

**IMPACT OF TECHNOLOGY-BASED SERVICE ENCOUNTER ON
CUSTOMER BRAND LOYALTY: BANGLADESH PERSPECTIVE**



PhD DISSERTATION

BY

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**A DISSERTATION SUBMITTED TO THE DEPARTMENT OF
MARKETING, UNIVERSITY OF DHAKA IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF**

DOCTOR OF PHILOSOPHY

IN

MARKETING

FACULTY OF BUSINESS STUDIES

UNIVERSITY OF DHAKA

BANGLADESH

2018

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BANGLADESH

2018

Dedicated

To My Beloved Late Mother

DECLARATION

I do hereby declare that the thesis entitled “Impact of Technology-based Service Encounter on Customer Brand loyalty: Bangladesh Perspective” submitted to the department of marketing, University of Dhaka, Bangladesh for the degree Doctor of Philosophy (PhD) in Marketing, is an original and independent research work. No part of this thesis has been submitted to any other University or Institution for the award of any other degree or diploma.

Dhaka,
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CERTIFICATE

We do hereby certify that the thesis entitled “Impact of Technology-based Service Encounter on Customer Brand loyalty: Bangladesh Perspective” submitted by Sagib Kumar Ghosh, Re-registration no: 176, Session: 2015-2016, a PhD research fellow of the Department of Marketing, University of Dhaka, Bangladesh, for the degree of Doctor of Philosophy (PhD) in Marketing, has been done under our joint supervision and guidance. The thesis is an original piece of research work done by the researcher. We, therefore, recommend its submission for examination.

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ACKNOWLEDGEMENTS

A successful completion of a research work, especially for PhD dissertation needs profound devotion, proper and selfless guidance, wholehearted support and encouragement of relevant stakeholders and blessings of well-wishers.

I am indebted and would like to express my gratitude and cordial thanks to people who helped me completing this dissertation. First, I would like to express profound gratitude to my academic guru and supervisor Dr. Haripada Bhattacharjee, who has consistently reinforced me throughout my career with patient. He has encouraged and supported me selflessly during my doctoral program, even though I have taken extra-time to submit this thesis. I am also very grateful to my friend cum co-supervisor, Dr. Morshed Hasan Khan, who has supported me and believed in my ability of completing the thesis. In parallel, I want to express special thanks to my friend Dr. Abu Nasser Ahmed Istiaque, Professor, Department of Marketing, University of Dhaka, who helped me a lot in both academic as well as administrative activities.

Second, I wish to express my gratitude to all my teachers in Marketing of Dhaka University for their presence in all my seminars and providing thoughtful feedback as well as suggestions. I would also like to extend my gratitude to all my colleagues in Marketing Department, University of Chittagong for their all-out support including participating in workshops, providing expert opinions, finalizing the questionnaire and collecting data.

Third, I am greatly indebted to my students who worked sincerely in a data collection team and taken all the pain of collecting data at two levels: pilot survey as well as final survey. As a professor of Marketing Department of University of Chittagong, I was privileged to select a group of students from my Marketing Research course and to train and equip them to work as an effective data collection team. Without their support, it would be very difficult to complete the most important part of this study particularly conducting Focus Group Discussion and Survey for primary data.

Fourth, it will remain incomplete without giving thanks to brokerage firm houses for their cooperation and positive attitude to allow and support us in collecting data as well as locating the respondents who are online users. I should name some firms, for example, IDLC Securities, Salta Securities, United Finance, Major Capital Securities Ltd. etc.

Finally, I would like to thank my families whose unconditional love enabled me to complete this dissertation. Most importantly, my beloved wife, Hena Ghosh, who has encouraged me always to complete this degree and supported a lot by managing all household activities including two beloved children, our son Gour Krishan and daughter Suvadra. Without your support, I could not be able to complete this thesis. I love you very much.

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ABSTRACT

Advancement in information, communication and technologies (ICT) has made SSTs a widely accepted technological interfaces worldwide. It's use has extended not only from the initial stages of vending machines, coin operated washer-dyers, and self-pumped gas to today's advanced offerings of self-service technologies (SSTs) such as ATMs, Kiosks, scanners, touch screens, automated phone systems but also from technologically advanced societies to relatively new in technology encounter societies. This shift from human interaction to technology encounter in delivering services has drawn attention of academic as well as industry researchers. A good number of studies on innovation adoption and diffusion have emphasized discovering the determinants of technology adoption, and suggested various approaches to this end. Relatively a few studies have contributed on the effect of progressive use of SSTs on customer satisfaction, the strongest determinant of customer loyalty.

Existing studies have placed importance only on extrinsic motivators such as perceived usefulness, ease of use, system quality, technology anxiety etc., and their impact on satisfaction and loyalty. To fill this gap, the present study has considered both extrinsic as well as intrinsic motivators- fun, playfulness, enjoyment etc. – strong determinants of technology encounter service satisfaction and their impact on loyalty. As consumers' technology orientation plays role in adoption and determining satisfaction with SSTs, the study has also measured customer technology readiness using TRI model in two perspectives: one, its impact on satisfaction, and the other one its moderating role in satisfaction-loyalty link.

