

UNIVERSITI TEKNOLOGI MARA

**THE RELATIVE IMPORTANCE OF TRUST AND
USABLE WEBSITE DESIGN IN BUILDING E-
LOYALTY INTENTION ON INTERNET BANKING:
A CASE OF MAYBANK2U.COM**

NOR AZIATI ABDUL HAMID

**Thesis is submitted in partial fulfillment of requirements
for the degree of
Master of Science**

Faculty of Information Technology and Quantitative Sciences

November 2005

ABSTRACT

In e-commerce, loyal customers are considered extremely valuable. The high cost of attracting new customers on the Internet and the relative difficulty in retaining them make customer loyalty an essential asset for many banks. Since online transactions involve many uncertainties for the customer and most of the Internet banking offers the same product as the other competitor, it is crucial for banks to recognize the key factor that can tie their existing customer become a loyal customer and change the web surfers into purchaser. Despite of increasing usage of Internet Shopping and banking, the literature only portray little effort of empirical research has addressed the role of quality Internet websites design and customer online trust in forming consumers' intentions to revisits or repurchase particular products or at particular banks within the context of customer relationship management. This empirical study was performed to measure relative importance of two different factor that is most cited as a critical success factor for e-commerce environment; usable website design and trust elements on the website. The study specifically focuses on Maybank2u.com users and sample for the study was drawn among academicians and students of three different faculties in **UiTM** Shah Alam. The results of the empirical analysis confirmed that the trust of the user increases when the user perceived that the website was usable and that there was a consequent increase in the degree of website loyalty.

Candidate's Declaration

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledge as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

In the event that my thesis be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and be subjected to the disciplinary rules and Universiti Teknologi MARA.

Candidate's Name : NOR AZIATI BINTI ABDULHAMID

Candidate's Signiture :

Date : 23 November 2005



ACKNOWLEDGEMENT

It is with great relief that I finally write this thesis, and with a lot of gratitude to those that have helped me reach this point. The work presented in this study was done during January 2005 till November 2005 at **Universiti Teknologi Mara (UITM)**, Shah Alam. I spent almost one year in this study. During this period, I got deeper knowledge of how to maintain online customer loyalty (e-loyalty) through website especially in Internet banking environment.

This study would not exist without the help of my thesis supervisor, **Prof. Dr. Noor Laila Md Noor**. She inspired me to embark on my journey and has given me invaluable support throughout the process. I am greatly indebted for all the hours she spent reading my texts, give recommendations for me, or helping me in other ways. I greatly appreciate her expertise both in my field of research and concerning research methods. She always took time to help me; even she did not have the time.

It has been an honor to have **Prof. Dr. Yap Bee Wah** from **Faculty of Information Technology and Science Quantitative (UITM)** and **En Azme Khamis**, from **Kolej Universiti Teknologi Tun Hussein Onn (KUITTHO)** as the statistical examiner for my data analysis process and I thank him for taking time to help me get used with mathematical concept and helping me to interpret the data. I also want to extend my warmest thanks to **Puan Mardziah Hj Hashim** for reading and commenting my work at master's viva. You took a massive task when accepting to comment and your comments greatly helped me finalize my thesis. And then, I still have to thank the people who provide data and information through e-mail, even though I don't know their name, they still gave their help to me in accomplishing my journey.

I do not think that I would have written this thesis if I had not felt the strong support of my parents and family. I especially want to thank my mum, **Hjh. Rogaiyah Hj. Abdul Rahim**, my beloved husband, **Roslan Amat Zainal** and my cute little baby, **Siti Sarah Roslan**. To all my brothers; you're the greatest brothers I ever have. I sincerely apologize for the sacrifice that all of you have done to me. With all my heart, I thank you for all your love, support and especially for bringing such harmony to my life.

UITM, November 2005

Nor Aziati Binti Abdul Hamid

TABLE OF CONTENTS

TABLE OF CONTENTS	PAGE
TITLE PAGE	
ABSTRACT	i
ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	xi
CHAPTER ONE: INTRODUCTION	
1.0 Introduction	1
1.1 Background of The Research	1
1.2 The Problem Statement	5
1.3 Research Objectives	9
1.4 Research Questions	9
1.5 Research Scope	9
1.6 Significance of The Research	11
1.7 Limitations of The Research	11
1.8 Contribution of Research	12
1.9 Organization of The Research Paper	13
CHAPTER TWO: LITERATURE REVIEW	
2.0 Introduction	15
2.1 Earning the Loyalty of Banking Customer	15
2.2 Theoretical Consideration	15
2.2.1 Trust and E-Loyalty	17
2.2.1.1 Model of Commitment-Trust Theory for Relationship Marketing	18
2.2.2 DeLone and McLean's Model of Information System	20

Success	
2.2.3 Theory of Behavior and Attitude	22
2.2.3.1 Theory of Reasoned Action (TRA)	22
2.2.3.2 Theory of Planned Behavior (TPB)	23
2.3 Internet Banking-An Overview	25
2.3.1 The benefits of Internet banking for banks	26
2.3.2 Benefits for customers	27
2.4 Factors Known to Affect Adoption of Internet Banking Activities	28
2.5 Internet Banking Scenario in Malaysia	32
2.5.1 About Maybank	34
2.6 Research on Customer Loyalty	37
2.6.1 Conceptualizing loyalty as a combination of behavior and attitudes	38
2.6.2 E-Loyalty: Customer Loyalty on The Internet	42
2.6.3 Loyalty Antecedents	44
2.7 Web and Technology	52
2.7.1 Influence of Website Design And Loyalty	54
2.7.2 Website Usability	57
2.7.2.1 Usability Definitions	59
2.7.2.2 Usable Website Design and E-Loyalty	63
2.7.2.3 Mapping of Usability Attributes with DeLone and McLean's Model	65

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction	72
3.1 Research Purpose	72
3.2 Research Approach	73
3.2.1 Conceptualization of E-Loyalty Model	74
3.3 Research Design	77
3.3.1 Sample Selection	78
3.3.2 Research Model and Hypotheses	79
3.3.2.1 Measurements and Constructs	80

3.4	Sampling Technique	82
3.4.1	Convenience Sampling	83
3.4.2	Sampling Size for Factor Analysis	84
3.5	Data Collection Method	86
3.5.1	Data Collection Instrument	88
3.5.2	Instrument Pilot Test	90
3.6	Project Scheduling	90

CHAPTER FOUR: DATA ANALYSIS AND DISUSSION OF FINDINGS

4.0	Introduction	91
4.1	Return Rate for the Survey	91
4.2	Demographic Profile of Respondents	92
4.3	Internet Banking Usage	93
4.3.1	Genders versus Customer of other Banks and Internet Banking	93
4.3.2	Respondents Age versus Customer of other Banks and Internet banking	95
4.3.3	Respondents Monthly Income versus Customer of other Banks and Internet Banking	96
4.3.4	Respondents Sign Up	97
4.3.5	Respondents Internet Banking Usage Frequency	100
4.3.6	Respondents Repatronize and Revisit Behavior	102
4.3.7	Products or services used by respondents	105
4.3.8	Online Loyalty Through Website	108
4.4	Reliability and Validity of Measurement	109
4.5	Preliminary Analysis	111
4.5.1	Correlation Matrix	111
4.5.2	Sampling Adequacy	112
4.6	Nonparametric Correlation	113
4.7	Factor Analysis	113
4.7.1	Communalities	115

4.7.2	Factor Extraction for Usability and Trust Constructs	116
4.7.3	Factor Extraction for E-Loyalty Constructs	121
4.7.4	Results of Hypothesis Testing and Discussion of Findings	122
4.8	Implications	127
CHAPER FIVE: CONCLUSION AND RECOMMENDATIONS		
5.0	Introduction	130
5.1	Summary	130
5.2	Conclusions and Recommendations for Future Study	132
REFERENCES		134
APPENDICES		
Appendix A : Survey Questionnaire		
Appendix B : Project Planning		
Appendix C : Inter-Item Covariance Matrix		
Appendix D : Correlation Matrix		
Appendix E : Anti-Image Correlation		
Appendix F : Nonparametric Correlation		

LISTS OF TABLES

TABLES	PAGE
Table 2.0: E-commerce earnings in Malaysia for the year 1997-2004	34
Table 2.1: The differences between four stages model of loyalty proposed by Oliver (1997)	39
Table 2.2: Trust constructs; precursors and building processes	50
Table 2.3: Web design for enhancing relationship, revisit and loyalty	55
Table 2.4: Overview of usability definitions	60
Table 2.5: Mapping of Usability Attributes from Past Research to DeLone and McLean's Model	71
Table 3.0: Research Design	78
Table 3.1: Measurements and Constructs	81
Table 3.2: Current practice in Factor Analysis	85
Table 3.3: Data Collection Methods: Six Source of Evidence	87
Table 3.4: Contents of Research Questionnaire	89
Table 4.0: Demographic Profile	92
Table 4.1: Respondents gender versus customer of other banks and other Internet banking services	95
Table 4.2: Respondents age versus customer of other bank and Internet banking	96
Table 4.3: Respondents Monthly Income versus customer of other bank and Internet banking	96
Table 4.4: Respondents demographic profile versus Internet banking sign up	98
Table 4.5: Internet banking usage frequency	100
Table 4.6: Respondents repeat behavior	103
Table 4.7: Respondents Positive word-mouth	104

Table 4.8:	Total products used by customers	106
Table 4.9:	Respondent's sex versus Loyalty through ease of use and user friendly website Crosstabulation	108
Table 4.10:	Reliability Statistics (Usability Constructs)	109
Table 4.11:	Reliability Statistics (Trust Constructs)	109
Table 4.12:	Reliability Statistics of All Item Constructs	110
Table 4.13:	Item-Total Statistics	110
Table 4.14:	Inter-Item Covariance Matrix	Appendix C
Table 4.15:	Correlation Matrix	Appendix D
Table 4.16:	Anti-Image Correlation	Appendix E
Table 4.17:	KMO and Bartlett's Test	113
Table 4.18:	Nonparametric Correlation	Appendix F
Table 4.19:	Communalities	116
Table 4.20:	Total Variance Explained	117
Table 4.21:	Component Matrix	118
Table 4.22:	Rotated Component Matrix	118
Table 4.23:	Factor loadings of Usability and Trust Constructs	119
Table 4.24:	Factor Loadings for E-Loyalty Constructs	121
Table 4.25:	Variance Explained by Each Factor	123
Table 4.26:	Beta Coefficient of Multiple Regression Analysis	125
Table 4.27:	Hypothesized Relationships and Summary of the Results	126
Table 4.28:	Summarize Table of Usability, Trust and E-Loyalty Constructs	127

