S. (1987) Developing Buyer-Seller Relationship, *Journal of Marketing*, **51,** 2, pp. 11-27.

Dyson, P., Farr, A., Hollis, N. S. (1996) Understanding, Measuring, and Using Brand Equity, *Journal of Advertising Research,* **36**, November/December, pp. 9-21.

Edwards, F. R. and Mishkin, F. S. (1995) The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy, *Federal Reserve Bank of New York Economic Policy Review*, **1**, 2, pp. 27-45.

Egan, J. (1999) Conference Proceedings: Relationship Marketing: A Relationship A Relating Perspective, in Marketing and Competition in the Information Age (Eds, Hildebrandt, L. and Annancker, D and Klapper, D.), *the 28th EMAC Conference,* May 11-14, Humboldt University, Berlin.

Engel, J. F. and Blackwell, R. D. (1982) *Customer Behavior,* 4th Edition, Chicago, Dryden Press.

Esch, F-R., Langner, T., Schmitt, B.H. and Geus, P. (2006) Are Brands Forever? How Brand Knowledge And Relationships Affect Current And Future Purchases, *The Journal of Product and Brand Management*, **15**, 2, pp. 98-105.

Essinger, J. (1998) *The Virtual Banking Revolution: the Bank, the Customer and the Future*, Thomson Learning Europe.

Estrin, D. (2005) Does Customer Satisfaction Lead To Profitability? The Mediating Role Of Share-Of-Wallet, *Managing Service Quality*, **15**, 2, pp. 172-181.

Evans, P. B. and Wurster, T. S. (1997) Strategy and The New Economics of Information, *Harvard Business Review*, **75**, September-October, pp. 71-82.

Falk, R. F. and Miller, N. B. (1992) *A Primer for Soft Modeling,* University of Akron Press, Akron, OH.

Feinberg, R. A., Widdows, R., Hirsch-Wyncott, M., and Trappey, C. (1990) Myth and Reality in Customer Service: Good and Bad Service Sometimes Leads to Re-purchase, *Journal of Consumer satisfaction, Dissatisfaction, and Complaining Behaviour*, **3**, pp. 112-114.

File, K. M. and Prince, R. A. (1994) Predicting Professional Service Retention, *Journal of Professional Services Marketing,* **11**, 1, pp. 5-20.

Finextra.com (2003) *NatWest Goes Back to the Branch*, published 11/06/2003, assessed August 25, 2006 http://www.finetra.com.fullstory.asp?id=9107.

Finextra.com (2004a) *Barclays Cuts Back Office and IT to Make Way for More Branch Staff,* published 07/06/2004, assessed August 25, 2006 http://www.finetra.com.fullstory.asp?id=11949.

Finextra.com (2004b) *NatWest Creates 1000 Jobs in Branches*, published 02/04/2004, assessed August 25, 2006 http://www.finetra.com.fullstory.asp?id=11559.

Finextra.com (2004c) *UK Financial Services Jobs Boom as Branches Come Back into Fashion,* published 06/07/2004, assessed August 25, 2006 http://www.finetra.com.fullstory.asp?id=12128.

Fishbein, M. and Ajzen, I. (1975) *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research,* Reading, MA, Addison-Wesley.

Floh, A. and Treiblmaier, H. (2006) What Keeps the E-Banking Customer Loyal? A Multigroup Analysis of the Moderating Role of Consumer Characteristics on E-Loyalty in the Financial Service Industry, *Journal of Electronic Commerce Research*, **7**, 2, pp. 97-110.

Fornell, C. (1992) *A National Customer Satisfaction Barometer: The Swedish Experience*, *Journal of Marketing*, **56**, pp. 1-18.

Fornell, C. and Bookstein, F. L. (1982) Two Structural Equation Models: LISREL and PLS applied to Consumer Exit-Voice Theory, *Journal of Marketing Research,* **XIX**, November, pp. 440-452.

Fornell, C. and Larcker, D. F. (1981) Evaluating Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics, *Journal of Marketing Research,* **18**, 3, pp. 382-388.

Fornell, C. and Lorange, P. and Roos, J. (1990) The Cooperative Venture Formation Process: a Latent Variable Structural Modelling Approach, *Management Science,* **36**, pp. 1246-1255.

Fornell, C. and Wernerfelt, B. (1987) Defensive Marketing Strategy by Customer Complaint Management: A Theoretical Analysis, *Journal of Marketing Research,* **24**, 11, pp. 337-346.

Fornell, C. and Wernerfelt, B. (1988) A Model for Customer Complaint Management, *Marketing Science*, **7**, 3, pp. 287-299.

Fornell, C., Ittner, C. D. and Larcker, D. F. (1995) Paper Presentation: Understanding And Using The American Customer Satisfaction Index (ACSI): Assessing The Financial Impact of Quality Initiatives, *IMPRO 95, Juran Institute's Conference on Managing for Total Quality.*

Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J. and Bryant, B. E. (1996) The American Customer Satisfaction Index: Nature, Purpose, and Findings, *Journal of Marketing,* **60**, 4, pp. 7-18.

Fournier, S. (1998) Consumer and Their Brands: Developing Relationship Theory in Consumer Research, *Journal of Consumer Research*, **24**, March, pp. 343-373.

Fournier, S. and Yao, J. L. (1997) Reviving Brand Loyalty: A Reconceptualization within the Framework of Consumer-brand Relationships, *International Journal of Research in Marketing*, **14**, 5, pp. 451-472.

Frost, T., Stimpson, D. V. and Maughan, M. (1978) Some Correlates of Trusts, *The Journal of Psychology,* **99**, 1, pp. 103-108.

Fukuyama, F. M. (1995) *Trust: The Social Virtues and the Creation of Prosperity*, The Free Press, New York.

Fullerton, G (2005) The Impact of Brand Commitment on Loyalty to Retail Service Brands, *Canadian Journal of Administrative Sciences*, **22**, 2, pp. 97-110.

Fung, R. K. K. and Lee, M. K. O. (1999) Ec-Trust (Trust in Electronic Commerce): Exploring the Antecedent Factors, in *The 5th America Conference on Information Systems*.

Furash, E. E. (1993) Banking's Critical Crossroads, *The Bankers Magazine*, **3-4**, pp. 20-6.

Furash, E. F. (1999), Internet Strategy: Why Banks May Be Getting It Wrong and How To Get It Right, *Journal of Retail Banking Services,* **21**, 2, pp. 37-42.

Gallaugher, J. (1999) Challenging the New Conventional Wisdom of Net Commerce Strategies, *Communications of the ACM*, **42**, 7, pp. 22-29.

Gambetta, D. (1988) Can We Trust Trust?, in Trust: Making and Breaking Cooperative Relations (Ed, Gambetta, D.), Basil, Blackwell, New York, NY, pp. 213-237.

Gandy, A. (1998) How the Internet Will Shape Global Banking, *Chartered Banker*, **4**, 4, pp. 32-33.

Ganesan, S. (1994) Determinants of Long-Term Orientation in Buyer-Seller Relationships, *Journal of Marketing*, **58,** April, pp. 1-19.

Garbarino, E. and Johnson, M. S. (1999) The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships, *Journal of Marketing*, **63**, 2, pp. 70-87.

Garland, R. (2002) What Influences Customer Profitability? Service-profit Chain: Non-financial Drivers of Customer Profitability in Personal Retail Banking, *Journal of Targeting, Measurement and Analysis for Marketing*, **10**, 3 (March), pp. 233-249.

Garland, R. (2005) Segmenting Retail Banking Customers, *Journal of Financial Services Marketing,* **10**, 2, pp. 179-192.

Gefen, D. (2002) Customer Loyalty in E-Commerce, *Journal of the Association for Information Systems,* **3**, pp. 27-51.

Gentle, C. J. S. (1993), *The Financial Services Industry,* Avebury: Hants.

Gephart, R. (1999) Paradigms and Research Methods, Research Methods Forum, *Academy of Management,* Research Methods Division, **4**, Summer.

Geyskens, I., Steenkamp, J. B., Scheer, L. and Kumar, N. (1996) The Effects of Trust And Interdependence on Relationship Commitment: An Trans-Atlantic Study, *International Journal of Research in Marketing,* **13,** 4, pp. 303-317.

