

THE INFLUENCE OF SERVICE QUALITY AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY IN E-COMMERCE SETTINGS



ALBERT CHONG YAN VUN

UMS
UNIVERSITI MALAYSIA SABAH

**SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2011**

THE INFLUENCE OF SERVICE QUALITY AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY IN E-COMMERCE SETTINGS

ALBERT CHONG YAN VUN



UMS
UNIVERSITI MALAYSIA SABAH

**THESIS SUBMITTED IN PARTIAL
FULFILLMENT FOR THE DEGREE OF MASTER
OF BUSINESS ADMINISTRATION**

**SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2011**

UNIVERSITI MALAYSIA SABAH

BORANG PENGESAHAN STATUS DISERTASI

JUDUL : THE INFLUENCE OF SERVICE QUALITY AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY IN E-COMMERCE SETTINGS.

IJAZAH : SARJANA PENTADBIRAN PERNIAGAAN

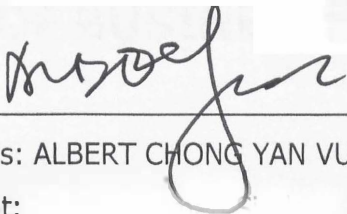
SESI PENGAJIAN: 2009-2010

Saya, ALBERT CHONG YAN VUN mengaku membenarkan disertasi sarjana ini disimpan di Perpustakaan Universiti Malaysia Sabah dengan syarat-syarat kegunaan berikut:

1. Disertasi adalah hak milik Universiti Malaysia Sabah
2. Perpustakaan Universiti Malaysia Sabah dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan dibenarkan membuat salinan disertasi ini sebagai bahan pertukaran Institusi Pengajian Tinggi.
4. TIDAK TERHAD.

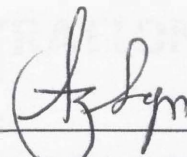
**PERPUSTAKAAN
UNIVERSITI MALAYSIA SABAH**

Disahkan oleh:

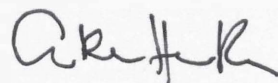


Penulis: ALBERT CHONG YAN VUN

Alamat:



TANDATANGAN PUSTAKAWAN



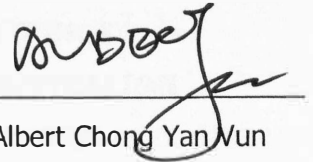
Penyelia: Dr. Amran Harun

Tarikh: 14 Ogos 2011

DECLARATION

I hereby declare that the material in this dissertation is my own and original work except for quotations, excerpts, summaries and references which have been duly acknowledged.

20 June 2011



Albert Chong Yan Yun

PE 2009-8632C



UMS
UNIVERSITI MALAYSIA SABAH

ACKNOWLEDGEMENT

First, I would like to express my gratitude and appreciation to my supervisor, Dr. Amran Haji Harun. Their kind support and help, the advice and guidance provided by them were extremely beneficial to accomplish my dissertation. I thank also for their unwavering patience and sincerity along the journey until I completed my dissertation.

I would also like to express my heartfelt gratitude to my family for their constant support and understanding. My thanks to all my MBA course mates for their support and inputs which eventually led to the betterment of my research.

Finally, my thanks to all who have assisted me in one way or another, without whom this study would not have been completed.



UMS
UNIVERSITI MALAYSIA SABAH

ABSTRACT

THE INFLUENCE OF SERVICE QUALITY AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY IN E-COMMERCE SETTINGS


This study aims to determine the influence of service quality and customer satisfaction on customer loyalty in electronic commerce settings among professionals working in Sabah. The objectives of this study can be achieved by examining the relationship between customer loyalty and e-service quality (efficiency, requirement fulfillment, accessibility, privacy, and responsiveness) and customer satisfaction. Secondly, relationship between customer satisfaction and e-service quality. Thirdly, the relationship between customer satisfaction and customer loyalty and lastly, the mediating effects of customer satisfaction between e-service quality and customer loyalty. Data collection was conducted through questionnaire and a total of 292 questionnaires were collected out of 381 copies distributed. The results from the analysis obtained from the data collected shows that 76.04% of the variance are able to be explained by the research model. E-service quality of efficiency, privacy and responsiveness produces a significant result while others appear to be insignificant. Customer satisfaction with service quality were found to have significant relationship on customer loyalty. Lastly, customer satisfaction were found to have significant mediating relationship between service quality and customer loyalty, whereby efficiency, privacy and responsiveness were found to be partially mediated. Further research is still needed to be done in order to understand the trend of the general online consumers instead of focusing on professionals only.