LISTS OF FIGURES

FIGURES	PAGE
Figure 2.0: The Morgan and Hunt Model of relationship marketing	19
Figure 2.1: The Reformulated IS Success	20
Figure 2.2: Theory of Reasoned Action (TRA)	23
Figure 2.3: Theory of Planned Behavior (TPB)	24
Figure 2.4: Snapshot of Personal Online Banking	36
Figure 2.5: Snapshot of Business Online Banking	37
Figure 2.6: Loyalty as a combination of relative attitude and behavioral loyalty	40
Figure 2.7: Key Component of Customer Satisfaction with Web Based Activities	45
Figure 2.8: Association between satisfaction and loyalty and relationship closeness	45
Figure 2.9: Typology of interrelated types of trust constructs	47
Figure 2.10: A Model of Trust in Online Relationship Banking	50
Figure 2.11: Low conversion rate on most e-commerce sites	57
Figure 3.0: Conceptual Framework of E-Loyalty	74
Figure 3.1: Proposed Research Model and Hypotheses	80
Figure 4.0: Respondent's age versus Maybank2u.com sign up	99
Figure 4.1: Respondent's monthly income	100
Figure 4.2: Respondent's monthly income versus Internet banking usage frequency	102
Figure 4.3: Bar Chart of positive word-mouth behavior by customer according to years of sign up	105
Figure 4.4: Products or services used by customers	107
Figure 4.5: Bar Chart of total products used by customer according to years of sign up	108
Figure 4.6: Component Plot in Rotated Space	115

Figure 4.7:	Results of Multiple Regression Analysis	123
Figure 4.8:	Conceptual Research Model and Hypotheses Results	126



LISTS OF ABBREVIATIONS

ABBREVIATIONS

AGFI	: Adjusted Goodness-of-Fit Index
ATMs	: Automated Teller Machines
AVE	: Average Variance Extracted
AVR	: Automated Voice Response
B2B	: Business To Business
B2C	: Business To Consumer
CSR	: Customer Service Representative
EFA	: Exploratory Factor Analysis
FAQs	: Frequently Asked Questions
GFI	: Goodness-of-Fit Index
HCI	: Human Computer Interaction
IB	: Internet Banking
IS	: Information System
IT	: Information Technology
KMO	: Kaiser-Meyer-Olkin
MSC	: Multimedia Super Corridor
PCA	: Principal Component Analysis
PEOU	: Perceived Ease of Use
PU	: Perceived Usefulness
SEM	: Structural Equation Model
TAM	: Technology Acceptance Model
TPB	: Theory of Planned Behavior
TRA	: Theory of Reasoned Action
UI	: User Interface
WWW	: World Wide Web

CHAPTER 1

INTRODUCTION

1.0 Introduction

Customer's loyalty has been an area of great interest for companies. The rapid development of technology and Internet has diverted company's direction to retain e-loyalty. Customer loyalty has a direct impact on the revenue and profitability of a company. The website interface plays an imperative role in customer e-loyalty. An interactive and content full website creates added value and highly motivate customer repeated visits (Thelwall, 2000). This first chapter will begin by briefly discussing the concept of customer e-loyalty and importance of website design in Business to Consumer (B2C) and Business to Business (B2B) context and why customer e-loyalty and effective website design is essential for company's long-term profitability.

1.1 Background of the Research

The increasing popularity of the Internet has created great challenges for companies in various business sectors to promote and sell their products and services using this new distribution channel. One very responsive business sector to this change is the banking sector. To sustain business competitiveness, more and more banks or financial services companies are transforming from their traditional approach of "bricks and mortar" into a "clicks and mortar" one under the recent emergence of electronic commerce and business. A major force behind these developments is technology, which is breaching geographical, industrial and regulatory barriers,

creating new products, services and market opportunities, and developing more information-and systems-oriented business and management processes.

For achieving different competitive strategies, which include cost containment, performance improvement, market penetration, and product transformation, banks and financial services companies are finding ways to utilize Internet technologies and to launch Internet banking services (Cronin, 1997). These companies are also keen to understand how their customers value their Internet banking services to help the banks devise strategic plans and capture market share. In other words, an important question for a successful launch of an Internet banking service is to ask what factors will impact the customer online loyalty.

With the potential of Internet to reach millions of customers and the opportunities to save transaction costs, banks in Malaysia are now urged to provide online banking services and to develop online relationships with potential customers in order to remain competitiveness in a turbulent market. Most industries have been influenced in some way or the other by electronic commerce, nowhere is the effect of e-commerce more apparent than in the banking industry (*emarketer*, 2000). According to the 11th Malaysia Internet Survey conducted by AC Nielson, Internet Banking is the one of the most popular service utilized by Malaysian surfers. The survey found out that 51 percent out of the total respondent base of 8000 used the Internet for online banking once a month. Services available through their online banking are online bill payment, fund transfer, check-book application, and downloading of current and loan account information into personal financial applications such as Microsoft Money or Quicken. The majority of local online banking users are young, Internet-savvy professionals, a demographic expected to grow over time. According to IDC Malaysia Research, the most Malaysians online consumers are aged 19 to 35 years. Morgan Stanley Dean Witter's Internet research concluded that the web is more important for retail financial services than for many other industries (Mukherjee

and Nath, 2003). The new economy has opened up new paradigms, structures and strategies for retail banking, and banks across the world face new opportunities and challenges.

The physical separation of the bank branch and the customer, and that of the customer and the financial advisor, and the overall environment of perceived in security on the Internet provide unique challenges to Internet banks to find ways in which to initiate and develop e-business relationships. In spite of these limitations, the bank must develop a trustworthy relationship at the same time promote their Internet banking services and foster customer loyalty. The low level of customer loyalty is particularly significant on the Internet, where the opportunities for customer loss can occur at warp speed. A recent McKinsey study (2000), *ePerformance*, found that 98.7 percent of online visitors do not become repeat customers. Another study determined that most sites will lose 60 percent of their first-time customers in a six-week period (Lowenstein, 2001). Most e-commerce companies are ill-prepared to counter this. Most company strives for customer loyalty, and considerable efforts are paid to maintain a loyal customer base. However, although businesses are realizing the value of keeping customer loyalty, no one knows for sure how to do it. Businesses measure customer satisfaction, and hope that if the satisfaction scores are good, the customers will stay with the firm. But the truth is if that even satisfied customers leave for the temptation of competitors offers (Mittal and Lassar, 1998).

Customer retention is considered by both scholars and practitioners to be of the critical success factors for retail businesses with its implications for cost savings and profitability. The cost of acquiring new customers is five to seven times that of retaining existing ones (Khalifa and Liu, 2005). Customer retention is even more challenging issue in the context of Internet banking, where the switching costs for customers are minimal. It is therefore important to identify the major determinants of online customer retention.

In traditional businesses, the advantages enjoyed by a brand with strong customer loyalty include ability to maintain premium pricing, greater bargaining power with channels of distribution, reduced selling costs, a strong barrier to potential new entries into the product or service category, and synergistic advantages of brand extensions to related product or service categories (Reichfeld, 1996). Traditional boundaries of “bricks and mortar” stores have revised parameters in the world of Internet storefront. No longer are consumers interacting with a physical building, product, and personnel, but instead they navigate through a digital environment where loyalty development is different than in face-to-face environment. The advent and growth of “Business to Consumer” (B2C) e-commerce has magnified the importance of building a loyal visitor base to an e-commerce website (Gommans et al., 2001). Most B2C e-business models have relied initially on an intensive effort to generate a large enough customer base and subsequently on achieving profitability based on “lifetime revenue potential” from each loyal customer (Porter, 2001).

This study draws mainly on literature on customer loyalty (Dick and Basu, 1994; Jacoby and Chestnut, 1978; Gommans et al., 2001), website usability (Nielson, 2000; Shackel, 1991) and website credibility (Fogg, SooHoo, et al., 2003; Xue, Harker, Heim, 2000) and online trust (Gefen, D. et al., 2003; Mukherjee and Nath, 2003; Morgan and Hunt, 1994). It contributes to both those literature streams by building a bridge between them; by understanding which factors have negative effect on customer’s online loyalty (e-loyalty), and vice versa. Customer loyalty is the central goal of relationship marketing and therefore the study draws upon relationship marketing literature. Due to the context of the study, it is also positioned within the service marketing literature. The literature streams of the study are discussed closer at Chapter 2.

Retail banking was chosen as the context of empirical study as will further discussed in research scope, retail banking is an interesting context for studying customer e-loyalty. Firstly, the development of Internet banking will depend strongly on the number of consumers acquiring and retaining Internet access (Kingsley and Anderson, 1998). Secondly, the retail banking market has gone important changes during the last decade, where Internet technologies have been cooperated with their daily routines. In such situation, a study of customer e-loyalty should also have managerial relevance and knowledge contribution to the web designer and Information System practitioner in improving web-based applications designing.

1.2 The Problem Statement

Human beings are used to making buying decisions using their senses, especially their sight and hearing. They read body language, want to make eye contact and hear voice inflection. As more and more banks get done in Cyberspace, there will be less and less of in-person contacts made. Although, the chances of online banking development totally replacing in-person contact is slim, more and more clients will be found in Cyberspace, and the need to maintain them as clients is great. This can be very challenging since people do business with others that they know, like and trust. A lot of those "feelings" come from in-person contacts. So how does bank retain client loyalty in Cyberspace?.