Ghauri, P. N., Grønhaug, K. and Kristianslund, I. (1995) *Research Methods in Business Studies – A Practical Guide,* Prentice Hall.

Ghorab, K. E. (1997) The Impact of Technology Acceptance Considerations on Systems Usage, and Adopted Level of Technological Sophistication: An Empirical Investigation, *International Journal of Information Management,* **17**, 4, pp. 249-259.

Glaser, B. G. (1992) *Basic of Grounded Theory Analysis,* California: The Sociology Press.

Goldthwaite, R. A. (1995) B*ank, Places and Entrepreneurs in Renaissance Florence*, Aldershot, Hampshire, Great Britain, Variorum.

González, M. V. R. and Guerrero, M. M. (2004) New Competitors in Banking Services, *Journal of Financial Services Marketing,* **9**, 2, pp. 126-138.

Green, G. B., Salkind, N. J. and Akey, T. M. (2000) Using SPSS for Window: Analyzing and Understanding Data, Second Edition, Prentice Hall, Inc.

Grimm, L. G. (1993) *Statistical Applications for the Behavioural Sciences,* John Wiley & Sons, Inc.

Grönroos, C. (1996) Relationship Marketing Logic, *Asia-Australia Marketing Journal,* **4**, 1, pp. 7-18.

Gross, S. R., Holtz, R. and Miller, N. (1995) Attitude Certainty, in *Attitude Strength, Antecedents and Consequences,* (Eds, Petty, R. E. and Krosnick, J. A.), Mahwah, NJ: Lawrence Erlbaum Associates, Inc. pp. 215-247.

Gruen, T. W., Summers, J. O. and Acito, F. (2000) Relationship Marketing Activities, commitment, and Membership Behaviors in Professional Associations, *Journal of Marketing,* **64**, pp.34-49.

Guerrero, M. M., Egea, J. M. O. and González, M. V. R. (2005) Profiling the Adoption of Online Banking Services in the European Union, *Journal of Internet Business,* **2**, pp. 1-29.

Gurăău, G. (2002) Online Banking in Transition Economies: The Implementation and Development of Online Banking Systems in Romania, *International Journal of Bank Marketing*, **20**, 6, pp. 285-296.

Gustafsson, A., Johnson, M. D. and Roos, I. (2005) The Effects of Customer Satisfaction, Relationship Commitment Dimensions, and Triggers on Customer Retention, *Journal of Marketing*, **69**, 4, p. 210-218.

Gwinner, K. P., Gremler, D. D. and Bitner, M. J. (1998) Relational Benefits in Services Industries: The Customer's Perspective, *Journal of the Academy of Marketing Science*, **26**, 2, pp. 101-14.

Ha, H. Y. (2004) Factors Influencing Consumer Perceptions of Brand Trust Online, *The Journal of Product and Brand Management,* **13**, 4/5, pp. 329-350.

Hagel, J., Hewlin, T. and Hutchings, T. (1997) Retail Banking: Caught in a Web?, *The McKinsey Quarterly*, **2**, pp. 42-56.

Hair, J. F., Anderson, R. L., Tatham, R. L. and Black, W. C. (1998) *Multivariate Data Analysis,* Upper Saddle River, New Jersey: Prentice-Hall.

Hansen, H., Sandvik K. and Selnes, F. (2003) Direct and Indirect Effects of Commitment to a Service Employee on The Intention to Stay, *Journal of Service Research,* **5**, 4, pp. 356-369.

Harrison, T. S. (1994) Mapping Customer Segments for Personal Financial Services, *The International Journal of Bank Marketing*, **12**, 8, pp. 17-26.

Hart, C. W. and Johnson, M. I. D. (1999) Growing the Trust Relationship, *Marketing Management,* Spring, pp. 8-19.

Heffernan, S. (1996) Modern Banking in Theory and Practice, John Wiley & Sons, Chichester.

Heinen, J. (1996) Internet Marketing Practices, *Information Management and Computer Security*, **4**, 5, pp. 7-14.

Henderson, R. (1995) European Retail Banking: Innovation Strategies, *International Journal of Business Studies,* **3**, 1, pp. 11-30.

Henderson, R. (1995) European Retail Banking: Innovation Strategies, *International Journal of Business Studies*, **3**, 1, pp. 11-30.

Hennig-Thurau, T. and Klee, A. (1997) The Impact of Customer Satisfaction and Relationship Quality on Customer Retention: A Critical Reassessment and Model Development, *Psychology and Marketing*, **14**. 8, pp. 737-764.

Hennig-Thurau, T., Gwinner, K. P. and Gremler D. D, (2002) Understanding Relationship Marketing Outcomes, *Journal of Service Research,* **4**, 3, pp. 230-247.

Heskett, J. L. and Schlesinger, L. A. (1994) Putting the Service-Profit Chain to Work, *Harvard Business Review*, **3-4**, pp. 164.

Heskett, J. L., Sasser, W. E., and Schlesinger, L. A. (1997) *The Service Profit Chain*, New York: The Free Press.

Hess, J. S. (1995) Conference Proceedings: Construction and Assessment of a Scale to Measure Consumer Trust, in *Enhancing Knowledge Development in Marketing* (Eds, Stern, B. B. and Zinkhan, G. M.), *1995 American Marketing Association (AMA) Summer Educators Conference,* **6**, Chicago, IL, pp. 20-26.

Hoffman, D. L., Novak, T. P. and Peralta, M. (1998) Building Consumer Trust On-line, *Communications of the ACM*, **42**, 4, pp. 80-85.

Holland, C. P., Lockett, A. G., and Blackman, I. D. (1996) Conference Proceedings: The Business Impact of Information Technology on the Banking Industry*, the Americas Conference on Information Systems*, Phoenix, AZ, **8**, pp. 99-101.

Homburg, C. and Giering, A. (2001) Personal Characteristics as Moderators of the Relationship between Customer Satisfaction and Loyalty – an Empirical Analysis, *Psychology and Marketing*, **18**, 1, pp. 43-66.

Hong Kong Annual Digest of Statistics (2006a) Quarterly Report on General Household Survey, Q2/2006, Table 5.6 Employed Persons by Major Occupation Group of Main Employment, Age and Sex, assessed November 24, 2006 http://www.censtatd.gov.hk/home/index.jsp.

Hong Kong Annual Digest of Statistics (2006b) Quarterly Report on General Household Survey, Q2/2006, Table 1.2 Labour Force by Marital Status, Age and Sex, assessed November 24, 2006 http://www.censtatd.gov.hk/home/index.jsp.

Hong Kong Annual Digest of Statistics (2006c) Quarterly Report on General Household Survey, Q2/2006, Table 5.3 Employed Persons by Educational Attainment, Age and Sex, assessed November 24, 2006 http://www.censtatd.gov.hk/home/index.jsp.

Hong Kong Annual Digest of Statistics (2006d) Quarterly Report on General Household Survey, Q2/2006, Table 5.9 Employed Persons by Monthly Employment Earnings of All Employment and Sex, assessed November 24, 2006 http://www.censtatd.gov.hk/home/index.jsp.

Hong Kong Monetary Authority (2001a) Deregulation of Interest Rate Rules, Press Release on 3 July 2001, assessed September 20, 2005 http://www.irasia.com/regbod/hk/hkma/press/po10703.htm.

Hong Kong Monetary Authority (2004a) Internet Banking: Some Useful Tips for Users by Yam, J., Press Release on 15 July 2004, assessed September 20, 2005 http://www.info.gov.hk/hkma/eng/viewpt/internet_banking_some_useful_tips_for_users_eng.doc.

Howcroft, B. and Kiely, J. (1995) Distribution Channels, in *Marketing Financial Services* (Eds, Ennew, C., Watkins, T., and Wright, M.), Second Edition, Butterworth Heinemann, Oxford, pp. 174-92, assessed August 10, 2006 http://tojde.anadolu.edu.tr/tojde22/articles/suki.htm.

Hunt, H. K. (1977) *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction,* Cambridge, MA: Marketing Science Institute.

Hussey, J. and Hussey, R. (1997) *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, Macmillan Press Ltd.