In addition of secondary sources of data, the study collected both qualitative and quantitative primary data using appropriate techniques to test the proposed hypothesis. Data was analyzed using appropriate statistical tools with the help of SPSS -22 and AMOS 23. The collected data was analyzed systematically with the following directions: first, identifying the determinants of satisfaction and dissatisfaction with SSTs as well as interpersonal encounter; second, measuring individuals' technology readiness and the impact of individual's technology readiness on satisfaction as well as dissatisfaction in both technology and interpersonal encounter; third, effect of satisfaction derived from both technology and interpersonal encounter on brand loyalty; and finally, measuring the moderating role of TR on customer satisfaction and loyalty-link.

The study findings revealed that both extrinsic and intrinsic components drive the satisfaction with SSTs in retail stock trading settings in Bangladesh context. Among the extrinsic components better than alternative (PU, EU), solve intensified needs, and access to customized information are found significant, while ‘fun’ among the intrinsic motivators is found as significant contributor in enhancing customer satisfaction in dealing with technology based service encounter. Technology Readiness (TR) model of Parasuraman and its dimensions are established valid and reliable to use in present study, and its impact on customer satisfaction with SSTs as well as interpersonal encounter are found statistically significant. On the other hand, satisfaction is found a strong determinant of customer loyalty in both the encounters, but its contribution in enhancing customer loyalty is supported more dominating and significant in SSTs compare to interpersonal encounter. Finally, in this study, TR is revealed as a significant moderator in satisfaction and loyalty link in both the encounters.

Thus, it can be concluded that customers have growing preference to progressive use of technology in delivering services in replacement of employee interfaces, provided that it serves better than alternatives, solve intensified needs as well as ensures using technology is a fun to users.

The findings help managers create effective strategies to better match consumers’ needs and to deliver more customized self-service experience. The role of SSTs can be expanded beyond functional attributes to satisfy consumers’ curiosity, hedonism, and personalize consumer experience.

Whereas most SSTs research focus on technology adoption intention, features, functionality, and benefits to the service provider; this study is among the first attempts to examine the role of SSTs in enhancing customer loyalty considering both extrinsic and intrinsic determinants of satisfaction. The bi-dimensional conceptualization of SSTs experience developed in this research suggests that SSTs in the financial services, particularly in retail stock trading sector should be utilized for reasons beyond their only functional attributes; SSTs should be designed to help create a hedonic service experience.

Keywords: Self-Service Technologies (SSTs); Customer Satisfaction; Functional as well as Hedonic attributes; Technology Readiness (TR); Interpersonal Service Encounter; Retail Stock Trading.

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LIST OF ABBREVIATIONS

ACI	: Access to Customized Information
AGFI	: Adjusted Goodness of Fit Index
AMOS	: Analysis of Moment Structures
AVE	: Average Variance Extracted
ATM	: Automated Teller Machine
BTA	: Better Than Alternative
CDF	: Customer Driven Failure
CFA	: Confirmatory Factor Analysis
CFI	: Comparative Fit Index
CR	: Construct Reliability
EU	: Ease of Used
EFA	: Exploratory Factor Analysis
GFI	: Goodness of Fit Index
ICT	: Information Communication Technology
INN	: Innovativeness
ISE	: Interpersonal Service Encounter
NFI	: Normed Fit Index
PCA	: Principal Component Analysis
PU	: Perceived Usefulness
RCN	: Response to Customer Needs
RMR	: Root Mean Square Residual
RMSEA	: Root Mean Square Error of Approximation
RSF	: Response to Service Failure
SD	: Spontaneous Delight
SD	: Standard Deviation
SEM	: Structural Equation Modeling
SIN	: Solve Intensified Need
SPSS	: Statistical Package for Social Statistic
SST	: Self Service Technology
TF	: Technology Failure
TRI	: Technology Readiness Index

CHAPTER 1

Introduction

1.1 Study Background

“Digital Bangladesh” is one of the nation’s dreams not only for ensuring equal access of all citizens to government services but also to build a new image of rural Bangladesh as a digital Bangladesh to rest of the world. With the realization of role of technology, especially communication and information technology, in achieving target economic development, the government of Bangladesh has set a goal to bring all of its citizens under digital network by 2021. One of the four specific elements of ‘Digital Bangladesh Vision’ is to use of information technology in Business (Wikipedia). As a result, a massive blow has been observed in the adaptation of technology irrespective of public, private, profitable and non-profitable organizations as a better way to serve target people.

Now-a-days, technology has increasingly more impact on business practices, particularly in service firms when they interact with their customers. **It** has been replacing human encounter progressively for enhancing service delivery capacity & efficiency, expanding market size & segments, and improving customer data base management. Further, the nature of service is also changing in the modern world. Technology is providing new opportunities for delivering existing services in more accessible, convenient and productive ways by reducing the employee/customer interface (Zeithaml, Bitner, and Gremler 2009; Walker RH 2002; Quinn 1996). For example, **technology facilitates basic customer service functions (Bitner et al. 2009) - bill paying, answering questions, checking account records, tracking orders; purchase transactions (Babulak E 2006) – both retail (online shopping, ticket booking & purchasing) and business to business (merchandising); learning or information seeking to support firm’s marketing relationship management (Zineldin 1998; Roth 1998)**. Recently, financial service firms across the globe including Bangladesh have been deploying self-service technologies (SSTs) such as online banking services, on-line retail stock trading etc. in efforts of gaining efficiencies and giving customers wider access and a greater sense of control without the assistance of the employees (Bitner 2009 and Meuter 2005). Despite the evident importance of bank branches, this distribution channel has lost significant terrain to electronic banking and telephone banking in the recent past (World Retail Bank Report, 2010) and the level of satisfaction with online banking has been increasing (American Customer Satisfaction Index, 2011).