In Malaysia, commercial banks have been quick to realize the importance of this factor to competitive advantage. Although millions of dollars have been spent on building Internet banking systems in Malaysia, reports have shown that potential users may not use the systems or leave the systems after certain period of time (Sivanand, Geeta and Suleep, 2004). Before commercial banks can even begin an e-loyalty strategy, they must first perfect their products, web execution and system quality. A bad first experience on website can kill the millions they spent on e-loyalty

(Smith, 2000). This report pointed out the need for research to identify the factors that determine loyalty among Internet banking users. There are several reasons why this study has to be drawn up:-

- Customer loyalty is considered important because of its positive effect on long-term profitability. According to Reichheld et al. (2000) and Reichheld and Schefter (2000), the high costs of acquiring new e-customers can lead to unprofitable customer relationships for up to three years. However, few companies seem to succeed in creating e-loyalty, and little is known about the mechanisms involved in generating customer loyalty on the internet.
- Research concerning the antecedents of Internet banking loyalty is scarce and focused on more general issues (Mukherjee, A. and Nath, P., 2003). Nevertheless, a number of mostly practitioner-oriented studies examine how Internet companies can retain their customer's stickiness, but if stickiness does not involve a relationship, it does not mean e-loyalty (Smith, 2000).
- Despite the increase in the number of internet users recorded by various agencies, the level of increase of internet usage for banking purposes has not increased at the same rate. Therefore, several antecedents of customer loyalty have been proposed. Among those, trust and usability of website design has been brought forward as a precondition for patronage behavior (Pavlou, 2003; Dahlen et al., 2002; Flavian et al., 2005; Kuan et al., 2005). But there are little empirical research has addressed the combination of quality Internet websites design (Waite and Harrison, 2002; Sathye, 1999) and customer online trust (Sathye, 1999; Nor Azah Mohd Suki, 2002; Norhayati Abd Mukti, 2000) in forming consumer's intentions to revisits or repurchase at particular Internet banks within the context of customer relationship management. In one perception, customer loyalty seems to be influenced by website usability and the other perception, trust place an important for customer satisfaction and loyalty. As a website loyalty seems to depend on consumer skills in managing

and controlling the website and cognitive lock-in (Johnson, Moe, Fader, Bellman and Lohse, 2000), suppose that the consumer's convenient and positive prior experience when using the website, lessens the likelihood of the consumer changing to another website (Johnson, Moe, Fader, Bellman and Lohse, 2000). But there is little empirical evidence to support the importance of usability factors on Internet banks websites. Most of the scholars only address the importance of trust as the main barrier of consumer participation in e-commerce (Quelch and Klein, 1996; Jarvenpaa et al., 2000; Jarvenpaa and Tractinsky, 1999; Lee et al., 2000; Chang and Cheung, 2005).

- The Internet banks in Malaysia are still lagging behind their customers' quality expectations (Norhayati Abd Mukti, 2000). Bruhn (1997) says that the typical Internet user wants to be respected as a communication partner, and wants his or her information needs to be satisfied individually, no matter who initiated the communication process. Financial service providers should offer more than just relevant information to become an often-visited portal. Incomplete, difficult to understand, or difficult to find product information may annoy the customer, can cause unwillingness to proceed and complete the transactions. In order to enhance customer loyalty, portals are required to put a strong emphasis on their customers' quality demands, which are steadily increasing over time due to the growing competition in the Internet banking industry (Jun and Cai, 2001).
- The loyalty of consumers to a Web site is considered elusive and is a problem to banks, because of fiercely innovative competitor sites that provides equivalent products and services. These findings hold especially true for the financial service sector, where reducing the defection rate by 5 per cent can boost profits by up to 80 per cent (Reichheld and Sasser, 1990). Banks are expected now to master enhanced competencies and methodologies to retain the loyalty of consumers. However, understanding what needs to be done and determining how best to go about achieving it, are very different things.

Making the customers loyal to the website depends on the ability and how successful businesses humanize digital loyalty by using digital tools to build human relationships. Reichheld and Scheffer (2000) suggest building loyalty on the Web does 'raise new questions and open new opportunities; it places the old rules in a new context'. The concept of e-loyalty extends the traditional brand and store loyalty concept to online consumer behavior. Although the underlying theoretical foundations of traditional brand and store loyalty and the newly defined phenomena of e-loyalty are generally similar (Gommans, Krishnan and Scheffold, 2001), there are unique aspects of it in the area of Internet based banking and consumer behavior.

In traditional marketplaces, customer services and brand equity i.e, quality, relevance, and popularity (Walker, D., 2002) place an important role to develop customer loyalty. In a new context of e-marketplaces, trust and usable storefront design are another critical success factors in order to attract and retain a good relationship with customer and positively will influences repatronize and repurchase intentions (Gefen, D., 2002; Xue e.t al, 2000; Gommans, Krishnan and Scheffold, 2001; Reichheld and Scheffer, 2000; Devaraj, Fan and Kohli, 2003).

Therefore, it is relevant to find out the relative importance of two different perception on building customer online loyalty especially most of the businesses are now switch to click and mortar environments. The high costs involved in increasing the client base of a business are forcing companies to look for ways to retain their customers. Findings of this study will be useful for the banking sector in assessing the impact of information technology and in formulating appropriate strategies for building customer loyalty thereby enabling them to retain customers. Short-term loyalty can be bought; long-term loyalty must be earned. Short-term loyalty is typically bought through discounts for online shopping and extras like free shipping for a limited period of time. Long-term loyalty takes time because companies have to earn trust by proving value, dependability and respect (Smith, 2000).

1.3 Research Objectives

1. To determine what are the major website design factors that drive customer loyalty in cyberspace
2. To measure the association between trust and usable website design factor with customer's e-loyalty
3. To measure the relative importance between trust and usable website design Factor in building e-loyalty in Internet banking environment

1.4 Research Questions

1. What are the web design factors that drive customer loyalty in cyberspace?
2. Does the trust factor have positive relationship with customer's e-loyalty?
3. Does the usability factor have positive relationship with customer's e-loyalty?
4. Which is most important factor in building e-loyalty in Internet Banking environment- whether trust or usable website design?

1.5 Research Scope

There are huge numbers of e-commerce sites available but for this research purpose it will limit the scope of the study with focusing on online banking environments. Online banking was chosen as the context for the study due to several reasons:-

1. Most of the local commercial banks have aggressively pursued multi-channel strategies, and the online channel is growing in importance and adoption. While the channel is still in a growth mode, banks have a window of opportunity to figure out how to maximize the impact of their website to increase loyalty among existing customers while reaching out new ones.
2. Secondly, banking services are inherently relational in that they are contract-based and usually purchased in long-term relationships. Bank customers have traditionally been highly loyal to their banks, and percentage of bank

switching fell partially due to higher satisfaction with the overall banking experience, including use of the website (Nordman, 2004; Forbes, 2005). Hence, it is a context where it is both interesting to study customer loyalty, and possible to find highly behavioral loyal customers.

3. Thirdly, online banking incorporate most of the trust elements with usable interface design and one of the most popular service utilized and assessed by Malaysian surfers (ACNielsen, 2004).
4. Only 20 million Internet users use Internet banking although bank websites get a large number of online visitors (Online Banking Report, 2001a). It is an interesting area to find out the cause of loyalty and disloyalty.

Customer's e-loyalty in this research was measured using most cited attitudes and behavior measurement even though there are different types of customer's loyalty and each type has its own attitudes and behavior. For data collection stage which involved the survey questionnaire, the targeted users will be conveniently selected within academicians, out-campus undergraduate students (PLK program) and postgraduate students (fulltime and part time students) at various faculties in University of Technology Mara (UiTM) that used Maybank2u.com Internet banking. Among the three major services or products offered by Maybank2u.com application, this study only scope to B2C category; personal online banking (e.g. online bill payment, online education) rather than B2B category like enterprise banking and international banking

Besides that, the respondents are selected among the professionals with fix monthly income since this focus group is the highest Internet banking user in Malaysia and they have the buying power relatively than the others (Suganthi, Balachandher and Balachandran, 2003). The intention for this survey is to gather customer perception about banking on the Internet and their loyalty towards the services provided through Internet to find out which is the most important factor; either trust or usability factor that affect most on customer online loyalty.

1.6 Significance of The Research

1. The study should make a substantial contribution to our understanding of underlying factors that influence customer loyalty in web businesses specifically in the role of trust and website ease of use that promote e-loyalty in e-commerce sites
2. Easier identification of design factor that derived customer online loyalty through web. This will assist the businesses managerial and web developer in incorporating customer online loyalty factors with website design factors. Thus the model can be enhanced and act as a basis of standard guidelines, which can be used by other e-commerce sites from different sectors in the future.
3. With an ideal factors, further assessment can be done in a more structured and objective manner. A site can be assessed on its strengths and weakness in increasing the likelihood that a customer will deeply held commitment to repatronize the site.
4. These findings should serve as general guidelines for web designer and Information System practitioners who establish an e-commerce presence to acquire and maintain customers.

1.7 Limitations of the Research

There are some limitations of the study: -

1. The study only focuses on the online banking environment instead of looking into the other e-commerce applications among business sectors in Malaysia
2. This study only focuses on two key drivers in building e-loyalty – trust and usable website design even though there are other drivers construct the e-loyalty model
3. No proper guidelines can be referred to for usable website design, therefore the method that is used followed as the most cited elements from prior research done by scholars.