Iamasia (2000) *ECommerce Statistics*, assessed June 1, 2006 http://www.commercenet.org.tw/Enews/Content.asp.

Igbaria, M., Nancy, Z., Paul, C., and Angele, L. C. (1997) Personal Computing Acceptance Factors in Small Firms: A Structural Equation Model, *MIS Quarterly*, **21**, 3, pp. 279-305.

Intermarket Group (2004) *Understanding Customer Trust in Agent-Mediated Electronic Commerce*, assessed May 29, 2006 http://www.springelink.com/index/T5184T33X046301X.pdf.

International Data Cooperation (IDC) (2004) Growth in Internet Banking, assessed August 2, 2006 *epaynews.com*.

Irish Times (1999) *Pan-European Online Banking Set to Take Off – NUA,* Newslinx Archive, 15 December, assessed May 3, 2006.

Itoh, M. (2001) Technology and E-Finance, In Japan, *BIS Papers,* **7**, pp. 87-89.

Jacoby, J. and Chestnut R. B. (1978) *Brand Loyalty Measurement and Management,* John Wiley & Sons: New York.

Jacoby, J. and Kyner, D. B. (973) Brand Loyalty versus Repeat Purchasing Behavior, *Journal of Marketing Research*, **10**, February, pp. 1-9.

Jahrig, S. H. (1995) Have Computer and Fax Modem, Will Travel: NY City Analyst Becomes Montana Lone Eagle, *Montana Business Quarterly*, Missoula: July 01, **33**, 2 (Sec 1), p.13-20.

Jansson, E, Letmark, M. (2005) *Customer Loyalty in An Internet Banking context,* Magisteruppsats 10 poäng, Företagsekonomi, Institutionen för ekononmi och företagande, Södertörns högskola.

Jasimuddin, S. M. (2000) Saudi Arabian Banks on the Web, *Journal of Internet Banking and Commerce,* **6**, 1, pp. 1-7.

Javalgi, R. G. and Moberg, C. R. (1997) Service Loyalty: Implications for Service Providers, *Journal of Services Marketing*, **11**, 3, p. 165-179.

Jayawardhena, C. and Foley, P. (2000) Changes in the Banking Sector - The Case of Internet Banking in the UK, *Internet Research: Electronic Networking Applications and Policy*, **10**, 1, pp. 19-30.

Jeon, I. and Rice, W. P. (1997) From Web Strategy to Implementation at Liberty Financial Companies, in*Banking and Finance on the Interne*t (Ed, Cronin, M.J.), John Wiley & Sons, New York, pp. 107-36.

Johnson, M. D., Herrmann, A. and Huber, F. (2006) The Evolution of Loyalty Intentions, Print ISSN: 0022-2429, Electronic ISSN: 1547-7185, CODEN: JMKTAK, **70**, 2 (April), pp. 122-132.

Jones J. M. and Vijasarathy L. R. (1998) Internet Consumer Catalog Shopping: Findings from an Exploratory Study and Directions for Future Research, *Internet Research*, **8**, 4, pp. 322-330.

Jones, M. A., Mothersbaugh, D. L., and Beatty, S. E. (2000) Switching Barriers and Repurchase Intentions in Services, *Journal of Retailing*, **76**, 2, pp. 259-374.

Jones, T. and Sasser, W. (1995) Why Satisfied Customers Defect, *Harvard Business Review*, **11-12**, pp. 88-99.

Judd, C. and Kenny, D. (1981) Process Analysis: Estimating Mediation in Treatment Evaluations, *Evaluation Review*, **5**, pp. 602-619.

Jüni, P., Witschi, A., Bloch, R. and Egger, M. (1999) The Hazards of Scoring the Quality of Clinical Trials for Meta-Analysis, *JAMA* 1999, **282**, pp.1054-60.

Karjaluoto, H. (2002) Selection Criteria for a Mode of Bill Payment: Empirical Investigation among Finnish Bank Customers, *Journal of Retail and Distribution Management*, **20**, 6, pp. 331-339.

Karjaluoto, H., Kovivumäki, T. and Salo, J. (2002) Conference Proceedings: Individual Differences in Private Banking: Empirical Evidence from Finland, *the 36th Hawaii International Conference on System Science*.

Keen, P. G. W. (1997) Are You Ready For Trust Economy, *ComputerWorld,* April 21, p. 80.

Keiningham, T. L., Goddard, M. K. M., Vavra, T. G., and Iaci, A. J. (1999) Customer Delight and the Bottom Line, *Marketing Management*, **8**, Fall, pp. 57-63.

Keiningham, T. L., Perkins-Munn, T. and Evans, H. (2003) The Impact of Customer Satisfaction On Share-Of-Wallet in a Business to Business Environment, *Journal of Service Research*, **6,** 1, pp. 37-50.

Keller, K. L. and Aaker, D. A. (1992) The Effects of Sequential Introduction of Brand Extensions, *Journal of Marketing Research*, **29,** February, pp. 35-50.

Kelly, S. W., Donnelly, J. H. and Skinner, S. J. (1990) Customer Participation in Service Production and Delivery, *Journal of Retailing*, **66**, 3, pp. 315-335.

Kennett, P. A., Moschis, G. P., and Bellenger, D. N. (1995) Marketing Financial Services to Mature Consumers, *Journal of Services Marketing,* **9**, 2, pp. 62-72.

Kenny, D. A., Kashy, D. A. and Bolger, N. (1998). Data Analysis in Social Psychology in Gilbert, D. T., Fiske, S. T. and Lindzey G. (Eds.) *The Handbook of Social Psychology* (4th Ed., **1**, pp. 233-265), McGraw-Hill.

Kerlinger, F. N. (1980) *Foundations of Behavioural Research*, Spottiswoode Ballantyne.

Kettinger, W. J. and Lee, C. C. (1994) Perceived Service Quality And User Satisfaction With The Information Services Function, *Decision Sciences,* **25**, 5/6, pp. 737-766.

Kiesler, C. A. (971) *The Psychology of Commitment: Experiments Linking Behavior to Belief,* CA: Academic, San Diego.

Kolodinsky, J., Hogarth, J. M. and Shue, J. F. (2000) Bricks or Clicks? Consumer Adoption of Electronic Banking Technologies, *Consumer Interests Annual,* **46**, pp. 180-184.

Komiak, S. X., Benbasat, I. (2004) Understanding Customer Trust in Agent-mediated Electronic Commerce, Web-Mediated Electronic Commerce, and Traditional Commerce, *Information Technology and Management*, **5**, pp. 181-207.

Kordick, J. A. (1988) Paper Presentation: Doing Well by Doing Good, in Ford Parts and Service Divisions (Eds.), Internal Documentation of the Ford Motor Company, *13 Automotive News World Congress,* Detroit.

Korgaonkar P. K. and Wolin, L. D. (1999) A Multivariate Analysis of Web Usage, *Journal of Advertising Research*, **39**, 2, pp. 53-68.

Kotler, P. R. (1994) *Marketing Management, Analysis, Planning, Implementation, and Control,* Eighth Edition, Englewood Cliffs, NJ, Prentice-Hall.

Kotler, P., Armstrong, G. and Cunningham, P. G. (2002) *Principles of Marketing,* Prentice-Hall, Englewood Cliffs, NJ.

KPMG (1997) Electronic Commerce Research Report 1997, *KPMG*.

Kroonenberg, P. M. (1990) Review Of Latent Variable Modelling With Partial Least Squares by Lohmoller, J-B., *Journal of American Statistical Association,* September, pp. 909-910.

Kumar, P. (2002) The Impact of Performance, Cost and Competitive Considerations on the Relationship Between Satisfaction and Repurchase Intent in Business Markets, *Journal Of Service Research*, **5**, 1, pp. 55-68.

Labahn, D. W. and Kohli, C. (1997) Maintaining Client Commitment in Advertising Agency-Client Relationships, *Industrial Marketing Management,* **26**, pp. 497-508.

Larzelere, R. and Huston, T. L. (1980) The Dyadic Trust Scale: Toward Understanding Interpersonal Trust in Close Relationships, *Journal of Marriage and the Family,* **42**, August, pp. 595-604.