Previous research focused extensively on investigating several issues of personal services. The area, technology interface as the replacement of interpersonal interface, as a field of

study has received researchers' interest not for long. Most institutions now offer their customers access to the majority of their services through online/electronic channels (Francisco, 2013). In one study Munoz-Leiva, (2008) found that electronic banking is the primary alternative to traditional bank branches (face to face banking) and offers customers a number of advantages such as convenience, global access, availability, cost and time savings, transparency of information, ability to choose and compare and customization and has few drawbacks related mainly to future investments, possible errors, and security issues. Early studies of Internet markets took a simplistic view of consumers as simply searcher for low cost transactions (Fujitsu, 2009; Strader & Hendrickson 2001). More recently, researchers have begun focusing on the **complex psychological and sociological effects** of the Internet on customer satisfaction (Kuo and Wu, 2012; Sheng and Liu, 2010; Berrocal, 2009; Ding, Verma, & Iqbal, 2007) and brand loyalty (Eid, 2011; Cristobal, Flavian, & Guinaliu, 2007). Customer satisfaction has become a key element of marketing initiatives that determines the extent to which an organization has successfully and efficiently satisfied the needs and wants of its customers (Severt et al., 2007). It suggests areas for improving service performance and experience, which lead to customers' revisit intention, positive word-of-mouth behavior, and eventually enhances a firm's competitive edge (MacDonald and Smith, 2004). The study of technology encounter satisfaction as an element of consumer decision-making behavior in virtual environments has only recently attracted attention in marketing research (Lassala et al., 2010; Kim and Qu, 2014). Such researches are still in their infancy and couldn't answer the question 'how technology-based services influence customer behavior' (White et al. 2010). But, findings of technology research shed light on the potential impacts of the extrinsic and intrinsic attributes of SSTs on customer satisfaction with SSTs use. SSTs are perceived to help companies to subsidize consumer transaction processes and improve customer satisfaction and loyalty through increasing the efficiency, convenience, and perceived control (Meuter et al., 2000). The intrinsic attributes associated with SSTs, such as felt independence, accomplishment, fun, enjoyment, confidence, novelty enhance customer satisfaction by empowering and engaging consumers (Kim et al., 2012; Kasavana, et.al., 2010; Meuter, 2005; Morosan and Jeong, 2008). Bitner (2001) identified legitimate customer concerns over privacy and confidentiality raise issues for firms as they seek to learn about and interact with their customers online. In one study Lin, shih, and Sher (2007) found that consumer technology readiness lays a significant role in both ease of use and perceptions of usefulness. Research on "technology readiness" suggests that some customers are

simply not interested in or ready to use technology (Parasuraman and Colby, 2001; Lin and Hsieh, 2007) with the thinking that less human contact is detrimental purely from a quality of life and human relationships perspective, and the importance of role clarity, motivation, and ability identified as key drivers to consumer readiness to try SSTs (Meuter et al. 2005).

On the other hand, customers' economic status and cultural preferences also influence the choice of service delivery channels and the level of satisfaction and retention (Francisco, 2013). Joseph et al, (2017) found that e-readiness or TR is relatively low in developing countries than developed countries.

As technology based innovations are undertaken to reduce costs, increase customer satisfaction and demand, develop new delivery channels for existing or new customer segments (Bitner et al., 2002; Liljander et al., 2006), it is therefore, critical to explore whether the effects on customer satisfaction and customer brand loyalty of implementing technology in service delivery would be the same as providing service by interpersonal interaction especially in Bangladesh perspective where people are assumed to be culturally less technology oriented and more prone to interpersonal interaction.

Furthermore, research using national satisfaction indices in Sweden, Switzerland, and the USA revealed that satisfaction has a positive impact on customer brand loyalty and firm performance (Francisco, 2013). Customer satisfaction, which affects relationship and loyalty (Casalo et al., 2008), is the evaluation of emotional commitment (Soderlund M. 2006) and it happens only after a customer has gone through the process of service and used the product (Chang and et al. 2006). Still, much research has looked at overall customer satisfaction rather than focused on some specific attributes of products or services. In services, the customers experience depends strongly on a service encounter, a direct interaction of consumers with service providers which can significantly affect the level of overall satisfaction. The service encounter is the basis for a customer's evaluation of the service provider (Solomon & et al. 1985) and when companies provide a service encounter that suits consumers, they generate a positive experiential value and lasting customer relationships (Wong & Tsai 2010).

According to a number of prominent researchers, there are knowledge gaps related to customer loyalty, particularly in the technology-customer linkage. One gap is pointed out in Parasuraman and Grewal (2000), who call for research on the issue of "Is customer retention/loyalty harder or easier to achieve when customers interact with technology rather than with employees?" what boundary conditions or moderating factors are likely

be relevant in this regard?. A second key gap is “how does the lack of human contact impact loyalty and what are the determinants of service loyalty regarding SSTs?”(Meuter et al., 2000).