ABSTRAK

Kajian ini bertujuan untuk mengenalpasti factor-faktor yang mempengaruhi kualiti perkhidmatan dan kepuasan pelanggan dan kesetiaan pelanggan di dalam kontex perdagangan elektronik dikalangan pekerja profesional di Sabah. Objektif kajian ini bertujuan untuk mengenalpasti perhubungan diantara kesetiaan pelanggan dan kualiti perkhidmatan. Kedua, mengenalpasti perhubungan diantara kepuasan pelanggan dan kualiti perkhidmatan. Ketiga, mengenalpasti perhubungan diantara kepuasan pelanggan dan kesetiaan pelanggan dan akhir sekali, mengkaji kesan perantara kepuasan pelanggan diantara keestiaan pelanggan dan kualiti perkhidmatan. Berdasarkan 381 borang soal selidik yang diedarkan, 292 borang soal selidik berjaya dikembalikan dan dianalisis. Hasil daripada kajian yang dijalankan, kualiti perkhidmatan yang merangkumi kecekapan, privasi dan responsif didapati signifikan manakala, memenuhi keperluan dan akses didapati tidak signifikan. Tambahan pula, kajian kepuasan pelanggan dengan kualiti perkhidmatan didapati signifikan dengan kesetiaan pelanggan. Akhir sekali, kajian kesan perantara kepuasan pelanggan diantara kesetiaan pelanggan dan kualiti perkhidmatan mendapati kepuasan pelanggan mempunyai kesan signifikan terhadap kualiti perkhidmatan dan kesetiaan pelanggan dimana kecekapan, privasi dan responsif didapati memberi kesan perantara separa hasil daripada kajian yang dijalankan. Secara kesimpulan, kajian lebih mendalam adalah diperlukan untuk mengenalpasti corak atau budaya pembelian melalui internet orang awam dan tidak tertumpu kepada golongan profesional sahaja.

TABLE OF CONTENT

	Page
TITLE PAGE	i
DECLARATION	ii
CERTIFICATION	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
ABSTRAK	vi
TABLE OF CONTENT	vii
LIST OF TABLE	xi
LIST OF FIGURE	xii
LIST OF APPENDICES	xiii
CHAPTER ONE: INTRODUCTION	
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Research Questions	4
1.4 Research Objectives	5
1.5 Scope of The Study	5
1.6 Significance of The Study	6
1.7 Research outline	7
CHAPTER 2: LITERATURE REVIEW	
2.1 Introduction	9
2.2 Expectancy Disconfirmation Theory (EDT)	9
2.3 E-commerce	11
2.4 Conceptual Definition of Customer Loyalty	12
2.5 Conceptual Definition of Customer Satisfaction	15
2.6 Service Quality	18

2.6.1	Conceptual Definition of Service Quality	18
2.6.2	Service Quality Model	19
2.6.3	Development of SERQUAL Model	19
2.6.4	Dimension of Service Quality	21
2.7	E-Service Quality	21
2.7.1	Conceptual Definition of E-Service Quality	21
2.7.2	E-Service Quality Model	23
2.7.3	E-Service Quality Dimensions	23
2.8	Relationship between Service Quality and Customer Satisfaction on Customer Loyalty	27
2.8.1	Relationship between service quality and customer satisfaction	27
2.8.2	Relationship between service quality and customer loyalty	27
2.8.3	Relationship between customer satisfaction and customer loyalty	28
 CHAPTER 3: RESEARCH FRAMEWORK AND METHODOLOGY		
3.1	Introduction	29
3.2	Research Framework	29
3.3	Research Hypotheses	33
3.3.1	E-Service quality to customer satisfaction	33
3.3.2	E-Service quality to customer loyalty	36
3.3.3	Customer satisfaction to customer loyalty	38
3.3.4	Service quality to customer loyalty with customer satisfaction as mediating variables	38
3.4	Summary of hypothesis proposed	39
3.5	Research Methodology	40
3.5.1	Population Sampling	40
3.5.2	Sample Size	41
3.5.3	Data Collection Method	41
3.5.4	Questionnaire Design	41

3.6	Data Analysis	47
3.6.1	Descriptive statistic analysis	48
3.6.2	Correlation analysis	48
3.6.3	Factor analysis	48
3.6.4	Reliability test	48
3.6.5	Multiple regressions	49
3.6.6	Hierarchical regressions	49