REFERENCES

- Achrol, R. (1991). Evolution of the Marketing Organization: New Forms for Turbulent Environments. *Journal of Marketing*, 55 (4) pp.77-93.
- Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntaries in the acceptance of information technologies. *Decision Sciences*, 28(3), pp. 557-581.
- Ahituv, N. (1980). A Systematic approach toward assessing the value of an information system. *MIS Quarterly*, 4 (4) pp. 61-75
- Ainin Sulaiman, Lim, C. H. and Wee, A. (2005). Prospect and challenges of e-Banking in Malaysia. *The Electronic Journal on Information System in Developing Countries*, 22 (1) pp. 1-11
- Ajzen, I. and Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Ajzen, I. (1985). *From intentions to actions: a theory of planned behavior* in Kuhl, J. and Beckman, J. (Eds), *Action- Control: From Cognition to Behavior*, Springer, Heidelberg, pp. 11-39.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, pp. 179-211.
- Allen, N. J. and Meyer, J. P. (1990). The Measurement and Antecedents of Affective, Continuance and Normative Commitment to the Organization. *Journal of Occupational & Organizational Psychology*, 63 (1).
- Aleamoni, L. M. (1976). The relation of sample size to the number of variables in using factor analysis techniques. *Educational and Psychological Measurement*, 36, pp. 879-883.
- Anderson, E. and B. Weitz (1989). Determinants of Continuity in Conventional Industrial Channel Dyads. *Marketing Science*, 8 (4) pp.310-323.
- Anderson, J.C. and Narus, J.A. (1990). A Model of Distributor Firm and Manufacturer Firm Working Partnerships. *Journal of Marketing*, 54, pp. 42-58.
- Anderson, R. E. and Srinivasan, S. S. (2003). E-Satisfaction and Loyalty: A Contingency Framework. *Psychology and Marketing*, 20 (20), pp. 123-138

- Baggaley, A. R. (1983). Deciding on the ratio of number of subjects to number of variables in factor analysis. *Multivariate Experimental Clinical Research*, 6(2), pp. 81-85.
- Bailey, J.E. and Pearson, S.W. (1983). Developing a Tool for Measuring and Analyzing Computer User Satisfaction. *Management Science*, 29 (5) pp. 530-545.
- Baldrigeplus.com, (1999). Customer Satisfaction and Loyalty: How New Zealand Bank Need To Improve. White Paper retrieved 19 April 2005 at <http://www.baldrigeplus.com/Exhibits/Exhibit%20-%20Customer%20satisfaction%20and%20loyalty%20NZ%20vs%20US%20banks.pdf>
- Balnaves, M. and Caputi, P. (2001). *Introduction to Quantitative Research Methods: An Investigative Approach*. Sage Publications Ltd, United Kingdom
- Barber, B. (1983). *The Logics and Limits of Trust*. New Rutgers University Press, Brunswick, New Jersey.
- Barrett, P. T., & Kline, P. (1981). The observation to variable ratio in factor analysis. *Personality study and group behavior*, 1, pp. 23-33.
- Bartel-Sheehan K. An investigation of gender differences in on-line privacy concerns and resultant behaviors. *Journal of Interactive Marketing*, Vol.13 (4), pp. 24.
- Bauer, H. and Hammerschmidt, M. (2004). Developing and Validating a Quality Assessment Scale for Web Portals. Institute for Market-Oriented Management Working Paper.
- Becker, H.S. (1960). Notes on the Concept of Commitment. *American Journal of Sociology*, 66, pp. 32-42.
- Bellman, S., G.H. Lohse, and E.J. Johnson (1999). Predictors of Online Buying Behaviour. *Communications of the ACM*, 42 (12), pp. 32-48.
- Bennett, R., (2000). Trust, Commitment And Attitudinal Brand Loyalty: Key Constructs In Business-To-Business Relationships. ANZMAC 2000 *Visionary Marketing for the 21st Century: Facing the Challenge*
- Bernhard, M. (2001). *Criteria for Optimal Web Design*. Available at <http://www.optimalweb.org>
- Bernstel, J.B. (2002). Why Canada wins in online banking? *Bank Marketing*, Vol. 34 (4), pp12-17.

- Berry, L.L. (1983). Relationship Marketing cited from Emerging Perspectives on Services Marketing, Berry, L.L., G.L. Shostack, and G.D. Upah (eds.), Chicago, *American Marketing Association*, pp. 25-28
- Best, John W., Khan, V., (2003). *Research in Education*. 9th Edition. Pearson Education, United States America
- Bevan, H. (2001). International Standards for HCI and usability. *International Journal of Human Computer Studies*, 55, p.p: 533-552
- Bhat, S. & Reddy, S. (1998). Symbolic and Functional Positioning of Brands," *Journal of Consumer Marketing*, 15 (1) pp. 32-44.
- Bhimani, A. (1996). Securing the commercial Internet. *ACM*, 39 (6) pp. 29-35
- Briggs, P., Burford, B., De Angeli, A. & Lynch, P. (2002). Trust in Online Advice, *Social Science Computer Review*, 20 (3), pp. 321-332.
- Burns, P.P. (2000). Service consistency across channels is the key to success American Banker, 165 (68), 4-6.
- Busch, D. (1997). Avoid the Five Cardinal Graphical Sins. *Internet World*, pp. 98-99.
- Butler, J.K. (1991). Toward Understanding and Measuring Conditions of Trust: Evolution of the Conditions of Trust Inventory. *Journal of Management*, 17, pp. 643-663.
- Cannon, J. P. and Doney, P. M., (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61, pp. 35-51.
- Chang, M., K., Cheung, W., (2005). Online Trust Production: Interactions among Trust Building Mechanisms. *Proceedings of the 38th Hawaii International Conference on System Sciences*.
- Chaudhuri, A. & Holbrook, M. (2001). The Chain Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty, *Journal of Marketing*, 65 (2) pp. 81-94.
- Churchill, G. A., Jr. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, 16 (1) pp. 64-73
- Chen, S. C., and Dhillon, G. S. (2003). Interpreting dimensions of consumer trust in e-commerce. *Information Technology and Management*, 4, pp. 303-318.

- Cheung, C.M.K., and Lee, M.K.O., (2003). An Integrative Model of Consumer Trust in Internet Shopping. *European Conference on Information Systems (ECIS 2003)*, Naples, Italy.
- Cheung, C.M.K., and Lee, M.K.O., (2005). The Asymmetric Effect of Wbsite Attribute Performance on Satisfaction: AN Empirical Study. *Proceedings of the 38th Hawaii International Conference on System Sciences*.
- Cheung, K. W., Kwok, J. T., Law, M.H. and Tsui, K. C., (2003). Mining customer product ratings for personalized marketing. *Decision Support Systems*, 35, pp. 231-243.
- Cunningham, I. C., & Cunningham, W. H. (1973). The urban in-home shopper: Socioeconomic and attitudinal characteristics. *Journal of Retailing*, 49 (3), pp. 42-50.
- Cohen, L., Manion, L., and Morrison, K. (2000). *Research Methods in Education*. 5th Edition. RoutledgeFalmer Publication, New York.
- Comfrey, A. L. and Lee, H. B. (1992). *A First Course in Factor Analysis*. Hillsdale, Lawrence Erlbaum
- Coner, A., (2003). Personalization and customization in financial portals," *Journal of American Academy of Business, Cambridge*, 2, pp. 498-504.
- Constantine, L.L. and Lockwood, L.A.D. (1999). *Software for Use: A Practical Guide to the Models and Methods of Usage-Centred Design*. Addison-Wesley, Massachusetts
- Corritore, C.L., Kracher, B. and Wiedenbeck, S. (2003). On-line trust: concepts, evolving themes, a model. *International Journal of Human-Computer Studies*, 58 (6), pp. 737-58.
- Corstjens and Lal, (2000). Building Store Loyalty through Store Brands," *Journal of Marketing Research*, 37 (3), pp. 281-292.
- Costabile, M. (1998). Customer Satisfaction and Trust into the Resource-Based Perspective. Research Propositions Endorsing the Confirmation/Disconfirmation Paradigm. 27th EMAC Conference, May 20th-23th, Stockholm.
- Costabile, M. (2000). A Dynamic Model of Customer Loyalty. 16th Annual IMP Conference, September 7th-9th, Bath (UK).
- Cooper, R.G. (1997). Examining some myths about new product winners in Katz, R. (Ed), *The Human Side of Managing Technological Innovation*, Oxford, pp. 550-60.

- Cowles, D. (1997). The Role of Trust in Customer Relationships: Asking the Right Questions, *Management Decision*, 35 (3/4) pp. 273-283.
- Daniel, E. (1999). Provision of electronic banking in the UK and Republic of Ireland. *International Journal of Bank Marketing*, 17 (2), pp.72-82.
- Dahlen, M. and Lange, F. (2002). Real consumers in the virtual store. *Scandinavian Journal of Management*, 18, pp. 341-363.
- Dasgupta, P. (1988). Trust as a Commodity. *Trust: Making and Breaking Cooperative Relations*, Diego Gambetta, ed. New York: Basil Blackwell, Inc.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology. *MIS Quarterly*, 13 (3) pp. 319-340
- DeLone, W.H. and McLean, E.R. (1992). Information Systems Success: The Quest for the Dependent Variable, *Information Systems Research*, 3 (1) pp. 60-95.
- DeLone, W.H. and E.R. McLean (2002). Information System Success Revisited. In *Proceedings of the 35th Hawaii International Conference on System Sciences*, Hawaii, 7-10
- Deutsch, M. (1960). The Effect of Motivational Orientation upon Trust and Suspicion. *Human Relations*, No. 13, pp.123-139.
- Devaraj, S., Fan, M., and Kohli, R., (2003). Eloyalty-Elusive Ideal or Competitive Edge?, *Communication of The ACM*, 46 (9ve), pp. 184-191
- Dholakia, U. M., Rego L. L. (1998). What makes commercial Web pages popular? An empirical investigation of Web page effectiveness. *European Journal of Marketing*, 32 (7/7), pp. 724-736.
- Dick, A., S., and K., Basu (1994). Customer Loyalty: Towards an Integrated Conceptual Framework. *Journal of the Academy of Marketing Science*, 22 (2), pp. 99-113
- Dittmar, H. (2004). Buying on the Internet: Gender Differences in Online and Conventional Buying Motivations. *Sex Role*
- Doll, W. J. and G. Torkhzadeh (1988). The Measurement of End-User Computing Satisfaction. *MIS Quarterly*. 12 (2), pp. 259-273
- Doll, W.J., Raghunathan, T.S., Lim, J.S. and Gupta, Y.P. (1995). A confirmatory analysis of the user information satisfaction instrument. *Information Systems Research*, 6 (2), pp. 177-88.