Understanding customer evaluations of service encounters, particularly in the financial services industries, is critical to both academics and practitioners. Firms in the industry have been progressively employing technology to enhance efficiency in managing their services in one hand, and to gain customer brand loyalty demonstrating distinct image in customer perception on the other hand. Nonetheless, these firms are offering technology based services without having studied carefully the true results of services through this technology interface. Parasuraman et al. (2005) noted that what customers expect from these new, innovative, technology-driven services does not necessarily fit the mold of early models of service expectations. So, the propose study is an attempt to evaluate the impact of technology –based service encounter on customer brand loyalty and profitability as well in comparison with the impact of interpersonal service encounter. No doubt, the study will be a significant contribution in this regard in Bangladesh perspective in particular and developing countries in general.

1.2 Rational for the Study

Customer loyalty is a key driver of companies’ profitability and growth (Heskett et al., 2008, 1994) and the cost of serving a loyal customer is five or six times less than a new customers (Ndubisi, 2005; Gee et al., 2008, and Pfeifer, 2005). Customer loyalty is a direct outcome of customer satisfaction (Tariq and Moussaoui, 2009; Han et al., 2008; Ehigie, 2006; East, 1997). Customer satisfaction with the service encounter is also critical to marketing performance of service companies (Bitner, Booms, and Ttraeault 1990). Much service encounter research has focused on interpersonal service encounters associated with customer satisfaction issues, still, few studies have investigated the impact of service encounter satisfaction on customer loyalty. In addition, there has been relatively little research which studied customer satisfaction with technology-based service encounters. Very few researches have explored the effects of technology interface services on customer loyalty. Consequently, there is a need for academic research to investigate the impact of a technology-based service encounter on customer loyalty.

According to a number of prominent researchers, there are knowledge gaps related to customer loyalty, particularly in the technology-customer linkage. One gap is pointed out in Parasuraman and Grewal (2000), who call for research on the issue of (1) “Is customer

retention / loyalty harder or easier to achieve when customers interact with technology rather than with employees? What boundary conditions or moderating factors are likely to be relevant in this regard? A second key gap is (2) “How does the lack of human contact impact loyalty and what are the determinants of service loyalty regarding SSTs” (Meuter et al., 2000)? Therefore, this research studies the impact of satisfaction with technology-based service encounters on customer loyalty, and compares it with interpersonal service encounter satisfaction.

Management also requires knowledge to understand how a technology-based encounter encourages customer loyalty. Thus, the significance of this study is its contribution to academic knowledge of service encounter satisfaction and service loyalty, and to managerial implications inherent in the current trend of increasing technology applications in services.

1.3 Problem Statement:

Both academic and managerial needs for future research motivate this study to find out “What is the impact of technology-based service encounters on customer loyalty?” Most service encounter research focuses on attributes of interpersonal service encounters, but the nature of the service encounter is changing. Currently, technology is used to provide non-human interfaces. Customer satisfaction with services depends strongly on the service encounter, thus, it is critical to investigate the results of employing technology-based service encounters, particularly in customer perceptions.

Furthermore, the use of e-services, accessed via Internet or mobile phone, is growing progressively larger in South Asian context. Following the success of technological adaptation in service encounter, firms –local or international- operating in Bangladesh are progressively using technology to provide non-human service interfaces. **Whereas individuals’ perception to use or consumption of services and goods is partially subject to cultural.** There is a strong need to develop a better understanding of how consumers evaluate these services. On the other hand, most service encounter researches have focused on attributes of interpersonal service encounters. No significant academic research in Bangladesh has addressed the issue of technology-based service encounter interface. Therefore, considering customer satisfaction with services depends significantly on the service encounter, it is critical to investigate the result of employing technology-based service encounters, particularly in customer perceptions and the impact on customer loyalty.

1.4 Research Questions:

Therefore, this research aims to answer the two research questions as follows:

- What are the determinants of customer satisfaction when customers interact with the service firm in technology-based service encounters? How do they compare with determinants in an interpersonal service encounter?
- Is customer brand loyalty easier to achieve when customers interact via technology based service encounters rather than through interpersonal encounters?

1.5 Research Objectives:

1.5.1 Broad Objective:

The main objective of this study is to investigate the impact of technology –based service encounter on customer satisfaction and brand loyalty in the developing Asian cultural context, with Bangladesh as the example.

1.5.2 Specific Objectives:

In support of the main purpose, the specific objectives are:

- to identify the customer satisfaction and dissatisfaction drivers in either technology-based or interpersonal service encounters,
- to investigate the service encounter satisfaction-service loyalty relationships
- to investigate the impact of technology readiness on customer satisfaction with a technology-based service encounter and an interpersonal service encounter
- to investigate the moderating impact of the technology readiness of customers on the service encounter satisfaction-service loyalty relationships

1.6 Scope of the Study

This research will focus on the relation between customer satisfaction with service encounters (both interpersonal and technology based) and customer loyalty toward service provider (service loyalty) in the context of evaluative judgment. Other loyalty drivers (e.g., brand image, corporate image, commitment, relationship, switching, service quality and trust) are beyond the scope of the study.

In addition, customer satisfaction and dissatisfaction (hereafter stated as dis/satisfaction) with service encounters are separately investigated into several dimensions. The scope of each dimension is specific to each type of service encounter. Customer dis/satisfaction

with interpersonal service encounter refers to the derived dis/satisfaction from services when customers, retail stock traders/ investors, interacting with service providers (e.g., brokers and marketing officers). Service encounter dis/satisfaction with technology-based service encounter specifically results from customer dis/satisfaction with non-human interaction services such as an online stock brokerage service. Other sources of customer dis/satisfaction such as service settings or physical environments are not considered in this study. Although, there have been a number of calls for longitudinal studies in satisfaction research, this study focused on measuring customer satisfaction with a service encounter at a single point in time.