CHAPTER 4: RESULT ANALYSIS AND FINDINGS

4.1	Profile of Respondent	50
4.1.1	Total Sample	50
4.1.2	Gender	51
4.1.3	Age	52
4.1.4	Marital Status	52
4.1.5	Occupation	52
4.1.6	Education Level	52
4.1.7	Monthly Income	53
4.1.8	Race	53
4.1.9	Profession	53
4.1.10	Years of Internet Usage	53
4.1.11	Online Shopping Experience	54
4.2	Factor Analysis	54
4.2.1	KMO & Factor Loading for Independent Variables	55
4.2.2	KMO & Factor Loading for Mediating Variables	57
4.2.3	KMO & Factor Loading for Dependent Variables	57
4.3	Reliability Analysis	58
4.4	Descriptive Analysis	60
4.5	Correlation Analysis	61
4.6	Regression Analysis	62
4.6.1	Hypotheses Testing	63

CHAPTER 5: DISCUSSION

5.1	Introduction	70
5.1.1	The relationship between efficiency and customer satisfaction	70
5.1.2	The relationship between requirement fulfillment and customer satisfaction.	71
5.1.3	The relationship between accessibility and customer satisfaction	72
5.1.4	The relationship between privacy and customer satisfaction	73
5.1.5	The relationship between responsiveness and customer satisfaction	74
5.1.6	The relationship between e-service quality and customer loyalty	75
5.1.7	The relationship between customer satisfaction with service quality on customer loyalty	75
5.1.8	The relationship between customer perceived benefits on service quality and mediating influence on customer satisfaction on customer loyalty	76

CHAPTER 6: CONCLUSION

6.1	Introduction	78
6.2	Limitations of Study and Suggestions for Future Research	79
6.2.1	Limited scope of study	79
6.2.2	Length of questionnaire and accuracy of respondent's feedback	79
6.2.3	Limited amount of time and resources	79
6.3	Implication of Study	80
6.4	Conclusion	81

REFERENCES	82
-------------------	-----------

APPENDIX

LIST OF TABLE

	Page
Table 2.1	Behaviors 13
Table 2.2	Attitudes 13
Table 2.3	Triggers to switching 14
Table 2.4	Service Quality dimension and Descriptions 21
Table 2.5	E-Service Quality dimension and Descriptions 23
Table 3.1	Summary of variables used 33
Table 4.1	Profile of Respondents 50
Table 4.2.1	Summary of the Items Dropped from Factor Analysis 54
Table 4.2.2	KMO and Bartlett's Test for Independent Variable 55
Table 4.2.3	Results of factor analysis for Independent Variable 56
Table 4.2.4	KMO and Bartlett's Test for Mediating Variable 57
Table 4.2.5	KMO and Bartlett's Test for Dependent Variable 58
Table 4.3.1	Reliability Statistics 59
Table 4.3.2	Summary of Reliability Test Analysis Results 59
Table 4.4.1	Descriptive Statistics 60
Table 4.5.1	Correlation Results 61
Table 4.6.1	Multiple Regressions on E-Service Quality with customer satisfaction 64
Table 4.6.2	Multiple Regressions on E-Service Quality with Customer Loyalty 66
Table 4.6.3	Multiple Regressions of Customer Satisfaction with Customer Loyalty 66
Table 4.6.4	Hierarchical regression using customer satisfaction as mediating in the relationship between e-service quality and customer loyalty 68
Table 4.6.5	Summary of Hypotheses 69

LIST OF FIGURE

		Page
Figure 2.1	Relationship between service quality and customer satisfaction based on SERVQUAL	20
Figure 3.1	Research model by Yongju Jeong and Yongsung Lee (2010)	30
Figure 3.2	Research model by Tianxiang Sheng and Chunlin Liu (2010)	31
Figure 3.3	Research framework model	32



UMS
UNIVERSITI MALAYSIA SABAH

LIST OF APPENDICES

	Page
Appendix A1 Instrument (Questionnaire)	91
Appendix B1 Descriptive Analysis	96
Appendix C1 Factor Analysis	100
Appendix D1 Reliability Analysis	103
Appendix E1 Descriptive Analysis (Dimension)	108
Appendix F1 Correlation Analysis	117
Appendix G1 Multiple Regression	118
Appendix H1 Hierarchical Regression	127



UMS
UNIVERSITI MALAYSIA SABAH

CHAPTER 1

INTRODUCTION

1.1 Introduction

Electronic commerce (e-commerce) can be defined as buying and selling, marketing and servicing of products and services via the computer networks (Combe, 2006). These website companies can develop mutual rewarding relationships with customers that they have never seen, met, or spoken to. Besides, e-commerce facilitates global distribution since it is largely automated and accessible 24 hours a day, seven days a week. It is largely self-service, which means more people can be serviced with the same support staff (Betsy & John, 2000). The entire relationship of conducting businesses online can successfully exist in the cyberspace.