- Doney, P. & Cannon, J. (1997). An Examination of the Nature of Trust in Buyer-Seller Relationships, *Journal of Marketing*, 61 (2), pp. 35-52.
- Dwyer, F.R., Schurr, P.H., and Oh, S. (1987). "Developing Buyer-Seller Relationships", *Journal of Marketing*, 51, pp. 11-27.
- Eagley A.H. and S. Chaiken. (1993). *The Psychology of Attitudes*. Harcourt, Brace and Jovanovich, San Diego, California.
- Egger, F.N. (2001). Affective design of e-commerce user interfaces: How to maximize perceived trustworthiness. *Proceedings of the International Conference on Affective Human Factors Design*. Singapore, June 27-29, pp. 317-324.
- eMarketer (2000). *The check is in cyberspace*, eMarketer.com. Available at http://www.emarketer.com/estats/081699_data.html
- Etgar, M. (1979). Sources and Types of Intrachannel Conflict. *Journal of Retailing*, 55, pp. 77-78.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., and Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272-299.
- Feagin, J., Orum, A., & Sjöberg, G. (1991). *A case for case study*. Chapel Hill, NC: University of North Carolina Press.
- Feller, B. (2003). Students Rule Net Population. *Marketing News*, 34 (24).
- Fishbein, M., and Ajzen, I. (1975). *Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research*. Addison-Wesley, Reading, Mass.
- Fiore, F. (2001), *e-Marketing Strategies: The Hows and Whys of Driving Sales Through e-Commerce - Sell Any Thing, Any Where, Any Way, Any Time, at Any Price*. Que, Indianapolis Indiana.
- Flavian, C., Guinaliu, M. and Gurrea, R. (2005). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information and Management*.
- Fogg, B.J., & Tseng, H. (1999). The Elements of Computer Credibility. *Proceedings of ACM CHI 99 Conference on Human Factors in Computing Systems* v.1, 80-87. New York: ACM Press. Available at <http://www.acm.org/pubs/articles/proceedings/chi/302979/p80-fogg/p80-fogg.pdf>
- Fogg, B.J., Kameda, T., Boyd, J., Marshall, J., Sethi, R., Sockol, M., and Trowbridge, T. (2002). *Stanford- Makovsky Web Credibility Study 2002: Investigating what*

makes Web sites credible today. A Research Report by the Stanford Persuasive Technology Lab & Makovsky & Company. Stanford University. Available at www.webcredibility.org

Fogg B., J., SooHoo, e.t al. (2003). How Do Users Evaluate the Credibility of Web Sites? A Study with Over 2,500 Participants. *ACM*

Folmer, E., and Bosch, J. (2004). Architecting for usability: a survey. *Journal of System Software*, 70 (1-2), pp. 61-78

Forbes (2005). *Online Banking: Customer Satisfaction and Its Implications for Building Loyalty and Influencing Buying Behavior*. Retrieve January 12, 2005 at <http://www.ForeSeeResult.com>

Forsythe, C., Grose, E., and Ratner, J. (1996). Characterization and assessment of HTML style guides. *Proceedings of the SIGCHI on Human Factors in Computing Systems. The Association of Computing Machinery*.

Forsythe, C., Ring, L., Grose, E., Bederson, B., Hollan, J., Perlin, K., & Meyer, J. (1996). *Human Factors Research and Development for the International Web at Sandia National Laboratories: A Review and Update* (Conference Proceedings).

Fowler, Floyd J. (2002). *Survey Research Methods*. 3rd Edition. Sage Publications, Inc. California, United States America

Frokjaer, E., M. Hertzum, and K. Hornbaek (2000). Measuring Usability: Are Effectiveness, Efficiency and Satisfaction Really Correlated?. *In Proceedings of ACM Conference Human Factors in Computing (CHI'00)*, ACM Press, New York, pp. 345-352.

Gallaughier, J., (1999). Challenging the new conventional wisdom of Net commerce strategies. *Communication of ACM*, 42 (7), pp. 22-29

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

Garbarino, E., Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships, *Journal of Marketing*, 63 (2) Spring, pp. 70-87.

Gelderman, T. (1998). Translation and Validation of the Doll and Torkzadeh End User Computing Satisfaction Instrument. *IEEE*

Gefen, D., (2000). E-Commerce: The Role of Familiarity and Trust, *Omega: The International Journal of Management Science*, 28 (6), pp. 725-737

- Gefen, D., (2002). Reflections on The Dimensions of Trust and Trustworthiness Among Online Consumers. *ACM SIGMIS Database*, 33 (3), pp.38-53.
- Gefen, D., Karahanna, E., and Straub, D. W., (2003). Trust and TAM in online shopping: An integrated model, *MIS Quarterly*, 27, p.p: 51-90.
- Gehrke, D. and Turban, E., (1999). Determinants of Successful Website Design: Relative Importance and Recommendations for Effectiveness. *Proceedings of the 32nd Hawaii International Conference on System Sciences*.
- George, J.F. (2004). The theory of planned purchase and Internet purchasing. *Internet Research*, 14 (3), pp. 198-212.
- Gilbert, D. C., Perry, P. J., Widijoso S. (1999). Approaches by hotels to the use of the Internet as a relationship marketing tool. *Journal of Marketing Practice: Applied Marketing Science*, 5 (1), pp. 21-38.
- Gillenson, M. L., Sherrell, D. L., and Chen (1999). Information technology as the enabler of one-to-one marketing. *Communication of AIS*, 2 (18).
- Gommans, M., Krishnan, K. S., and Scheffold, K. B., (2001). From Brand Loyalty to E-Loyalty: A Conceptual Framework. *Journal of Electronic and Social Research*, 3 (1), pp. 43-58.
- Gordon, I. (2000). *Organizing for Relationship Marketing*. In Handbook of Relationship Marketing, edited by J.N. Sheth and A. Parvatiyar, Sage Publications, California.
- Gorsuch, R. L. (1990). Common Factor-Analysis Versus Component Analysis - Some Well and Little Known Facts. *Multivariate Behavioral Research*, 25(1), 33-39.
- Guadagni, P.M. and Little, J.D.C. (1983). A logic model of brand choice calibrated on scanner data, *Marketing Science*, 2, Summer, pp. 203-38.
- Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, 103, pp. 265-275.
- Guiltinand, J.P and Donnelly, J.H. (1983). The use of product portfolio analysis in bank marketing planning in Shanmugam and Burke (Eds), *Management Issues for Financial Institutions*, p.50.
- Gupta, S. (1988). Impact of sales promotions on when what and how much to buy. *Journal of Marketing Research*, 25, November, pp. 342-55.
- Gutteling JM, Wiegman O. Gender-specific reactions to environmental hazards in the Netherlands. *Sex Roles*, Vol.28, pp.433-47.

- Grabner-Krauter, S. and Kalusha, E.A. (2003). Empirical research in on-line trust: a review and critical assessment. *International Journal of Human-Computer Studies*, 58 (6), pp. 783-812.
- Graziano, A. M. and Raulin, M. L. (1997). *Research Methods- A process of Inquiry*. 3rd Edition, New York. Addison-Wesley Educational Publisher.
- Gremler, D., D., and Brown, S., W., (1998). The Loyalty Ripple Affect – Appreciating a Full Value of Customers. *International Journal of Services Industry Management*, 10 (3), pp. 271-291
- Griner, B., (2002). Leveraging Attitudinal & Behavioral Data to Better Understand Global & Local Trends in Customer Loyalty & Retention. Griner Consulting Ltd. Available at <http://grinerconsulting.com>
- Guru, B., Vaithilingam, S., Ismail, N. and Prasad, R. (2000). Electronic Banking in Malaysia: A Note on Evolution of Services and Consumer Reactions. *Journal of Internet Banking and Commerce*, 5 (1).
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., and Black, W. C. (1998). *Multivariate data analysis (5th ed.)*. Upper Saddle River, NJ: Prentice Hall
- Hamilton (1997). *E-Banking: A Global Study of Potential*. Booz Allen and Hamilton Inc. New York.
- Harrison, D.A., Mykytyn, P.P. and Riemenschneider, C.K. (1997). Executive decisions about adoption of information technology in small business: theory and empirical tests. *Information Systems Research*, 8 (2), pp. 171-95.
- Hatcher, L. (1994). *A Step-by-Step Approach to Using the SAS® System for Factor Analysis and Structural Equation Modeling*. Cary, N.C.: SAS Institute, Inc.
- Helmsley, S. (2000). Keeping Custom. *Marketing Week* (UK), 23(7), pp. 39-42.
- Hofacker, C. F. (2001), *Internet Marketing*, 3rd Ed., New York: John Wiley & Sons.
- Hoffman, D.L., and Novak, T.P. (1996). Marketing in hypermedia computer mediated environments: conceptual foundations, *Journal of Marketing*, 60, pp. 50-68.
- Hoffman, D., Novak, T., and Peralta, M. (1999). Information Privacy in the Marketspace: Implications for the Commercial Uses of Anonymity on the Web, *Information Society*, 15 (2), pp. 129-140.
- Hogarty, K., Hines, C., Kromrey, J. D., Ferron, J. M. and Mumford, K. R. (2005). The Quality of Factor Solutions in Exploratory Factor Analysis: The Influence of

Sample Size, Communality and Overdetermination. *International Journal of Testing*, 65 (2), pp. 202-226.

Homburg, C., Koschate, N. and Hoyer, W. D. (2005). Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay. *Journal of Marketing* Vol. 69, pp. 84–96

Horton, S. and Lynch, P. (1999). *Web Style Guide*. Yale University Press, New Haven CN.

Howard, J. and Moore, W. (1982). Changes in consumer behavior over the product life cycle" in Tushman and Moore (Eds), *Readings in the Management of Innovation*, Pitman, p. 128.

Huang, A.H. (2002). A Research Taxonomy for Ecommerce System Usability. *Proceedings of the Eighth American Conference on Information Systems*, Dallas, U.S.A, pp. 638-642.

Huemer, L. (1998). Trust in Business Relations: Economic Logic or Social Interaction?. Cited in Mukherjee, A. and Nath, P. (2003). A Model of Trust in Online Relationship Banking. *Internatinal Journal of Bank Marketing*. 21 (1), pp. 5-15.