Further, this research focused on investigating Bangladeshi customers who concurrently have the opportunity for services encounters with both technology as well as interpersonal interfaces. The conceptual model of the study was designed to explain whether the impact on customer satisfaction and customer loyalty of implementing technology-based services would be the same as in interpersonal service encounters, particularly in the launching stage of technology-based services. Therefore, retail stock-traders/ investors (i.e., the customers) of stock brokerages firms in Bangladesh were selected as the target population, since they had more potential opportunities for encounters with either technology-based or interpersonal interface. Additionally, Bangladesh is one of the South Asian countries that stock brokerage firms have rapidly employed technology-based services and concurrently provided interpersonal services for their customers. After the major downturn/ collapse of retail stock market (Dhaka Stock Exchange) in 1996, stock market of Bangladesh have been developing rapidly and the recent experience of sudden crisis has made the market matured and stable.

In conclusion, this study exclusively focused on customer dis/satisfaction with both service encounters (interpersonal and technology-based) and the results of service encounter satisfaction on service loyalty.

The specific context of the current study, brokerage services in Bangladesh, was chosen for two reasons. First, particularly in Bangladesh, the stock trading services have concurrently been providing both technology-based and interpersonal service encounter for several years. The other one is the customers' (retail stock traders) high involvement attention when making the decisions or evaluations, compared to customers in other potential services (e.g., bank customers, and hotel or airline clients).

Exploratory research, both in-depth interviews and secondary data analysis, in Bangladesh explored that bank services such as, loan services are perceived as high involvement

services in terms of time and effort to decide, and the amount of information needed (Ghosh, S., 2015). However, this type of banking services are rarely offered online/ electronically in Bangladesh, so it is difficult to assess realistically how customers might perceive both services interfaces. In this research, the stock brokerage service was considered a high involvement service, thus, it is well suited for investigating the impact of technology readiness of customers on service encounter satisfaction, customer loyalty and their relationships. The sampling frame was provided by fifteen brokerage service firms in Bangladesh, since these firms concurrently provided both interpersonal and technology-based service encounters.

The unit of analysis for the present research is individual retail stock traders who can potentially encounter services either via technology interface or interpersonal interfaces. The retail stock traders are the individual customers of the stock brokerage services. The study didn't investigate institutional customers here. Retail customers are usually the persons who decide and evaluate the service interaction with the brokerage firms. Other kinds of customers such as big account or institutional clients have their representatives execute or interact with the service firms, and decisions about how to interact, as well as perceptions of the interactions, are more dispersed.

Further, the study was conducted in Chittagong and Dhaka metropolitan cities to ensure the real representative who have access to both the encounters and have experience of technology encounters more or less.

1.7. Structure of the Study

The study is divided into six chapters as follows:

Chapter 1 includes the introduction to the study, the background to the study, rationale for the study, problem statement and objectives, scope of the study and structure of this study.

Chapter 2 covers the critical analysis of current generations of consumers and their consumption behavior. In doing so, it discusses how the modern consumers / consumers 2.0 differ from the traditional consumers known as consumer 1.0, the behavioral patterns of digital consumers and the possible marketing challenges of dealing with them, and finally the present status of digital consumers in Bangladesh and their interaction with cultural value dimensions.

Chapter 3, the literature review divided into four sections covers a review on the three main concepts and the conceptual model. Literature was reviewed extensively in the fields of customer satisfaction, customer loyalty, and technology readiness of customers. The proposed conceptual model of the impact of technology-based service encounters on customer loyalty, and that the strength of the impact in each case depends on the technology readiness of customers.

Chapter 4 describes the research methodology and the pilot work. The exploratory pilot study, in-depth interviews with typical customers of stock brokerage services and Delphi with both academic and practitioner experts are delineated. Early stages of the work focused on gaining a deeper understanding of how customers developed satisfaction with either type of service encounter in this industry, and their feelings toward the role of technology in providing the service. Development of the instrument for the quantitative research was a later part of this pilot work.

Chapter 5 presents the findings of empirical study findings. the analysis of findings resulting from the survey and discusses in detail including the analyzed reason behind the findings. The broad patterns of our hypothesis were confirmed. Technology readiness does influence customer satisfaction with both technology based and interpersonal service encounters. These satisfactions contribute to loyalty, and TR influences the strength of the relationship in each case. However, while the overall patterns confirm our basic ideas, some of the detail do not work, or do not work as expected.

Finally, chapter 6 proposes conclusions and recommendation about the impact of technology-based service encounters on customer loyalty. The study proposes among other things, that attitudes toward service encounters cannot be fully understood only in terms of orientation toward technology (technology readiness), but that human orientation may be able to solve some of the problems in detail mentioned in the results. It should allow a more sophisticated understanding of how to implement technology in services. The mass markets in Bangladesh context in particular are unlikely to prefer stand-alone technology interfaces, rather, they will probably want to have service interactions which fully integrate interpersonal and technology modes.