LaTour, S. A. and Peat, N. C. (1979) Conceptual and Methodological Issues in Consumer Satisfaction Research, in Advances in Consumer Research, 6, Wilkie, W. L. Edition, Anne Arbour, *Association for Consumer Research*, MI, pp. 431-437.

Lawley, M. A. and Perry, C. (1998) Paper Presentation: Thai and Malaysian Students' Perceptions of Overseas Study Destinations: An Exploratory Study, *ANZMAC 1998 Conference*, November 24-27, Dunedin.

Lee, J., Lee, J., and Feick, L. (2001) The Impact of Switching Costs on the Customer Satisfaction-loyalty Link: Mobile Phone Service in France*, Journal of Services Marketing,* **15**, 1, pp. 35-48.

Lee, M. K. O. and Turban, E. (2001) A Trust Model for Consumer Internet Shopping, *International Journal of Electronic Commerce,* **6**, 1, pp. 75-91.

Legg, S. (1994) Success Depends on Timing, *Banking World*, **12**, 1, pp. 14-15.

Levinson, K., Orloff, E. (2003) The 24/7 Lifestyle: Time Management in the Home Office, on January 3, 2003, accessed April 10, 2006 http://www.informit.com/articles/article/asp?p=30420&redir=1&rl =1

Leung, K., Li, W. K., and Au, Y. F. (1998) The Impact of Customer Service and Product Value on Customer Loyalty and Purchase Behavior, *Journal of Applied Social Psychology*, **28**, 18, pp. 1731-1741.

Lewis, D. J. and Weigert, A. (1985) Trust as a Social Reality, *Social Forces*, **63**, pp. 967-985.

Lincoln, Y. S., and Guba, E. G. (2000) Paradigmatic Controversies, Contradictions, and Emerging Confluences, in *Handbook of Qualitative Research* (Eds, Denzin, N. K. and Lincoln, Y. S.), Second Edition, Sage.

Lindgreen, A. (2004) The Design, Implementation and Monitoring of a CRM Programme: A Case Study, *Marketing Intelligence & Planning*, **22**, 2, pp. 160-186.

Litwin, M. (1995) *The Survey Kit 7 – How To Measure Survey Reliability And Validity,* Sage Publications.

Llwellyn, D. (1995) The Future Business of Banking, *Banking World,* **13**, 1, pp. 17-19.

Locarek-Junge, H. and Schwaiger, M. (1998) Realizing Customer Retention Potentials by Electronic Banking, in Em-EC in the Insurance Industry/Converging Media. (Eds, Buchet, B., Schmid, B. F., Sela, D., and Witting, D.), *EM-Electronic Markets,* **8**, 4, pp. 23-26.

Lockett, A. and Littler, D. (1997) The Adoption of Direct Banking Services, *Journal of Marketing Management*, **13**, pp. 791-811.

Long, G., Hogg, M. K., Hartley, M. and Angold, S. J. (1999) Relationship Marketing and Privacy: Exploring the Thresholds, *Journal of Marketing Practice*, **5**, 1, pp. 4-20.

Mäenpää K. (2006) Clustering the Customers on the Basis of Their Perceptions of the Internet Banking Services, *Internet Research*, **16**, 3, pp. 304-319.

Makadok, R. (1998) Can First-Mover and Early-Move Advantages be Sustained in an Industry with Low Barriers to Entry/Imitation?, *Strategic Management Journal*, **19**, pp. 686-696.

Mattila, M. (2001) *Essay on Customers in the Dawn of Interactive Banking,* Jyvaskyla Studies in Business and Economics, Doctoral Thesis.

Mayer, R. C. Davis, J. H. and Schoorman, F. D. (1995) An Integrative Model of Organizational Trust, *Academy of Management Review*, **20**, 3, pp. 709-734.

McAllister, D. J. (1995) Affect- and Cognition-Based Trust as Functions for Interpersonal Cooperation in Organizations, *Academy of Management Journal,* **38**, 1, pp. 24-59.

McGann, R. (2005) Online Banking Increased 47 Percent Since 2002, 9 February 2005, accessed September 23, 2006 http://www.clickz.com/stats/sectors/finance/article.php/3481976.

McKnight, H., Cummings, L. L. and Chervany, N. L. (1998) Initial Trust Formation in New Organisational Relationship, *Academy of Management Review,* **23**, 3, pp. 473-490.

McMellon, C. A., Schiffman, L. G. (2001) Cybersenior Research: A Practical Approach to Data Collection, *Journal of Interactive Marketing,* **15**, 4, p. 46.

Mendonca, L and Nakache, P. (1996) Branch Banking is Not a Dinosaur, *The McKinsey Quarterly*, **1**, pp. 136-147.

Messick, S. (1980) Test Validity and the Ethics of Assessment, *American Psychologist*, **35**, pp. 1012-1027.

Meyer, J. P. and Allen, N. J. (1997) *Commitment in the Workplace: Theory, Research, and Application,* Sage, Thousand Oaks, CA.

Meyer, J. P. and Herscovitch, L. (2001) Commitment in the Workplace: Toward a General Model, *Human Resource Management Review,* **11**, 3, pp. 299-326.

Michell, P., Reast, J. and Lynch, J. (1998) Exploring the Foundations of Trust, *Journal of Marketing Management,* **14**, pp. 159-172.

Miller, J. A. (1977) Studying Satisfaction: Modifying Models, Eliciting Expectations, Posing Problems and Making Meaningful Measurements, in *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction*, (Ed, Hunt, H. K.), Cambridge, Mass: Marketing Science Institute.

Minhas, R. S. and Jocobs, E. M. (1996) Benefit Segmentation by Factor Analysis: An Improved Method of Targeting Customers for Financial Services, *International Journal of Bank Marketing,* **14**, 3, pp. 3-13.

Mitall, V., Rose, W. T., and Baldasare, P. M. (1998) The Asymmetric Impact of Negative and Positive Attribute-Level Performance on Overall Satisfaction and Repurchase Intentions, *Journal of Marketing*, **62**, 1, pp. 33-47.

Mithas, S., Krishan, M. S. and Fornell, C. (2005) Why Do Customer Relationship Management Applications Affect Customer Satisfaction, *Journal of Marketing*, **69**, 4, pp. 177-192.

Mittal, B. and Kamakura, W. A. (2001) Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics, *Journal of Marketing Research*, **38**, pp. 131-42.

Mittal, V., Katrichis, J. M. and Kumar, P. (2001) Attribute Performance and Customer Satisfaction Over Time: Evidence from Two Field Studies, *Journal of Services Marketing*, **15**, 5, pp. 343-356.

Mittila, M. Karjaluoto, H. and Pento T. (2003) Internet Banking Adoption among Mature Customers: Early Majority or Laggards? *The Journal of Services Marketing,* **17**, 4/5, pp. 514-527.

Mocanu, M. and Filip, A. (2001) Una Dintre Cele Mai De Succes Inovat Ii Aduse Sistemului Bancar, *Direct Banking*, E-finance Romania.

Mols, N. P. (1998) The Behavioral Consequences of PC Banking, *International Journal of Bank Marketing*, **16**, 5, pp. 195-201.

Mols, N. P. (2000) The Internet and Services Marketing: The Case of Danish Retail Banking, *Internet Research: Electronic Networking Applications and Policy,* **10**, 1, pp. 7-18.

Moorman, C. M., Deshpandé, R and Zaltman G. (1993) Factors Affecting Trust in Market Research Relationships, *Journal of Marketing*, **57**, 1, pp. 81-101.

Morgan R. M. and Hunt, S. D. (1994) The Commitment-Trust Theory of Relationship Marketing, *Journal of Marketing*, **58**, 3, pp. 20-38.

Moutinho, L., Davies, F., Peris, S. M., and Alcaniz, J. E. B. (1997) The Future Role of Bank Branches and Their Managers: Comparing Managerial Perceptions in Canada and Spain, *International Journal of Bank Marketing,* **15**, 3, pp. 99-105.

Mukherjee, A. and Nath, P. (2003) A Model of Trust in Online Relationship Banking, *The International Journal of Bank Marketing*, **21**, 1, pp. 5-16.

Mylonakis, J., Malliaris, P. G. and Siomkos, G. J. (1998) Marketing-Driven Factors Influencing Savers In the Hellenic Bank Market, *Journal of Applied Business Research,* **14**, 2, pp. 109-117.