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

Janda, S., Trocchia, P.J., and Gwinner, K.P. (2002). Consumer perceptions of Internet retail service quality. *International Journal of Service Industry Management*, 13 (5), pp. 412-431.

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.

Jarvenpaa, S. L. and Tractinsky, N. and Vitale, M. (2000). Consumer Trust in an Internet Store. *Information Technology and Management*, 5 (2), pp. 45-71.

Jevons, C. and Gabbott, M. (2000). Trust, Brand Equity and Brand Reality in Internet Business Relationships: An Interdisciplinary Approach. *Journal of Marketing Management*, 16 (6), pp. 619-635.

Johnson, M. D. and Gustafsson, A. (2000). *Improving Customer Satisfaction, Loyalty, and Profit: An integrated Measurement and Management System*, Jossey-Bass, San Francisco.

- Johnson, E., Moe, W., Fader, P., Bellman, S. and Lohse, G. (2000). *On the depth and dynamics of online search behavior*. Working paper, The Wharton School, University of Pennsylvania.
- Jun, M. and Cai, S. (2001). The key determinants of internet banking service quality: a content analysis, *International Journal of Bank Marketing*, 19 (7), pp. 276-91.
- Kalakota, R., and Whinston, A. (1997). *Electronic Commerce: A Manager's Guide*: Addison Wesley Longman Inc.
- Katerattanakul, P. (2002). Framework of effective web site design for business-to-consumer internet commerce. *INFOR*, 40 (1), pp 57-69.
- Kerlinger, F. N. (1986). *Foundations of Behavioral Research*, CBS Holt, Rinehart.
- Khalifa, M. and Limayem, M. (2003). Drivers of Internet shopping. *Communications of the ACM*, 46 (12), pp. 233-239.
- Khalifa., M., and Liu, V. (2005). Online Consumer Retention: Development of New Habits. *Proceedings of the 38th Hawaii International Conference on System Sciences*.
- Kim, J., and Moon, J. Y. (1998). Designing towards emotional usability in customer interface: Trustworthiness of cyberbanking system interfaces. *Interacting with Computers*, 10, pp. 1-29.
- Kim, K. K., and Prabahkar, B. (2004). Initial trust and the adoption of B2C e-commerce: The case of internet banking. *ACM SIGMIS*, 35 (2), pp. 50 – 64.
- Kirakowski, J., N. Claridge and R. Whitehand (1998). Human Centred Measures of Success in Website Design. *Proceedings of 4th Conference on Human Factors and the Web: Our Global Community*, New Jersey, U.S.A.
- Klang, M. (2001). Who do you trust? Beyond encryption, secure e-business. *Decision Support Systems*, 31 (3), pp. 293-302.
- Kolesar, M. B. and Galbraith, R. W. (2000). A services-marketing perspective on e-retailing: implications for e-retailers and directions for further research. *Internet Research: Electronic Networking Applications and Policy*, 10 (5), pp. 424-438.
- Koufaris, M., A. Kambil, and P. LaBarbera, (2001). Consumer Behavior in Web-based Commerce: An Empirical Study. *International Journal of Electronic Commerce*, 6 (2), pp. 115-138.
- Korgaonkar, P. and Wolin, L. (1999). A multivariate analysis of Web usage. *Journal of Advertising Research*, 39 (2), pp. 53-68.

- Kuan, H.H., Bock, G.W., and Vathanopas, V. (2005). Comparing The Effects of Usability on Customer Conversion and Retention at e-commerce Websites. *Proceedings of the 38th Hawaii International Conference on System Sciences*.
- Lee, J., Kim, J., and Moon, J. Y. (2000). What makes Internet Users visit Cyber Stores again? Key Design Factors for Customer Loyalty. *Proceedings of the Conference Human Factors in Computing Systems CHI 2000*, pp. 305-312.
- Lee, M. K. O. and Turban, E. (2001). A trust model for consumer Internet Shopping. *International Journal of Electronic Commerce*. 6 (4), pp. 75-91.
- Levesque, T. and McDougall, G. H. G. (1996). Determinants of customer satisfaction in retail banking, *International Journal of Bank marketing*, 14 (7), pp. 12-20.
- Lewicki, R.J. and B.B. Bunker (1995). Trust in Relationships: A Model of Development and Decline. *Conflict, Cooperation and Justice*. Bunker, B.B. and Rubin J.Z., eds. San Francisco: Jossey-Bass.
- Lewis, J.D. and A.J. Weigert (1985). Trust as a Social Reality. *Social Forces* (63), pp.967-985.
- Lin, C.C. and Lu, J. H. (2000). Towards an Understanding of the Behavioural Intention to Use a Web Site. *International Journal of Information Management*, 20(3), pp. 197-208.
- Lindskold, S. (1978). Trust Development, the GRIT Proposal and the Effects of Conciliatory Acts on Conflict and Cooperation. *Psychological Bulletin*, 85 (4), pp.772-793.
- Liu, C. and K.P. Arnett (2000). Exploring the Factors Associated with Web Site Success in the Context of E-Commerce, *Information and Management* 38, pp. 23-33.
- Long, G., Hogg, M. K., Davidson, D., Nuttall, J. (1998). Marketing relationships and the Internet: towards an analytical framework, *Journal of Database Marketing*, Vol. 6 (2), pp. 105-126.
- M. Sadiq Sohail and Shanmugham, B. (2003). E-banking and customer preferences in Malaysia: An empirical investigation. *Information Sciences*, 150 (3-4), pp. 207-217
- Madu, C.N., and Madu, A.A. (2002). Dimensions of E-quality, *International Journal of Quality and Reliability Management*, 19(3), pp. 246-258.
- MacCallum, R. C., Widaman, K. F., Preacher, K. J., and Hong, S. (2001). Sample size in factor analysis: The role of model error. *Multivariate Behavioral Research*, 36, pp. 611-637.

- Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior, *Information Systems Research*, 2 (3), pp. 173-91.
- Mayer, R., Davis, J., and Shoorman, F. (1995). An Integrative Model of Organizational Trust, *The Academy of Management Review*, 20 (3), pp. 709-734.
- Maybank website. Available at <http://www.maybank2u.com>
- Mazursky, D., LaBarbera, P. and Aiello, A. (1987). When consumers switch brands, *Psychology and Marketing*, 4, pp. 17-30.
- McKinney, V., Yoon, K. and Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research*, 13, pp. 296-315.
- McKnight, Harrison D., Chervany, N. L. (2001-2002). What Trust Means in E-Commerce Customer Relationships: An Interdisciplinary Conceptual Typology. *International Journal of Electronic Commerce*, 6 (2), pp. 35-59.
- McKnight, D.H., V. Choudhury and C. Kacmar. (2002). Developing and Validating Trust Measures for e-Commerce: An Integrative Typology, *Information Systems Research* 13(3), pp. 334-359.
- Mearian, L. (2001). Despite growth in online usage, banks urged not to forget their roots. *Computer World*
- Meuter, Matthew L., Amy L. Ostrom, Robert I. Roundtree, and Mary Jo Bitner (2000). Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters. *Journal of Marketing*, 64 (July), pp. 50-64.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd edition). London: Sage.
- Milne, G. R., & Gordon, M. E. (1993). Direct mail privacy-efficiency trade-offs within an implied social contact network. *Journal of Public Policy and Marketing*, 12(2), pp. 206-215.
- Mittal & Lassar, (1998). Why do customer switch? The dynamic of satisfaction versus loyalty. *The Journal of Service Marketing*. 12 3), pp. 177-194.
- Mittal, V. and Kamakura, W. (2001). Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics. *Journal of Marketing Research*, 38 (1), pp. 131-143.

- Mohammad Talha and Abdullah Sallehhuddin Abdullah Salim (2003). Role of E-Commerce in 21st Century. *The Journal of Internet Banking and Commerce*, 8 (2).
- Mols, N. P. (1998). The behavioral consequences of PC banking, *International Journal of Bank Marketing*, 16 (5), pp. 195-201.
- Moon, J. W. and Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management*, 38, pp. 217-230.
- Moorman, C., G. Zaltman, and R. Deshpande (1992). Relationships between Providers and Users of market research: The dynamics of trust within and between organisations. *Journal of Marketing Research*, pp. 314-28.
- Moorman, C., G. Zaltman, and R. Deshpande (1993). Factors affecting trust in market research relationship. *Journal of Marketing Research*, 5, pp. 81-101.
- Morgan, R. M. and Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing”, *Journal of Marketing*, 58, pp. 20-38.
- Morris, T., and Wood, S., (1991). Testing the Survey Method: Continuity and Change in British Industrial Relations, in Saunders, M., Lewis, P., Thornbill, A. (2002). *Research Methods for Business Students*, 2nd edition, Edinburgh Gate: Pearson Education Limited
- Mukherjee, A. and Nath, P. (2003). A Model of Trust in Online Relationship Banking. *Internatinal Journal of Bank Marketing*, 21 (1), pp. 5-15.
- Mulaik, S. A. (1990). Blurring the Distinctions between Component Analysis and Common Factor-Analysis. *Multivariate Behavioral Research*, 25(1), pp. 53-59.
- Mundfrom, D. J., Shaw, D. G. and Lu Ke, T. (2005). Using Total Sample Size. *International Journal of Testing*, Vol. 5 No. 2, pp. 159-168
- Muyllle, S. Moenaert, R. and Despontin, M. (2004). The conceptualization and empirical validation of web site user satisfaction. *Information and Management*, 41, pp. 543-560.
- Nah, F.F.-H., and Davis, S. (2002). HCI research issues in E-commerce. *Journal of Electronic Commerce Research*, 3(3), pp. 98-113.
- Neal, W.D. (1999). Satisfaction is Nice But Value Drives Loyalty – The Most Satisfied Customer May Not Necessarily Be the Most Loyal. *Journal of Marketing Research*, 11(1), pp. 21-23.
- Negash, S., T. Ryan and M. Igbaria. (2003). Quality and Effectiveness in Web-based Customer Support Systems. *Information and Management*, 40, pp. 757-768.