CHAPTER 2

Understanding Consumer Behavior 2.0/ Web 2.0/ Digital Consumer

2. Introduction:

Market and market behavior is the product of the interplay of the major environmental forces. Their individual or joint internal movements reshape market as well as consumer behavior. In recent past, technology has emerged as a key determinants of market behavior. The world of digital media is changing at an incremental pace. Its constantly evolving technologies, and the way people are using them, is transforming not just how you access your information, but how you interact and communicate with your friends and colleagues on a global scale. It has also changed the way you choose and buy product and services. Consumer behavior on the Web has been the subject of considerable research in the recent past, but understanding it is made difficult by the fact that the main entities involved, consumers and businesses, have been transformed (Marios, 2012). People around the world are embracing digital technology to communicate in ways that would have been inconceivable just a few short years ago. Every consumer is now also a computer user. The online consumer performs all the functions of a traditional consumer on a computer while interacting with a system, i.e., a commercial Web site. They also exhibit all the characteristics of a computer user. Not only the tech-savvy early adopters, today ordinary people are integrating digital technology seamlessly into their everyday lives. Therefore, the physical store has been transformed into a virtual store through information technology (IT).

The global online population was around and 2.1 billion at the end of March 2011 (Internet World Stats). By 2012, the figure reached to almost 2.5 billion people online or just one third of the 7 billion. People on the planet being connected rapidly via Internet, there is no doubt, this figure is set to double in the years ahead- that means approximately 5 billion by 2020.

This new horizon of communication has been revealing new opportunities where marketers in sectors as diverse as travel, retail, gambling, and adult entertainment have stumbled on incredible effective techniques to turn people on to doing business online, reaping literally millions as a result.

The Internet has become the medium of choice for a generation of consumers: the first generation to have grown up taking for granted instant access to digital information. This

generation integrates digital media into every facet of its daily life, in ways we could never have conceived in even the recent past. Today this generation of digital natives is entering the work place and is spending like never before. This is the mass market of tomorrow, and for business people and marketers the challenge is to become fluent in this new digital language so that we can talk effectively to our target audience.

2.1 Introducing Web 2.0 (Pronounced two-points-oh)

Two-points-oh technology also known as Web 2.0 is neither a new version of Web 1.0 nor a revolutionary technology rather it's an evolution in the way people are using technology. It's about harnessing the distributed collaborative potential of the internet to connect and communicate with other like-minded people wherever they are; creating communities and sharing knowledge, thoughts, ideas and dreams. Almost all the sectors responding to the changing market have transformed their services with web 2.0 technologies and termed them as business 2.0, government 2.0, education 2.0, career 2.0, and of course marketing

2.2 Consumer

Before web 2.0, consumer roles in communication and receive service was passive and control rested on marketers. But, now after the web technology and its application in communication and service delivery, all the rules have been changed and today's consumers are in control like never before. They are almost free agent and can choose what they want, when they want it, in the way they want it... they can even create their own and share it with their friends, their peers and the world. According to Julian Smith, the analyst with Jupiter Research, consumers are better informed through the increased ability to access and shift an abundance of information anytime, anywhere. They are more in control through the ability not only to personalize their information and entertainment consumption, marketing messages, and the product and services they buy, but also to gain satisfaction on demand. A key difference between online and offline consumer behavior is that the online consumer is generally more powerful, demanding, and utilitarian in her shopping resulting low customer loyalty on the web (Morrisette et al. 1999). This power shift from marketers to consumers brings a huge challenges for marketers in devising right strategy to deal with digital consumers effectively. Perceived risk of online shopping and perceived ease of use of the Web site have been found most influencing factors to form

attitude towards online purchasing (Heijden et al. 2001). Marketer must have clear and adequate information as well as idea how web 2.0 technology is influencing consumer behavior. Online consumers clearly share some characteristics of their offline counterparts but also have unique needs and concerns that reflect their online environment. In this regard, Julian Smith suggested that progressive adoption of Web 2.0 technology reshaped consumer behavior in the following seven ways:

- Interconnectivity
- Technology is levelling the information playing field
- Relevance filtering is increasing
- Niche aggression is growing
- Micro publishing of personal content is blossoming
- Rise of prosumer
- On demand: any time, any place and any where

2.3 Prosumer:

Online consumers are getting increasingly involved in the creation of the products and services they purchase, shifting the balance of power from producer to consumer. They are letting producers know what they want in no uncertain terms: the level of interaction between producer and consumer is unprecedented. Individuals are more involved in specifying, creating, and customizing products to suit their requirements, and are able to shape and mould the experiences and communications they receive from producers. Traditional mass production and mass marketing concepts are rapidly becoming a thing of the past. These consumers are:

- In control: The web is no passive medium. Users are in control- in the Web 2.0 world more than ever before. Fail to grasp that simple fact and your target audience won't just fail to engage with you, they will actively disengage. Marketing is to be user centric, elective or permission based, and offer a real value proposition to the consumer in order to garner positive results.
- Fickle: the transparency and immediacy of the internet doesn't eradicate the concept of brand or vendor loyalty, but it does erode it. Building trust in a brand is still a crucial element of digital marketing, compare and contrast competing brands. How does your value proposition stack up against the competition around the

country and across the globe? Your brand identity may be valuable, but if your overall value proposition doesn't stack up you will lose out.

- **Vocal:** Online consumers talk to each other a lot. Through peer reviews, blogs, social networks, online forums and communities they are telling each other about their positive online experience and the negative ones.