Narins, P. (1994) How to Determine Sample Size, *Keywords*, **54**, SPSS, pp. 4-5.

Narver, J. C. and Slater, S. F. (1990) The Effect of a Market Orientation on Business Profitability, J*ournal of Marketing*, **54**, pp. 20-35.

Nehmzow, C. (1997) The Internet Will Shake Banking's Medieval Foundations, Journal of *Internet Banking and Commerce,* **2**, 2, accessed April 10, 2006 http://www.arraydev.com/commerce/JIBC.

Nickson, C. (2001) Shouldn't You Be Online Banking? in WQAD.com quoting ING Direct, accessed on July 27, 2006 http://www.wqad.com/global/story.asp?s=4823860&ClientType=Printable.

Nissenbaum, H. (2001) Securing Trust Online: Wisdom or Oxymoron?, *School of Social Science, Institute for Advanced Study, Research Associate and Lecturer, University Center for Human Values,* Princeton University.

Norton, K., Gudergan, S. P. and Young, L. (2004) *Beyond Exchange: The Commitment-Trust Theory Revisited*, University of Technology, Sydney, assessed December 1, 2006 http://130.195.95.71:8081/WWW/ANZMAC2004/CDsite/papers/Norton1.

Noulas, A. G. (2001) Deregulation and Operating Efficiency: The Case of the Greek Banks, *Managerial Finance*, **27**, 8, pp. 35-47.

Noulas, A. G. (2001) Deregulation and Operating Efficiency: The Case of the Greek Banks, *Managerial Finance*, **27**, 8, pp. 35-47.

Nunnally, J. C. (1978) *Psychometric Theory,* 2nd Ed. New York: McGraw-Hill.

Nunnally, J. C. and Bernstein, I. H. (1994) *Psychometric Theory,* McGraw-Hill, New York, NY.

O'Cass, A. (2000) An Assessment of Consumer Product, Purchase Decision, Advertising and Consumption Involvement in Fashion Clothing, J*ournal of Economic Psychology,* **21**, pp. 545-576.

O'Cass, A. and Julian, C. (2003) Examining Firm and Environmental Influences on Export Marketing Mix Strategy and Export Performance of Australian Exporters, *European Journal of Marketing,* **37**, 2.4, pp. 366-384.

Okazaki, S. (2006) What Do We Know About Mobile Internet Adopters? A Cluster Analysis, *Information and Management,* **43**, 2 (March), pp. 127-141.

Oliva, T. A., Oliver, R. L., and Bearden, W. O. (1995) The Relationship among Consumer Satisfaction, Involvement, and Product Performance, *Behavioural Science*, **40**, 4, pp. 104-132.

Oliva, T. A., Oliver, R. L., and Lan, C. M. (1992) A Catastrophe Model for Developing Service Satisfaction Strategies, *Journal of Marketing*, **56**, 3, pp. 83-95.

Oliver, R. L. (1980) A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions, *Journal of Marketing Research,* **17**, 4, pp. 460-469.

Oliver, R. L. (1993) Cognitive, Affective, and Attribute Bases of the Satisfaction Response, *Journal of Consumer Research,* **20**, 3, pp. 495-507.

Oliver, R. L. (1997) *Satisfaction: A Behavioral Perspective on the Consumer,* The McGrawHill Companies. Inc., New York.

Oliver, R. L. (1999) Whence Consumer Loyalty? *Journal of Marketing,* **63**, 4, pp. 33-44.

Oliver, R. L. and Svan, J. E. (1989) Equity and Disconfirmation Perceptions as Influences on Merchant and Product Satisfaction, *Journal of Consumer Research*, **14**, 3, pp. 495-507.

Papadopoulou, P., Andreou, A., Kanellis, P. and Martakos, D. (2001) Trust and Relationship Building in Electronic Commerce, *Internet Research: Electronic Networking Applications and Policy,* **11**, 4, pp. 322-332.

Patterson, P. G., Johnson, L. W., and Spreng, R. A. (1997) Modeling the Determinants of Customer Satisfaction for Business-to-Business Professional Services, *Journal of the Academy of Marketing Science*, **25**, 1, pp. 4-17.

Paulin, M., Perrien, J., Ferguson, R.J., Salazar, A. M. A., and Seruya, L. M. (1998) Relational Norms and Client Retention: External Effectiveness of Commercial Banking in Canada and Mexico, *International Journal of Bank Marketing,* **16**, 1, pp. 24-31.

Pels, J. (1999) Exchange Relationships in Consumer Markets? *European Journal of Marketing*, **33**, 1/2, pp. 19-37.

Peppers, D. and Rogers, M. (1993) *The One to One Future: Building Relationships One Customer at a Time*, Doubleday: New York, NY.

Peppers, D. and Rogers, M. (1997) *Enterprise One-to-One, Tools for Competing in the Interactive Age,* Currency Doubleday: New York, NY.

Perumal, V. and Shanmugam, B. (2004) Internet Banking: Boon Or Bane? *Journal of Internet Banking and Commerce*, **4**, 3, pp. 1-6.

Peterson, R. A., Balasubramanian, S. A., and Bronnenberg, B. J. (1997) Exploring the Implications of the Internet for Consumer Marketing, *Journal of the Academy of Marketing Science*, **25**, 4, pp. 329-346.

Petro, T. M. (1990) Profitability: The Fifth 'P' of Marketing, *Bank Marketing*, **9**, pp. 48-52.

Pettit, P. (1995) The Cunning of Trust, *Philosophy and Public Affairs,* **24**, 3, pp. 202-225.

Pikkarainen, K. Pikkarainen, T, Karjaluoto, H. and Pahnila, S. (2006) The Measurement of End-user Computing Satisfaction of Online Banking Services: Empirical Evidence from Finland, *The International Journal of Bank Marketing,* **24**, 3, pp.158-168.

Pinsonneault, A. and Kraemer, K. L. (1993) Survey Research Methodology in Management Information Systems: An Assessment, *Journal of Management, Information System,* **10**, 2, pp. 75-105.

Porter, M. E. (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, New York: The Free Press.

Prendergast, G. and Marr, N. (1994) Towards a Branchless Banking Society?, *International Journal of Bank Marketing,* **22**, 2, pp. 18-26.

Pritchard, M. P., Havitz, Mark E., and Howard, D. R. (1999) Analyzing The Commitment-loyalty Link in Service Contexts, *Journal of the Academy of Marketing Science,* **27**, 3, pp. 333-348.

Quelch, J. A. and Klein, L. R. (1996) The Internet and International Marketing, *Sloan Management Review*, **37**, 1, pp. 60-75.

Raimondo, M. A. (2000) The Measurement of Trust in Marketing Studies: A Review of Models and Methodologies, *IMP Conference Papers*, Bath University, Bath.

Ranaweera, C. and Prabhu, J. (2003a) The Influence of Satisfaction, Trust and Switching Barriers on Customer Retention in a Continuous Purchasing Setting, *International Journal of Service Industry Management*, **14**, 4, pp. 374-395.

Ranaweera, C. and Prabhu, J. (2003b) On the Relative Importance of Customer Satisfaction and Trust as determinants of Customer Retention and Positive Word of Mouth, *Journal of Targeting, Measurement and Analysis for Marketing,* **12**, 1, pp. 82.

Ranaweera, C., McDougall, G. and Hansal, H. (2004) *A Model of Online Customer Behavior: Moderating Effects of Customer Characteristics,* Wilfred Laurier Univeristy, Waterloo, Canada.

Ratnasingham, P. (1998) The Importance of Trust in Electronic Commerce, *Internet Research*, **8**, 4, pp. 313-321.

Reichardt, C. S. and Coleman, S. C. (1995) The Criteria for Convergent and Discriminant Validity in a Multitrait-multimethod Matrix, *Multivariate Behavioral Research,* **30**, 4, pp. 513-538.

Reichheld, F. and Schefter, P. (2000) E-Loyalty: Your Secret Weapon on the Web, *Harvard Business Review,* **78**, 4, 105-114.

Reichheld, F. F. (1993) Loyalty-Based Management, *Harvard Business Review*, **71**, 2, pp. 64-73.