- Nemzow, Martin (1999). Ecommerce "Stickiness" for Customer Retention, *Journal of Internet Banking and Commerce*, October, Vol 4, No.1
- Nielsen, J. (1997). Loyalty on the Web. *Alertbox*, useit.com. Retrieve 7 May 2005 at <http://www.useit.com/alertbox/9708a.html>
- Nielsen, J. (2000). *Designing for Web usability*. Indiana: New Riders Publications.
- Norusis, M. J. (2004). *SPSS 12.0 Guide to Data Analysis*. Prentice Hall, New Jersey.
- Nor Azah Mohd Suki. (2002). *Motivation and Concern Factors for Internet Shopping: A Malaysian Perspective*. PhD Dissertation. Multimedia University, Cyberjaya.
- Nordman, C. (2004). *Understanding Customer Loyalty and Disloyalty- The Effect of Loyalty-Supporting and Repressing Factors*. PhD dissertation, Swedish School of Economics and Business Administrations, Finland.
- Norhayati Abd.Mukti. (2000). Barriers to Putting Businesses on the Internet in Malaysia. *The Electronic Journal on Information Systems in Developing Countries*, 2 (6), pp.1-6.
- Norman, K. & Chin, J. (1998). The Effect of Tree Structure on Search in a Hierarchical Menu Selection System, *Behavior and Information Technology*, 7, pp.51-65.
- Novak, T.P, Hoffman, D.L. and Peralta, M. (1999). Building consumer trust in online environments: the ease for information privacy. *ACM*, 40 (4), pp. 80-85.
- Novak, T.P, Hoffman, D.L. and Y.F. Yung. (2000). Measuring the Customer Experience in Online Environments: A Structural Modelling Approach, *Marketing Science*, 19 (1), pp. 22-42.
- Novo, J. (2000). Measuring Customer Retention and Value in Online Retailing. *E-Tailers Digest*.
- Nunnally, J. C. (1978). *Psychometric Theory* (2nd ed.). New York: McGraw Hill.
- O'Connell, B. (1996). Australian banking on the Internet - fact or fiction?. *The Australian Banker*, December, pp. 212-14.
- Oliver, R.L., Swan, J.E. (1989). Consumer Perceptions of Interpersonal Equity and Satisfaction in Transactions: a Field Approach, *Journal of Marketing*, April, 21-35.
- Oliver, R.L. (1997). *Satisfaction: A Behavioral Perspective on the Consumer*. New York, NY.

- Oliver, R. (1999). Whence Consumer Loyalty?. *Journal of Marketing*, 63 (Special Issue), pp.33-44.
- Online Banking Report. (2001a). *Online banking by the numbers*. Available online <http://www.onlinebankingreport.com>, No.60.
- Osborne, J. W. and Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research & Evaluation*, Vol. 9 No. 11. Retrieved September 5, 2005 from <http://PAREonline.net/getvn.asp?v=9&n=11>
- Osborne, J. W. and Costello, A. B. (2005). Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most From Your Analysis. *Practical Assessment, Research & Evaluation*, 10 (7).
- Palmer, J.W. (2002). Web Site Usability, Design and Performance Metrics. *Information System Research*, 13 (2),pp. 151-167.
- Pang, J., (1995). *Banking and Finance in Malaysia*. Federal Publications Sdn Bhd. Malaysia
- Papadopoulou, P., Andreou, A., Kanellis, P., Martakos, D., (2000). Enabling trust formation within agent-mediated virtual environments. *Virtual Reality, Springer-Verlag Heidelberg*, 5(3).
- Parasuraman, A., Zeithaml, V. A. and Berry L. L. (1988). SERVQUAL: A Multiple_item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64 (1),pp.12-40
- Parker (2002). *Relationship Marketing on the Internet: create one on one bonds with prospects and customer and keep them forever*. Adams Media Corporation, Holbrook, Massachusetts
- Pavlou, P.A. (2003). Consumer acceptance of electronic commerce – integrating trust and risk with the technology acceptance model, *International Journal of Electronic Commerce*, 7 (3),pp. 101-34.
- Pedersen P.E. and Nysveen H. (2000). Shopbot banking: An experimental study of shopbot effects on customer loyalty. *International Journal of Bank Marketing*, 19, 146-155
- Porter, M. (2001). Strategy and the Internet. *Harvard Business Review*, 79 (3),pp.62-79.
- Pritchard, M., M. Havitz and D. Howard (1999). Commercial Friendships: Service Provider-Client Relationships in Context. *Journal of Marketing*, 63, p.p: 38-56.

- Quelch, J. and Klein, L. (1996). The Internet and Internetoanl Marketing. *Sloan Management Review*, pp.60-75.
- Raganathan, C. and S. Ganapathy (2002). Key Dimensions of Business-to-Consumer Websites. *Information and Management*. 39, pp.457-465.
- Rai, A., Lang, S. S. and Welker, R. B. (2002). Assessing the validity of IS success models: An Empirical Test and Theoretical Analysis. *Information Systems Research*, 13, pp.50-59
- Raijas, A., (2002). The consumer benefits and problems in the electronic grocery store. *Journal of Retailing and Consumer Services*. 9 (2), pp.107-113.
- Ratnasingham, P., (1998). Internet-based EDI Trust and Security,” *Information Management & Computer Security*, 6 (1), pp.33-40.
- Rayport, J.F. and Sviokla, J.J., (1995). Exploiting the virtual value chain, *Harvard Business Review*, 73 (6), pp.75-85.
- Reichheld, F.F. and Sasser, W.E. (1990). Zero defections: quality comes to services, *Harvard Business Review*, 68(5), pp. 2-8.
- Reichheld, F., (1996). *The Loyalty Effect*. Boston: Harvard Business School Press.
- Reichheld, Frederick F., and Schefter, P., (2000). E-loyalty: Your secret weapon on the web. *Harvard Business Review*, 78 (4) pp.105-14.
- Reynold, K. E., Beatty, S. E. (1999). Customer benefits and company consequences of customer-salesperson relationships in retailing, *Journal of Retailing*, 75, No.1, pp.11-32.
- Reynolds, P.D. (1971). *A Primer in Theory Construction*. New York: The Free Press
- Robinson, T. (2000). Internet banking – still not a perfect marriage. *Informationweek* 17 (4), pp. 104-106.
- Rogers, E.M. and Shoemaker, F. (1971) *Communications in Innovation*, Free Press, New York.
- Rothwell, R. and Gardiner, P. (1984). Design and competition in engineering, *Long Range Planning*, 7 (3), pp. 78-91.
- Rourke, C. (2004). User Friendly e-Banking. *Scottish Banker Magazine*. Retrieved 8 May 2005 at http://www.uservision.co.uk/usability_articles/usability_eBanking.asp

- Roussos, G., and Moussouri, T., (2004). Consumer perceptions of privacy, security and trust in ubiquitous commerce, *ACM*, Vol. 8, No.6, p.p: 416-429
- Rundle-Thiele, S., and Bennett, R., B., (2001). A Brand For All Seasons? A Discussion of Brand Loyalty Approaches and Their Applicability for Different Markets. *Journal of Product and Brand Management*, Vol. 10 No.1 p.p: 25-37
- S. Hassanein and M. Head, (2004). Building Online Trust through Socially Rich Web Interfaces, *Second Annual Conference Proceedings on Privacy, Security and Trust*, pp. 15-22
- Sathye M. (1999). Adoption of Internet banking by Australian consumers: an empirical investigation, *International Journal of Bank Marketing*, 17(7), pp.324-334.
- Saunders, M., Lewis, P., Thornbill, A. (2002). *Research Methods for Business Students*, 2nd edition, Edinburgh Gate: Pearson Education Limited
- Schonberg, T., R. Hoch, M. Podlaseck and S. Spraragen. (2000). Measuring Success, *Communications of the ACM* 43(8), pp. 53-57.
- Schultz, D. (2000). Customer/Brand Loyalty in an Interactive Marketplace, *Journal of Advertising Research*, Vol. 40 No. 3 p.p: 41-53.
- Schurr, P.H. & Ozanne, J.L. (1985). Influences on exchange processes: Buyers' preconceptions of a seller's trustworthiness and bargaining toughness. *Journal of Consumer Research*, Vol. 11 No. 4 p.p: 939-953.
- Seal, W.B. (1998). Relationship banking and the management of organisational trust, *International Journal of Bank Marketing*, Vol. 16 (3), pp.102-107.
- Seddon, P.B. and Kiew, M.-Y. (1994). A Partial Test and Development of the DeLone and McLean Model of IS Success, in DeGross, J.I., Huff, S.L. and Munro, M.C. (eds.), *Proceedings of the Fifteenth International Conference on Information Systems*, Vancouver, Canada, pp. 99-110.
- Serino, C. M., Furner, C. P., Smatt, C., (2005). Making it personal: How personalization affects trust over time. Proceedings of the 38th Hawaii International Conference on System Sciences
- Shackel, B., (1991). *Usability-context, framework, definition, design and evaluation*, In Shackel, B., and Richardson, S. (1991). *Human Factors for Informatics Usability*, Cambridge University Press. Cambridge.
- Shergill, G. S. and Li, B. (2004). Internet Banking- An Empirical Investigation of a Trust and Loyalty Model for New Zealand Banks. E-commerce research paper. College of Business, Massey University.