2.4 Digital Consumers Vulnerability:

The young consumers constitute one of the fastest growing Internet populations. This group of consumers spends more time and money online than adults. They experience purchasing and behaviors at a much faster rate than their parents in dealing with media and digital products (McDonnell 1994; Tapscott, 1998) since they are able to use technologies such as Internet to improve their consumption skills. Batat (2010) has described 12 dimensions of young consumers competences related to the use of media and new technologies to improve their consumption experience. These domains are: good managing of pocket money, making good decisions, using Internet and blogs to improve their consumption skills, dealing with sales people, seeking appropriate assistance and advice, comparison shopping, controlling impulsive purchasing, innovation by consumption and usage, ability to transgress, Internet risks consciousness, consumer's moral consciousness and ecological consciousness.

In spite of these competencies, teenagers could be viewed as victims even though they are empowered by using Internet because of their vulnerability and the lack of their experiences and knowledge in terms of consumptions and purchasing. There is no consensus on what consumer vulnerability refers in marketing literature (Baker et al., 2005).

Consumer vulnerability has been defined in various ways. From a time perspective, vulnerability may be either a temporary (situational) or a permanent (enduring) condition (Brenkert, 1998; Walsh, 1996). Baker, Gentry and Rittenburg (2005) define vulnerability as a "short run phenomenon that does not become an equilibrium state". Situations contributing to consumer vulnerability include death of a loved one (Gentry et al., 1995), divorce (McAlexander et al., 1993), or lack of access to technology (Hogg et al., 2007). In addition, consumers who have limited literacy skills are also assumed to have greater

potential for vulnerability (Adkins and Ozanne 2005). Through exploratory research, Batat (2010) suggested some potential causes of young consumers vulnerability. These are:

- Lack of/low self-esteem enhances consumers vulnerability: “I don’t feel comfortable in my peer group if I am not dressed as all the rest of my group, I mean wearing famous brands is very important to get involved within the group and it allows you to be respected by all the members as well. For me, even it is very expensive brand, I have to buy it and sometimes my mother is against that because we don’t have enough money to buy this kind of brands but she does understand the importance of a such brand for me” (Female, 15).
- Higher level of materialism leads vulnerability in consumers with high self-esteem: “In my class, I’m the only one who has all the digital equipments. Well, I’ll tell you, I have Xbox, PS#, Game Boy (the latest one of course), Wii, laptop, Iphone, IPod..... and I am very proud of that. You know what, all my friends consider me as an expert and they often ask me for advices before they purchase their video games. By the way, I am very popular in my school because I’m always the first one who will purchase the last digital product. I was the first one in the whole school who bought it the first day it was launched in Paris, my friends were very impressed....it’s cool” (Male, 14).
- Lack of self-confidence makes young consumers vulnerable: “I don’t feel comfortable when dealing with salespeople particularly when I’m alone. It’s very difficult to resist their pressure, they start by asking you if you need any help and then they propose you an item and they try to convince you that it will fit with your need even you are not interested. Sometime, I can’t resist the salespeople pressure, so I purchase the item then when I get home I am always very angry against myself because I did not control the situation and I was vulnerable... it’s not funny” (Male, 15).
- Lack of consumption experience makes the young consumers vulnerable:
- Peer group pressure intensifies young consumers vulnerability
- Paradox of technology: negative outcomes of technology cause young consumers vulnerability
- Power of unsafe communities’ prescriptions leads vulnerability among young consumers.

2.5 Digital Bangladesh

The slogan of “Digital Bangladesh” of the Government of Bangladesh has special significance for national development. Digital Bangladesh with Vision 2021 is a big impetus for the use of digital technology in the country. In spite of several bottlenecks and limitations, works are in progress for the realization of Digital Bangladesh. Several projects for digitalization have been completed and a big number of projects are under progress. The nation now, with over 12 cores mobile subscribers and 8.03 (in table) cores Internet subscribers, enjoys the fruits of digitization in numerous areas of activities. The ultimate objective is to make more and more services available at the doorsteps of the people with increased digitalization where possible.

A few examples of available digital services (Summarized in Table) are: registration for admission to academic institutions, publication of results of examinations, registration for jobs abroad, registration of pilgrimage, collection of official forms, online submission of tax returns, online tendering, etc. Online banking and online stock trading systems have sped up the financial activities of the country. SMS services for lodging complaints to police stations, online bill payments for utility services, instant communication with persons working abroad, and e-passports, e-ticketing are some more examples.

Telemedicine services, videoconferencing for the treatment of diseases, and video conferencing for administrative activities are examples of e-services available to rural Bangladesh. Setting up of nearly five thousand Union Information Service Canters is a great boost for Digital Bangladesh, especially for rural areas. Turning eight thousand village post offices and approximately five hundred upazila post offices into e-centers and the introduction of mobile money order and postal cash cards are significant achievements in the recent past. Union Information Centers, District Information Cells, National Information Cell are also revolutionary additions.

There are many more developments in the line. Deputy Commissioner Offices in districts and UNO offices in upazilas provide a large number of e-services to rural clients. Direct digital services eliminate middlemen and save both time and money. Without such online services, our cities and towns would have turned into difficult places to live in.