Reichheld, F. F. (1996) The Loyalty Effect: The Hidden Force behind Growth, Profits, and Lasting Value, *Harvard Business School Press,* Boston, MA.

Reichheld, F. F. and Sasser, W. E. (1990) Zero Defections: Quality Comes to Services, *Harvard Business Review*, **68**, 5, pp. 105-111.

Reinhartz, W. and Kumar, V. (2000) On the Profitability of Long-life Customers in a Non-contractual Setting: An Empirical Investigation and Implications for Marketing, *Journal of Marketing,* **64**, pp. 17-35.

Rempel, J. K., Homes, J. G. and Zanna, M. P. (1985) Trust In Close Relationships, *Journal of Personality and Social Psychology,* **49**, 1, pp. 95-112.

Robinson, E. (2000), Click and Cover, *Business*, 2nd Ed., pp. 168-180.

Rogers, E. M. (1995) *The Diffusion of Innovations,* 4th ed., The Free Press, New York.

Rogerson, S., Foley, P., and Jayawardhena, C. (1999) Conference Proceedings: Is Electronic Commerce a Socially Beneficial Activity?, *the Exploring Cyber Society Conference*, Newcastle, UK.

Rotter, J. B. (1967) A New Scale for The Measurement Of Interpersonal Trust, J*ournal of Personality,* **35**, 4, pp. 651-665.

Rucci, A. J., Kim, S. P. and Quinn, R. T. (1998) The Employee-Customer Profit Chain at SEARS, *Harvard Business Review,* **76**, 1, pp. 82-98.

Runyon, K. E. and Stewart, D. E. (1987) *Consumer Behaviour and the Practice of Marketing*, Merrill Publishing Company.

Rush, L. (2004) E-Commerce Growth Spurred by Maturation, accessed April 23, 2006 http://www.clickz.com.

Rust, R. T. and Zahorik, A. J. (1993) Customer Satisfaction, Customer Retention, and Market Share, *Journal of Retailing*, **69**, 2, pp. 193-215.

Sathye, M. (1999) Adoption of Internet Banking by Australian Consumers: An Empirical Investigation, *The International Journal of Bank Marketing*, **17**, 7, pp. 324-334.

Schneider, B. and Bowen, D. (1999) Understanding Customer Delight and Outrage, *Sloan Management Review*, Fall, pp. 35-45.

Seipp, M. (2000) Thesis Paper: Exploring Emerging Market Models in the Financial Industry, *Part of the Seminar in Information Management: Advanced Topics,* European Business School.

Sekaran, U. (2000) *Research Methods for Business*, John Wiley & Sons, United States of America, pp.28-35, 296.

Selnes, F. (1998) Antecedent and Consequences of Trust and Satisfaction in Buyer-Seller Relationships, *European Journal of Marketing,* **32**, 3/4, pp. 305-322.

Severin, V., Louviere, J. J. and Finn, A. (2001) The Stability of Retail Shopping Choices Over Time and Across Countries, *Journal of Retailing,* **77**, 2, pp. 185-202.

Seybold, P. (2001) Loyalty Incentives, *Executive Excellence*, July, 15.

Shankar, V., Urban, G. and Sultan, F. (2002) Online Trust: A Stakeholder Perspective, Concepts, Implications, and Future Directions, *Journal of Strategic Information Systems,* **11**, pp. 325-344.

Sarkar, M. B., Echambadi, R. and Cavusgil, S. T. and Aulakh, P. S. (2001) The Influence of Complementarity, Compatibility, and Relationship Capital on Alliance Performance, *Journal of the Academy of Marketing Science*, **29**, 4, pp. 358-373.

Shannon, D. and Davenport, M. (2001) *Using SPSS to Solve Statistical Problems: A Self-Instruction Guide,* Merrill Prentice Hall.

Shapiro, B. P., Rangan, V. K., Moriarty, R. T., and Roos E. B. (1987) Manage Customers for Profits (Not Just Sales), *Harvard Business Review,* **65**, 5, pp.101-108.

Sharma, N. and Patterson, P. G. (2000) Switching Costs, Alternative Attractiveness and Experience as Moderators of Relationship Commitment in Professional, Consumer Services, *International Journal of Service Industry Management,* **11**, 5, pp. 470-490.

Sharma, N., Patterson. P., Cicic, M. and Dawes, P. (1997) Conference Proceedings: A Contingency Model of Relationship Commitment for Professional Consumer Services, *the 24th European Marketing Academy Conference*, pp. 2026-2037.

Sheaves, D. E. and Barnes, J. G. (1996) The Fundamental of Relationships: An Exploration of the Concept to Guide Marketing Implementation in *Advances in Services Marketing and Management* (Eds, Swartz, T.A., Bowen, D. E. and Brown, S. W.), **5**.

Shernwell, D. J., Cronin, J. J. and Bullard, W. R. (1994) Relational Exchange in Services: An Empirical Investigation of Ongoing Customer Service Provider Relationships, *International Journal of Service Industry Management*, **5**, 3, pp. 57-68.

Sheshunoff, A. (2000) Internet Banking - An Update from the Frontlines, *ABA Banking Journal,* **92**, 1, pp. 51-55.

Shneiderman, B. (2000) Universal Usability, Association for Computing Machinery, *Communications of the ACM,* **43**, 5, pp. 84-91.

Silos, I. M. (1999) Employee Involvement: a Component of Total Quality Management, *Production and Inventory Management Journal,* **40**, 1, pp. 56-65.

Silverman, D. (1994) *Interpreting Qualitative Data*, Sage.

Simmel, G. (1964) *The Sociology of Georg Simmel,* Free Press, New York.

Singh, J. and Sirdeshumukh, D. (2000) Agency and Trust Mechanism in Consumer Satisfaction and Loyalty Judgments, *Journal of the Academy of Marketing Science,* **28**, 1, pp. 150-167.

Slywotsky, A. J. and Shapiro, B. P. (1993) Leveraging to Beat the Odds: The New Marketing Mind-Set, *Harvard Business Review*, **71**, 4, pp. 97-107.

Speed, R. and Smith, G. (1991) Retail Financial Services Segmentation, *Service Industries Journal,* **12**, 3, July, pp. 368-383.

Spiegel, J., Gart, A., and Gart, S. (1996) *Banking Redefined: How Superregional Powerhouses are Reshaping Financial Services,* Irwin, Chicago: IL.

Stanley, T. J. (1984) Investment Management and the Affluent Customer, *The Bankers Magazine,* **167**, 2, pp. 50-55.

Stevens, S. S. (1951) Mathematics, Measurement and Psychophysics in Handbook of Experimental Psychology (Ed, Stevens, S. S.), New York: Wiley, 1968, Quoted in *Reliability and Validity Assessment,* Carmines, E. G. and Zeller, R. A. (1979), Beverly Hills: Sage Publications.

Stewart, K. J. (1999) Transference As A Means Of Building Trust In World Wide Web Sites, in *The 20th International Conference on Information Systems (ICIS) Conference*, Charlotte, North Carolina, US.

Storbacka, K., Strandvik, T. and Grönroos, C. (1994) Managing Customer Relationships for Profit: The Dynamics of Relationship Quality, *International Journal of Service Industry Management*, **5**, 5, pp. 21-38.

Strauss, B. and Friege, C. (1999) Regaining Service Customers: Costs and Benefits of Regain Management, *Journal of Service Research,* **1**, 4, pp. 347-361.

Sultan, F. and Henrichs, R. B. (2000) Consumer Preferences for Internet Services Over Time: Initial Explorations!, *Journal of Consumer Marketing,* **17**, 5, pp. 386-402.

Sultan, F., and Morraj, H. A. (2001) Design a Trust-based e-business Strategy, *Marketing Management*, **10**, 4, pp. 40-46.

Swan, J. E. (1988) Consumer Satisfaction Related to Disconfirmation of Expectations and Product Performance, *Journal of Consumer Satisfaction Dissatisfaction, and Complaining Behavior,* **1**, pp. 40-47.

Swan, J. E. and Trawick, I. F. (1981) Disconfirmation of Expectations and Satisfaction with a Retail Service, *Journal of Retailing,* **57**, Fall, pp. 49-67.