- Sheshunoff, A. (2000). Internet banking – an update from the frontlines. *ABA Banking Journal* Vol. 92 No. 1 p.p: 51-55.
- Sim, L. and Koi, S. (2002). Singapore's Internet shoppers and their impact on traditional shopping patterns. *Journal of Retailing and Consumer Services*, No.2, p.p: 115-124.
- Sisodia, R.S. and D.B. Wolfe. (2000). Information Technology: Its Role in Building, Maintaining and Enhancing Relationships. In *Handbook of Relationship Marketing*, edited by J.N. Sheth and A. Parvatiyar, Sage Publications, California.
- Slyke, Comunale and Belanger, (2002). Gender Differences in Perceptions of Web-based Shopping. *ACM. Vol. 45* No.7, p.p: 82-86
- Slywotzky, A. (2000). The Age of Choiceboard, *Harvard Business Review*, Vol. 78 No. 1 p.p: 40-42.
- Smith, E. R. (2000). *E-Loyalty*. New York: Harper Collins.
- Sivanand, C. N., Geeta, M. and Suleep, (2004). Barriers to Mobile Internet Banking Services Adoption: An Empirical Study in Klang Valley of Malaysia. *Journal of Internet Business Review*. Issue 1
- Srinivasan, Srini S, Rolph Anderson & Kishore Ponnayolu, (2002). Customer Loyalty in Ecommerce: An exploration of its antecedents and consequences. *Journal of Retailing*, Vol. 78 p.p: 41-50.
- Stake, R. (1995). *The art of case research*. Thousand Oaks, CA: Sage Publications.
- Stephens, R. T. (2004). A Framework for the Identification of Electronic Commerce Design Elements that Enable Trust within the Small Hotel Industry. *ACM*, p.p: 309-314.
- Stewart, K. (1999). Transference as a Means of Building Trust in World Wide Web Sites. *Proceedings of the 20th ICIS*, Charlotte, North Carolina.
- Strauss, J. & Frost, R. (2001). *E-Marketing*. Upper Saddle River, NJ: Prentice Hall.
- Straub, D. and R. Watson (2001). Research Commentary: Transformational Issues in Researching IS and Net-Enabled Organizations, *Information System Research* Vol. 12 No. 4 p.p: 337-345.

- Strub, P.J. and T.B. Priest (1976). Two patterns of Establishing Trust: The Marijuana User. *Sociological Focus*, Vol. 9 No. 4 p.p: 399-411.
- Suganthi, Balachandher and Balachandran (2003). Internet Banking Patronage: An Empirical Investigation of Malaysia. *The Journal of Internet Banking and Commerce*, Vol.6. No.1
- Suh, B. and Han, I. (2003). The impact of customer trust and perception of security control on the acceptance of electronic commerce, *International Journal of Electronic Commerce*, Vol. 7 No. 3, pp. 135-61.
- Song, J. and Zahedi, F. (2001). Web design in e-commerce: a theory and empirical analysis, *Proceedings of the 22nd International Conference on Information Systems*, pp. 205-20.
- Swaminathan, V., Lepkowska-White, E., & Rao, B. (1999). Browser or buyers in cyberspace? An investigation of factors influencing electronic exchange. *Journal of Computer-Mediated Communication*, 5(1).
- Swan, John E., Michael R. Bowers and Lynne D. Richardson (1999). Customer Trust in the Salesperson: An Integrative Review and Meta Analysis of the Empirical Literature, *Journal of Business Research*, Vol. 44 (2), pp. 93-107.
- Szymanski, D., & Hise, R. (2000). e-Satisfaction: An Initial Examination, *Journal of Retailing*, Vol. 76 (3), pp: 309-323.
- Tan, M. and Teo, T.S.H. (2000). Factors influencing the adoption of Internet banking, *Journal of the Association for Information Systems*, Vol. 1 No. 5, pp. 1-42.
- Taylor, S. and Todd, P.A. (1995), Understanding information technology usage: a test of competing models, *Information Systems Research*, Vol. 6 No. 2, pp. 144-76.
- Tellis, W., (1997). Introduction to Case Study. The Qualitative Report, Volume 3, Number 2. Retrieve 23 April 2005 at <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>
- Teas, R. K. (1994). Expectations as a comparison standard in measuring service quality: an assessment of reassessment. *Journal of Marketing*. Vol.58, pp. 132-139
- Teo, T. S. H. (1998), Differential effects of occupation on Internet usage, *Internet Research: Electronic Networking Applications and Policy*, 8 (2), pp. 156-165.
- Teo, T., Lim, V., & Lai, R. (1999). Intrinsic and extrinsic motivation in internet usage. *Omega, the International Journal of Management Science*, 27, pp. 25-37.

- Teo, T. S. H., and Lim, V. G. K. (1999). Usage and Perceptions of the Internet: What has Age Got to Do with It? *CyberPsychology and Behavior*, 1 (4), pp. 371-381.
- Teo, H.H., L.B. Oh, C. Liu and K.K. Wei. (2003). An Empirical Study of the Effects of Interactivity on Web User Attitude, *International Journal of Human-Computer Studies* 58, pp. 281-305.
- Thelwall, M. (2000). "Effective websites for small and medium-sized enterprise", *Journal of Small Business and Enterprise Development*, 7 (2), pp. 149-159
- Ting, W. M. (2000). Electronic Age's one-to-one Web site operation strategy and action. *E-Business Executive Report*, 8 (2), pp. 156-165
- Turban, E., D. King, J. Lee, M. Warkentin and H.M. Chung (2004). *Electronic Commerce: A Managerial Perspective*, Prentice Hall.
- Uncles, M., D., Dowling, G.R., Hammond, K., (2003). Customer Loyalty and Customer Loyalty Programs, *Journal of Consumer Marketing*, 20 (4), pp. 294-316
- Urban, G.L. and Hauser, J.R. (1993). Design and marketing of new products, 2nd edition, Prentice Hall, Englewood Cliffs, New Jersey.
- Usability.gov. Available at <http://www.usability.gov/basics/index.html>
- Van Riel, A.C.R., Lemmink, J., Streukens, S. and Liljander, V. (2004), Boost customer loyalty with online support: the case of mobile telecoms providers, *International Journal of Internet Marketing and Advertising*, 1 (1), pp. 4-23.
- Vatanasombut, B., Stylianou, Antonis C. and Igbaria, M. (2004). How To Retain Online Customers, *Communication of The ACM*, 47 (6), pp. 65-69
- Velicer, W. F., & Fava, J. L. (1998). Effects of variable and subject sampling on factor pattern recovery. *Psychological Methods*, 3(2), 231-251.
- Venkatesh, V., Morris, M. G., Davis, G. B. and Davis, F. D., (2003). User Acceptance of Information Technology: Towards a Unified View. *MIS Quarterly*, 27 (3), pp. 425-478.
- Wah, L. (1999). Banking on the Internet. *American Management Association*. 88 (11), pp. 44-48.
- Waite, K., and Harrison, T. (2002). Consumer Expectations of Online Information provided by Bank Website. *Journal of Financial Services Marketing*. 6 (4), pp. 309-322.

- Wakefield, R. (2001). *A determination of the antecedents of online trust and an evaluation of current web assurance seals*. University of Mississippi, Oxford.
- Walker, D., (2002). Building Brand Equity Through Advertising. *ARF Week of Workshops*
- Walsh, J., and Godfrey, S. (2000), The Internet: A new era in customer service, *European Management Journal*, Vol. 18 (1), pp. 85-92.
- Watchfire Ponemon Institute (2005). Privacy Trust Survey for Online Banking. Retrieve 20 April 2005 at <http://www.watchfire.com/resources/privacy-survey.pdf>
- Widaman, K. F. (1993). Common Factor-Analysis Versus Principal Component Analysis – Differential Bias in Representing Model Parameters. *Multivariate Behavioral Research*, 28(3), pp. 263-311.
- Wiegran, G., and H., Koth. (1999). Customer Retention in On-line Retail. *Journal of Internet Banking and Commerce*, Vol.4 (1).
- Wiersma, W. (1991). *Research Method in Education: An Introduction*. Boston, Allyn and Bacon.
- Wetzels, M., K. de Ruyter, and M. van Birgelen (1998). Marketing Service Relationships: the role of commitment. *The Journal of Business and Industrial Marketing*, Vol. 13, Issue 4/5
- Winn, W. & Beck. K. 2002. The persuasive power of design elements on an ecommerce web site. *Technical Communication*, 49(1), pp. 17-35.
- Williamson, O.E. (1991). Calculativeness, Trust and Economic Organization. *Journal of Law and Economics*, Vol. 26, pp. 453-486.
- Xue, M., Harker, P., T., Heim, G., R., (2000). Website Efficiency, Customer Satisfaction and Customer Loyalty: A Customer Value Driven Perspective. Retrieve 2 February 2005 at <http://opim.wharton.upenn.edu/~harker/website010501.pdf>
- YB Datuk Dr Fong Chan Onn, (2001). Minister of Human Resources Malaysia. Speech During The Signing Ceremony of a Value Added Reseller Agreement between EC Partners & Golden Orb Technologies And MOU between EC Partners & ICON Signature, Kuala Lumpur
- Yin, R. K., (1994). *Case Study Research: Design and Methods*, 2nd edition, Thousand Oaks: Sage Publications Inc.
- Yoo, B., Donthu, N., & Lee, S. (2000) “An Examination of Selected Marketing Mix Elements and Brand Equity,” *Journal of the Academy of Marketing*

Science, 28 (2), pp. 195-212.

Yoon, Sung-Joon. 2002. The antecedents and consequences of trust in online purchase decisions. *Journal of Interactive Marketing* 16 (2), pp. 47-63.

Zaidatun Tasir and Mohd Salleh Abu (2003). *Analisis Data Berkomputer SPSS 11.5 for Windows*. Venton Publishing, Kuala Lumpur

Zeithaml, Valarie A. (2000). Service quality, profitability, and the economic worth of customers: what we know and what we need to learn. *Journal of the Academy of Marketing Science*. Vol. 28(1), pp. 67-85.

Zeithaml, V. A. and Berry L. L. and Parasuraman, A. (1996). The behavior consequences of Service Quality. *Journal of Marketing*. Vol. 60, pp. 31-46

Zeithmal, V.A., Parasuraman, A., and A., M. (2002). An empirical examination of the service quality - value-loyalty chain in an electronic channel, *Working paper, University of North Carolina, Chapel Hill, NC*.

Zeti Akhtar Aziz (2003). *Central Bank of Malaysia*. Retrieve 20 March 2005 at <http://www.bnm.gov.my/index.php?ch=9&pg=15&ac=131>

Zikmund, W., G., (2000). *Business Research Methods*, 6th edition, Orlando: Harcourt Inc.

Zsidisin, G. A., Jun, M., Adams, L. L. (2000), "The relationship between information technology and service quality in the dual-direction supply chain: A case study approach", *International Journal of Service Industry Management*, 11 (4), pp. 312-328.