Norizan and Asiah (2010) highlighted that by leveraging the internet, business organizations through online websites can free up resources to deliver higher levels of value to customers in new ways and provide companies and consumers with opportunities for much greater interaction and individualization. Betsy and John (2010) concurred that the shift of e-commerce can reduce costs, allow online website organization to interact directly with customers, improve the reservation and sales process through availability of more timely information, and consequently help an organization outperform its competition.

Today, with the exponential growth of e-commerce websites in the internet, an online business organization must continually assess if its web site is meeting the expectations of its customers. As web design capabilities and consumer expectations change, it is important to determine which design factors appeal to customers and positively influence purchase through web site (Betsy & John, 2010).

Reid Smith (2000) in his research defined consumer loyalty as: "e-loyalty in terms of positive behaviors such as revisits, repurchase, recommendations or active participation in a customer program." In other words, consumer loyalty can be simply defined as a measure of good faith of the consumers to a web site. Loyal consumers would regularly patronize, make frequent visit, and conduct repeated purchases or services and acknowledgement through word of mouth referrals to the same web site.

1.2 Problem Statement

The study of e-consumer behavior is gaining in importance due to the proliferation of online shopping (Charles. D, Merrilees. B, Jayawardhena. C and Wright L.T, 2008). E-commerce represents the next frontier in business transaction in around the world. Increase in e-commerce transaction has been reported in economies around the world. Hui-min Ma *et al.* (2010) reported due to the rapid development of China's electronic commerce, transaction volume of online shopping in 2008 totaled 128.18 billion Ren Min Bi (RMB) or 19.83 billion USD, a 128.5 percent increase compared to 2007. Furthermore, with China's electronic commerce environment maturing and offering improved service, it is predicted that the volume could reach 498 billion Renminbi (RMB) or 77.05 billion USD by 2012.

Meanwhile, Yongju and Yongsung, (2010) also reported that a survey conducted by Korea National Statistical Office revealed that the volume of transaction in domestic cyber shopping mall in Korea steadily grew starting from 2001 when it reached approximately 3.4 trillion won or 3.2 billion USD, which is well over 20 trillion won or 18 billion USD in 2009.

Norzieiriani *et al.* (2010) highlighted that even though e-commerce through online shopping facilitates customer purchase through unlimited information, instantaneous price comparison and 24/7 service, it also raises concern to online retailers, especially in retaining online customers. Furthermore, a lot of e-commerce companies particularly online retailers have started to realize that since their

competitors are just a click away, retaining the company's customer base, in addition to attracting new customers, is critical for sustaining revenue base, profitability and market share (Bhattacharjee, 2001).

Due to the increasing number of e-commerce being transacted online, loyal customers are indeed crucial to business survival. For that reason many companies use defensive marketing strategies to increase their market share and profitability by maximizing customer retention (Norizan & Abdullah, 2010).

In Malaysia, a Malaysian Communication and Multimedia Commission (MCMC) survey revealed that there were 11 million internet users in 2005, only 9.3 percent of them had purchased products or services through the internet. (Economist Intelligence Unit, 2006). This implies that internet users are discovering attractive shopping opportunities on the web, but there are barriers and other concerns preventing them purchasing continuously via the internet (Norzieiriani *et al.* 2010).

The needs for retaining customer base, attracting new customers and identifications of what leads to customer satisfaction and loyalty has led to this study. Clearly, in e-commerce settings, all companies need to consider and evaluate e-marketing and e-purchasing opportunities thoroughly. The key challenge is designing a site that is attractive on first viewing and interesting enough to encourage repeat visits (Norizan & Asiah, 2010).

Although the internet channel have been extensively used by many business organization in performing e-commerce; however not many organization are adopting it seriously and are providing substandard services. In a competitive borderless market place, understanding customer's needs become essentially crucial. Therefore, companies have moved from a product-centric to a customer centric position (Siadat, 2008). Retention or customer loyalty is a major challenge particularly in e-commerce settings, as customers can easily switch from one service provider to another at low

cost. Considering the high costs of acquiring new customers and the apparently high customer turnover of many online services, it is very important to study the determinants of service quality and customer satisfaction on customer loyalty (Siadat, 2008).