Szymanski, D. M. and Henard, D. H. (2001) Customer Satisfaction: A Meta-Analysis of the Empirical Evidence, *Journal of the Academy of Marketing Science*, **29**, 1, pp. 16-35.

Thatcher, J. B. and George, J. F. (2004) Commitment, Trust, and Social Involvement: An Exploratory Study of Antecedents to Web Shopper Loyalty, *Journal of Organisational Computing and Electronic Commerce*, **14**, 4, pp. 243-268.

The Economist (2004) E-Commerce: Shopping Around the World, *The Economist,* 26 February, pp. 5-54.

Tilden, M. (1996), Channel Vision, *Retail Banker International*, **28**, pp. 12-15.

Trethowan, J. and Scullion, G. (1997), Strategic Responses to Change in Retail Banking in the UK, *International Journal of Bank Marketing,* **15**, 2, pp. 60-68.

Tuchila, R. (2000) *Servicii Bancare Prin Internet,* E-finance Romania.

Urban, G. L., Sultan, F. and Qualls, W. J. (2000) Placing Trust at the Centre of Your Internet Strategy, *Sloan Management Review,* **42**, 1, pp. 39-48.

Vatanasombut, B., Stylianou, A. C. and Igbaria, M. (2004) How To Retain Online Customers, *Communications of the ACM*, **47**, 6, pp. 65-69.

Vavra, T. G. (1995) *After-marketing: How to Keep Customers for Life through Relationship Marketing*, Chicago: Irwin.

Wah, L. (1999) Banking on the Internet, *American Management Association*, **88,** 11, pp. 44-48.

Waite, N. (2001), New Entrants in the Financial Services Sector: The Case of Kwik-Fit Insurance Services, *International Journal of Bank Marketing,* **19**, 5, pp. 213-216.

Walsh, D. (1983) Banking on Demographics, *American Demographics*, **5**, 6, pp. 40-41.

Wang, P. and Splegel, T. (1994) Database Marketing and Its Measurements of Success: Designing a Managerial Instrument to Calculate the Value of a Repeat Customer Base, *Journal of Direct Marketing*, **8**, 2, pp. 73-84.

Wayland, R. E. and Cole, P. M. (1997) Customer Connections: New Strategies for Growth, *Harvard Business School Press*, Massachusetts.

Wendel, C. B. (1993) Meeting the Nonbank Challenge, *The Bankers Magazine*, **3-4**, pp. 12-19.

Werts, C. E., Linn, R. L. and Joreskog, K. G. (1974) Intraclass Reliability Estimates: Testing Structural Assumptions, *Educational and Psychological Measurement,* **34**, 1, pp. 25-33.

Westbrook, R. A. and Oliver, R. L. (1981), Developing Better Measures of Consumer Satisfaction: Some Preliminary Results, in *Advances in Consumer Research (*Ed, Monroe K. B.), **8**, pp. 94-99.

Wetsch, L. R. and Cunningham, P. H. (1999) *Measuring Determinants of Trust and Their Effects on Buying Intention for Online Purchase Decisions*, Working Paper, in Komiak, S. X., Benbasat, I. (2004) Understanding Customer Trust in Agent-mediated Electronic Commerce, Web-Mediated Electronic Commerce, and Traditional Commerce, *Information Technology and Management*, **5**, pp. 181-207.

Wetzels, M., de Ruyter, D. and Lemmink, J. (2000) Antecedents and Consequences of Servie Quality in Business-to-Business Services, in *Handbook of Services Marketing and Management* (Eds, Swartz T. A. and Iacobucci, D), Thousand Oaks, CA: Sage, pp. 343-356.

Wetzels, M., deRuyter, K. and van Birgelen, M. (1998) Marketing Service Relationships: The Role of Commitment, *Journal of Business & Industrial Marketing,* **13**, 4/5, pp. 406-423.

White, C. J., Varadarajan, R. P. and Dacin, P. A. (2003) Market Situation Interpretation and Response: The Role of Cognitive Style, Organisational Culture and Information Use, *Journal of Marketing,* **67**, 3 (July), pp. 63-79.

Wikipedia, (2006) *Online Banking/Internet Banks,* assessed August 25, 2006 http://infoscouts.com/finance/onlinebanking2.htm.

Wilson, D. T. and Mummalaneni, V. (1990) B*uyer-Seller Relationships as a Bonding Process: A Preliminary Conceptualization,* The Pennsylvania State University.

Wilson, D. T., Soni, P.K. and O'Keeffe, M. (1995) Modelling Customer Retention as a Relationship Problem, Pennsylvania: *Institute for the Study of Business Markets, Research Report* **13**.

Wirtz, B. and Lihotzky, N. (2003) Customer Retention Management in the B2C Electronic Business, *Long Range Planning*, **36,** 6 (December), pp. 517-532.

Wold, H. (1989) Introduction to the Second Generation of Multivariate Analysis, in *Theoretical Empiricism* (Ed, Wold, H.), NY: Paragon House, pp. vii-xl.

Wolfinbarger, M. and Gilly, M. C. (2003) eTailQ: Dimensionalizing, Measuring and Predicting E-tail Quality, *Journal of Retailing,* **79**, pp. 183-198.

Wong, A. (2004) The Role of Emotional Satisfaction in Service Encounters, *Managing Service Quality,* **14**, 5, p. 365-380.

Woodruff, R. B. (1997) Customer Value: The Next Source for Competitive Advantage, *Journal of the Academy of Marketing Science*, **25,** 2, pp. 139-53.

Woodruff, R. B., Cadotte, E. R., and Jenkins, R. L. (1983) Modeling Consumer Satisfaction Processes Using Experience-Based Norms, J*ournal of Marketing Research,* **20**, pp. 296-304.

Yen, H. J. R. and Gwinner, K. P. (2003) Internet Retail Customer Loyalty: The Mediating Role of Relational Benefits, *International Journal of Service Industry Management,* **14**, 5, pp. 483-501.

Yi, Y. (1990) A Critical Review of Customer Satisfaction*, American Marketing Association*, Chicago, IL.

Zeithaml, V. A., Berry, L. L., and Parasuraman, A. (1996) The Behavioural Consequences of Service Quality, *Journal of Marketing,* **60**, 4, pp. 31-46.

APPENDICES

Appendix I Survey Questionnaire of This Study

The UNIVERSITY of NEWCASTLE
AUSTRALIA

The University of Newcastle
Faculty of Business and Law

University Drive
Callaghan NSW Australia 2308

For further information:
Supervisor: Associate Professor SIVA MUTHALY
Tel: +61 3 9859 4273
Fax:+61 3 9859 4273
Email: siva.muthaly@newcastle.edu.au

1 September 2006

A Study of Internet Banking
Among Hong Kong Business Practitioners and Professionals

SURVEY INFORMATION SHEET

Dear Potential Participant,

I am Yau Suk Ching Eppie, a student in the faculty of Business and Law at the University of Newcastle, Australia undertaking Doctorate of Business Administration (DBA). As part of my studies, I am conducting a research project titled 'A Study of Internet Banking Among Hong Kong Business Practitioners and Professionals'. You are invited to take part in this research project which examines the factors affecting Internet banking among business practitioners and professionals.

You are invited to participate in this research and this will involve:
- Completing an anonymous survey which will take approximately 15 minutes of your time.
- Return the survey to the distributor/sender. This will be taken as your informed consent to participate.

All information of this study will be treated strictly confidential. All respondents will remain anonymous to safeguard their privacy. By no means and at no time, will any participants be identified in any reports, other than this one, both during the course of and following this study. The data will not be used in other research in the future. Once the data has been analysed and the study completed, all printed completed questionnaires will be destroyed through shredding and the computer file deleted.

Participation is **entirely voluntary.** You can withdraw at any time and there will be no disadvantage if you decide not to complete the survey. All information collected will be confidential. All information gathered from the survey will be stored securely and once the information has been analysed all questionnaires will be destroyed. At no time will any individual be identified in any reports resulting from this study.

If you have any concerns or would like to know the outcome of this project, please contact my supervisor (Dr Siva Muthaly) at the above address.

Thank you for you interest,

Complaints Clause:
This project has been approved by the University's Human Research Ethics Committee, Approval No. Bus-Law –
[insert approval number when known).