Based on the previous research conducted, it can be said that e-commerce is the new frontier in conducting business. With the liberation of markets around the world and the advancement in information technology, business transaction can be conducted with just a click away. However, previous research by Combe, (2006) has shown that customer satisfaction and customer loyalty for online purchases or e-commerce is lower as compared to traditional shopping experience of visiting brick and mortar retail outlet stores.

This study aims to understand the influence of e-service quality and its dimension on customer satisfaction and customer loyalty based on the existing literature on service quality. By understanding the service quality factors that influence customers' perception towards online purchase and e-commerce, it can help to attract more consumer towards adopting e-commerce transaction. In addition to this, this study will assist online service providers and marketing managers to understand the customer's perception towards online purchase decision.

1.3 Research Questions

The main research questions of this study are:

1. How do the e-service quality dimensions (efficiency, requirement fulfillment, accessibility, privacy, responsiveness) influence customer satisfaction?
2. Is there any relationship between e-service quality and customer loyalty?
3. Is there any relationship between customer satisfaction and customer loyalty?
4. What is the effect of customer satisfaction as mediator to e-service quality and customer loyalty?

By identifying the answer to the above questions, the online service providers and marketing managers can identify and understand how e-service quality dimension influence customer satisfaction and loyalty and this can help benefit managers to develop suitable marketing strategies to reach out to their targeted market segment.

1.4 Research Objectives

The research objectives for this study are:

- a. To determine the relationship between e-service quality (efficiency, requirement fulfillment, accessibility, privacy, responsiveness) and customer satisfaction.
- b. To determine the relationship between customer satisfaction and customer loyalty.
- c. To determine the relationship between e-service quality and customer loyalty.
- d. To determine the mediating effects of customer satisfaction between e-service quality and customer loyalty.

1.5 Scope of Study

In order to identify the determinants of service quality and its influence on customer satisfaction and customer loyalty, the selection will be carried out based on previous research on related study. The influence of e-service quality and customer satisfaction on customer loyalty are determined by variables such as product diversity, tangibles, responsiveness, interaction, stability, efficiency, requirement fulfillment, accessibility, privacy (Jeong and Lee, 2010 and Sheng and Liu, 2010). However, only five variables will be studied in this research. The variables focused are (1) Efficiency; (2) Requirement fulfillment; (3) Accessibility; (4) Privacy; (5) Responsiveness.

The research design chosen for this research is cross-sectional study. The sample of this study will involve professionals working in different industries and business settings located in Sabah. They can be architects, engineers, doctors, lawyers, accountant, pharmacist, quantity surveyor, auditors, researcher and many more.

Professionals are chosen for this studies as they have higher purchasing power, they are more computer literate, internet savvy with better internet connection, and more occupied with work with little time to shop hence more likely to shop online.

1.6 Significance of Study

Customer behavior in traditional shopping contexts has received much attention. As the competition in the marketplace continues to grow, understanding customers has become an important method of marketing. According to the Chartered Institute of Marketing, marketing can be defined as: The management process for identifying, anticipating and satisfying customer requirements profitably (Chia, 2003). Customer centered companies have place great emphasized at understanding of customer's needs and wants and then translated them into the capability to give customers what they really need and want. Moreover, measuring customer satisfaction has become increasingly popular in the last two decades and the satisfaction construct has gained an important role in marketing literature. (Chia, 2003).

According to Gounaris *et.al*/ (2008), the new glamour field of research studies today is e-commerce. E-commerce has been used both as a broad term to cover the use of internet for advertising and presenting information about products and services, and a narrow term which recognizes e-commerce to include only business transactions, involving ordering and payment on the internet (Blackwell *et.al*, 2001). It is well recognized though that the web represents a fundamentally different shopping environment than a traditional shopping channel. As such, classical marketing paradigms, theories, and activities as well as consumer attitudes and behaviors need to be reevaluated in this new context. (Gounaris *et.al*, 2008).

Besides, the technology of e-commerce determines what can be offered to customers, but only customers determine which of those technologies will be accepted. Development of various information communication technologies including computer has changed the consumption life of the consumers, and especially tons of changes

take place in the consumers' selection through their decision making (Jeong and Lee, 2010). The key to success for e-commerce lies in knowing customers (Chia, 2003).

Zeithaml *et. al*, (2002) believe that service experience greatly affects the establishment of trust and relation with customers, and enterprises must pay attention in this regard. All these existing research achievements further verify that service quality can improve customers' satisfaction, keep customers, and maintain long term relations with them. A favorable service quality should be created also to improve the responsiveness market changes as well as to enhance customer services. With these underlined importance of understanding the service quality and customer satisfaction, valuable guidelines can be provided to business practitioners, policy-makers, especially the corporate management in providing and implementing world-class service quality and retain customer satisfaction and customer loyalty, thus accelerating the revenue and growth of the company.

1.7 Research Outline

The report is organized into six chapters, which is Introduction, Literature Review, Research Framework and Methodology, Results Analysis and Findings, Discussion and Conclusion respectively.

Chapter One, Introduction provides an overview of e-commerce through online websites. It subsequently derives the Problem Statements, Research Questions, Research Objectives, Scope of Study and Significance of Study.

Chapter Two, Literature Review, review studies on service quality, e-service quality, customer loyalty and customer satisfaction previously conducted by others and their findings. The dependent and independent variables used in this research were derived from the literature review and the relationship between the variables will be further discussed further in Chapter Two.

Chapter Three, Research Methodology discusses the Research Framework, Research Hypotheses, Research Methodology and questionnaires used to conduct the survey for the research. Chapter Four presents the Analysis of Results and Findings. Chapter Five discuss about the findings and the relationship between among the variables and finally, the report concludes in Chapter Six, Conclusion.



UMS
UNIVERSITI MALAYSIA SABAH

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature conducted on the relationship among service quality and customer satisfaction on customer loyalty in e-commerce settings. The aim of this chapter is to evaluate the literature and define SERVQUAL model, the meaning of service quality, customer satisfaction and its affect on customer loyalty. Next, the chapter justifies the choice of independent variables such as service quality to customer satisfaction and customer loyalty as everyone need a good level of service quality to experience satisfaction which leads to customer loyalty.

2.2 Expectancy Disconfirmation Theory (EDT)

Expectation confirmation theory (ECT) relates that expectations, coupled with perceived performance will subsequently lead to post-purchase satisfaction (Oliver, 1980). This effect is mediated through positive or negative disconfirmation between expectations and performance. For example, if a product outperforms expectations (positive disconfirmation), it will result in post-purchase satisfaction. If a product falls short of expectations (negative disconfirmation) the consumer is likely to be dissatisfied. (Oliver, 1980 and Spreng *et. al.*, 1996). Churchill and Suprenant, (1982) also found that the four main constructs discovered in the model are : expectations, performance, disconfirmation and satisfaction. For expectations, it reflects on the anticipated behavior (Churchill and Suprenant, 1982). Spreng *et al.*, (1996) highlighted that they are predictive, indicating expected product attributes at some point in the future. Expectations serve as the comparison standard in expectation confirmation theory (ECT) and what consumers use to evaluate performance and form a disconfirmation judgment. Meanwhile, disconfirmation is hypothesized to affect

satisfaction with positive disconfirmation leading to satisfaction and negative disconfirmation leading to dissatisfaction (Oliver, 1980).

Parasuraman *et al.*, (1988) in his research has defined expectations in terms of "what they feel service firms should offer with their perceptions of the performance of firms providing the services". Also, it indicates that expectations can range from being subjective desires to more objective predictions (Parasuraman *et al.*, 1988).

Yen and Lu (2008) in their research found that Expectancy disconfirmation theory (EDT) has been widely used in the marketing field of consumer behavior to study post-purchase phenomena, including consumer satisfaction, repurchase intentions and complaining behaviors. The author also highlighted that the EDT model was originally developed by Oliver (1980) who theorizes that consumers' post-purchase satisfaction is jointly determined by pre-purchase expectation and disconfirmation. Yen and Lu (2008) in their research of Churchill and Surprenant's (1982) earlier work found that satisfaction in turn is believed to influence post-purchase intention to repurchase a product or reuse a service and it was hypothesized that satisfaction was only a function of expectations and disconfirmation but subsequent research has shown that perceived performance could also affect satisfaction directly and sometimes it emerges as the only influence (Churchill and Suprenant, 1982).

Yen and Lu's (2008) studies on previous scholars work discovered that EDT has been used to understand individuals' intentions in the e-commerce context and some studies asserted that confirmation had a significant effect on satisfaction, which in turn had a positive influence on IT continuance usage. Works by Kalifa and Liu (2003) also confirm the role of satisfaction at different adoption stages. Research results by Kalifa and Liu (2003) shows that disconfirmation and performance are important factors in explaining satisfaction.