The University requires that should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, telephone (02 49216333, email HumanEthics@newcastle.edu.au)

1

Survey Questionnaire

A STUDY OF INTERNET BANKING
AMONG HONG KONG BUSINESS PRACTITIONERS AND PROFESSIONALS

Part I: Perception of your Internet banking service

Please rate the extent of your perception concerning **the Internet banking service of your bank** by ticking in the box ☑ to indicate your answers to Questions 1-10.

		Strongly agree **7**	Agree **6**	Slightly agree **5**	Neutral **4**	Slightly disagree **3**	Disagree **2**	Strongly disagree **1**
Q1	I am very satisfied with my choice of the Internet banking service of my bank.	☐	☐	☐	☐	☐	☐	☐
Q2	I feel good about my decision to choose this bank with regards to its Internet banking service.	☐	☐	☐	☐	☐	☐	☐
Q3	It is a wise decision to carry out Internet banking at my bank.	☐	☐	☐	☐	☐	☐	☐
Q4	Internet banking at my bank has really pleased me.	☐	☐	☐	☐	☐	☐	☐
Q5	If I had to do it all over again, I would choose the same Internet banking service of my bank.	☐	☐	☐	☐	☐	☐	☐
Q6	I would probably be happy with the Internet banking services of another bank.	☐	☐	☐	☐	☐	☐	☐
Q7	I would be willing to pay a higher price for using the Internet banking service of my bank over other banks.	☐	☐	☐	☐	☐	☐	☐
Q8	In the future I will continue to carry out Internet banking at my bank.	☐	☐	☐	☐	☐	☐	☐
Q9	In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.	☐	☐	☐	☐	☐	☐	☐
Q10	I feel a sense of loyalty to my bank with regards to its Internet banking service.	☐	☐	☐	☐	☐	☐	☐

Please rate the extent of your perception concerning **your bank with regards to its Internet banking service** by ticking in the box ☑ to indicate your answers to Questions 11-20.

		Strongly agree 7	Agree 6	Slightly agree 5	Neutral 4	Slightly disagree 3	Disagree 2	Strongly disagree 1
Q11	I have confidence that my bank provides the best Internet banking service.	☐	☐	☐	☐	☐	☐	☐
Q12	I find it necessary to be cautious in dealing with my bank.	☐	☐	☐	☐	☐	☐	☐
Q13	My bank holds me in high regard as a customer.	☐	☐	☐	☐	☐	☐	☐
Q14	My bank can be relied upon to keep their promises and service pledge.	☐	☐	☐	☐	☐	☐	☐
Q15	I trust this bank.	☐	☐	☐	☐	☐	☐	☐
Q16	My bank is interested in my satisfaction.	☐	☐	☐	☐	☐	☐	☐
Q17	I am always on the lookout for an alternative bank.	☐	☐	☐	☐	☐	☐	☐
Q18	I feel like there is a 'bond' between my bank and myself.	☐	☐	☐	☐	☐	☐	☐
Q19	I am very committed to my relationship with my bank.	☐	☐	☐	☐	☐	☐	☐
Q20	I should put maximum effort to maintain the relationship with my present bank.	☐	☐	☐	☐	☐	☐	☐

Part II: Personal Data

Please **tick in the box** ☑ or **fill in the blank** to indicate your answer for Questions 21-27.

Q21 What is your gender?

1 ☐ Male

2 ☐ Female

Q22 What is your marital status:

1 ☐ single
2 ☐ married
3 ☐ divorced
4 ☐ separated
5 ☐ widowed
6 ☐ none of the above (please specify: ________________________)

Q23 Which age group do you fall into?

1 ☐ 20 or under
2 ☐ 21-30
3 ☐ 31-40
4 ☐ 41-50
5 ☐ 51-60
6 ☐ 61-65
7 ☐ over 65

Q24 What is your highest education level?

1 ☐ Primary or below
2 ☐ Secondary
3 ☐ Post-secondary
4 ☐ University
5 ☐ Postgraduate or above

Q25 Which monthly income range do you fall into?

1 ☐ HK$10,000 or below
2 ☐ HK$10,001 – HK$20,000
3 ☐ HK$20,001 – HK$30,000
4 ☐ HK$30,001 – HK$40,000
5 ☐ HK$40,001 – HK$50,000
6 ☐ HK$50,001 or above

Q26 How long have you been working? ______________ years

Q27 What is your occupation? ______________________________________

End of Questionnaire

Thank you very much for your time!

Appendix II Established Source for the Questionnaire

Constructs	Questions	Established Source
Satisfaction Q1	• *I am very satisfied with my current choice of financial advisor.* • I am very satisfied with my choice of the internet banking service of my bank.	Sharma and Patterson, 2000
Satisfaction Q2	• *I feel good about my decision to choose this advisor.* • I feel good about my decision to choose this bank with regards to its Internet banking service.	Sharma and Patterson, 2000
Satisfaction Q3	• *It was a wise decision to carry out electronic banking at Easybank.* • It was a wise decision to carry out Internet banking at my bank.	Oliver and Svan, 1989
Satisfaction Q4	• *Electronic banking at Easybank has really pleased me.* • Internet banking at my bank has really pleased me.	Oliver and Svan, 1989
Retention Q5	• *If I had to do it all over again, I would choose the same adviser.* • If I had to do it all over again, I would choose the same Internet banking service of my bank.	Sharma and Patterson, 2000
Satisfaction Q6	• *I would probably be happy with the products and services of another bank. (Reverse Coded)* • I would probably be happy with the Internet banking services of another bank. (Reverse Coded)	Jones, Mothersbaugh and Beatty, 2000
Commitment Q7	• *I would be willing to pay a higher price for this brand over other brands.* • I would be willing to pay a higher price for using the Internet banking service of my bank over other banks.	Chaudhuri and Holbrook, 2001
Retention Q8	• *In the future I will continue to carry out electronic banking at Easybank.* • In the future I will continue to carry out Internet banking at my bank.	Homburg and Giering, 2001
Retention Q9	• *In the future I will continue to recommend Easybank to my friends and acquaintances.* • In the future I will continue to recommend the Internet banking service of my bank to my friends and acquaintances.	Homburg and Giering, 2001

Commitment Q10	• *I feel a sense of loyalty to my main bank.* • I feel a sense of loyalty to my bank with regards to its Internet banking service.	Colgate and Lang, 2001
Trust Q11	• *I have confidence that my bank provides the best deal.* • I have confidence that my bank provides the best Internet banking service.	Colgate and Lang, 2001
Trust Q12	• *I find it necessary to be cautious in dealing with my adviser. (Revise Coded)* • I find it necessary to be cautious in dealing with my bank. (Reverse Coded)	Sharma and Patterson, 2000
Trust Q13	• *Easybank holds me in high regard as a customer of its product.* • My bank holds me in high regard as a customer.	Delgado-Ballester and Munuera-Alemán, 2001
Trust Q14	• *My adviser can be relied upon to keep his promises.* • My bank can be relied upon to keep their promises and service pledge.	Sharma and Patterson, 2000
Trust Q15	• *I trust this brand.* • I trust this bank.	Chaudhuri and Holbrook, 2001
Trust Q16	• *Easybank is interested in my satisfaction.* • My bank is interested in my satisfaction.	Delgado-Ballester and Munuera-Alemán, 2001
Commitment Q17	• *I am always on the lookout for an alternative adviser. (Reverse Coded)* • I am always on the lookout for an alternative bank. (Reverse Coded)	Sharma and Patterson, 2000
Commitment Q18	• *I feel like there is a 'bond' between at least one employee at this bank and myself.* • I feel like there is a 'bond' between my bank and myself.	Jones, Mothersbaugh and Beatty, 2000
Commitment Q19	• *I am very committed to my relationship with my advisor.* • I am very committed to my relationship with my bank.	Sharma and Patterson, 2000
Commitment Q20	• *I should put maximum effort to maintain the relationship with my present advisor.* • I should put maximum effort to maintain the relationship with my present bank.	Sharma and Patterson, 2000

Remarks: Fonts in italics = established source
Fonts in regular = modified version
Fonts underlined = wording being modified