Table 2.1: Technology Encountered Services Available in Bangladesh

1. E-Banking	8. E-health care
2. E-Ticketing	9. Online visa service
3. Online application / Admission	10. Online utility bill payment
4. Online securities trading	11. E-Tax payment
5. E-booking	12. E-Governance
6. Online restaurant Booking/ Food ordering	13. E-Conference
7. E-shopping	

2.6 Growing Use of Digital Technology:

Emergence of technology, particularly information technology and its multi-dimensional applications in improving life-style has intensified the use of this technology around the globe. Rapid growth of users (Shown in table 2.2) refers that no business can afford to avoid the application of this technology in future. Asia is the habitant of almost two-third of the world population and 48.1% of them use Internet, which is highest in number as Internet user, 48.7% of total world users. In compare to the other regions, Asia represents the highest future growth potential of Internet users. Internet use rate has increased rapidly in recent years in Bangladesh and present penetration rate is 48.1% of the total population of 16.6 million (See in the table 2.3). Growing maturity of internet uses and rapid improvement of technology, for instance launching 4G of Mobile technology, will accelerate the growth of technology-driven services in Bangladesh. It offers opportunities in one hand and imposes challenges for marketers to understand rapidly changing consumer behavior.

Table 2.2: World Internet Usage and Population Statistics Dec 31, 2017- Update

World Regions	Population (Million)	Population % of World	Internet Users 2017 (Mil)	Penetration Rate (% Pop.)	Growth 2000-2018	Internet Users%
Africa	1,287.91	19.9%	453.32	35.2%	9,941%	10.9%
Asia	4,207.59	55.1%	2,023.63	48.1%	1,670%	48.7%
Europe	827.51	10.8%	704.83	85.2%	570%	17.0%
Latin America	652.05	8.5%	437.00	67.0%	2,318%	10.5%

Middle East	254.43	3.3%	164.03	64.5%	4,893%	3.9%
North America	363.84	4.8%	345.66	95.0%	219%	8.3%
Oceania	41.27	0.6%	28.44	68.9%	273%	0.7%
Total	7,634.75	100.0%	4,156.93	54.4%	1,052%	100.0%

Source: www.internetworldstats.com

Table 2.3: Internet Users in Asia

World Regions	Population (Million)	Internet Users 2000	Internet Users 2017	Penetration Rate (% Pop.)	Users % in Asia	Facebook Users%
<u>Afghanistan</u>	36.37	1,000	5,700,905	15.7 %	0.3 %	3,200,000
<u>Bangladesh</u>	166.37	100,000	80,483,000	48.4 %	3.8 %	28,000,000
<u>India</u>	1,354.05	5,000,000	462,124,989	34.1 %	22.8 %	251,000,000
<u>Maldives</u>	0.45	6,000	340,000	76.5 %	0.0 %	320,000
<u>Nepal</u>	29.60	50,000	16,190,000	54.7 %	0.8 %	8,700,000
<u>Pakistan</u>	200.81	133,900	44,608,065	22.2 %	2.2 %	32,000,000
<u>Sri Lanka</u>	20.95	121,500	6,710,160	32.0 %	0.3 %	5,500,000
<u>China</u> *	1,415.04	22,500,000	772,000,000	54.6 %	38.1 %	1,800,000

Source: www.internetworldstats.com

2.6.1 Networked Readiness Index (NRI)

The Networked Readiness Index (NRI) of the World Economic Forum assesses the impact of ICT on the competitiveness of the nations of the world. The four sub-indices of NRI are: Environment (business, innovation, political and regulatory), Readiness (infrastructure, digital contents, affordability, skills), Usage (individuals, businesses and government), and finally the Impact of ICT (economic and social impact). Each sub-index is based on several pillars (a total of 10) and each pillar is calculated out of a number of indicators. Table depicts the NRI status of Bangladesh and its neighboring countries.

Table 2.4: Status of NRI of Bangladesh and its neighboring countries

COUNTRY	2014	2013	2012
Bangladesh	119 (score 3.21)	114	113
Bhutan	94 (score 3.68)	N/A	N/A
India	83 (score 3.85)	68	69
Nepal	123 (score 3.09)	126	128
Pakistan	111 (score 3.33)	105	102
Sri Lanka	76 (score 3.94)	69	71

2.6.2 ICT Development Index (IDI)

The ICT Development Index (IDI) of the International Telecommunication Union (ITU) is a useful tool for the status of Information Society. This index, which is based on eleven indicators, is grouped into three categories: Access, Use and Skills. Table 2 depicts the IDI of Bangladesh and its neighboring countries according to the Information Society Report 2014 of ITU.

Table 2.5: Status of IDI of Bangladesh and its neighboring countries

COUNTRY	2013	2012	2011
Afghanistan	155 (score 1.67)	155	N/A
Bangladesh	145 (score 1.97)	146	139
India	129 (score 2.53)	129	120
Nepal	131 (score 2.37)	134	N/A
Pakistan	142 (score 2.05)	141	128
Bhutan	123 (score 2.85)	126	117
Sri Lanka	116 (score 3.24)	113	107
Myanmar	150 (score 1.82)	148	N/A

2.6.3 E-Government Development Index (EGDI)

United Nation's e-Government Development Index (EGDI) evaluates the impact of ICT on the political economy of a country. This index focuses on how governments use ICT to deliver services to the people and opportunities for citizens to participate in the decision-making process. EGDI is measured on the basis of online services, technological infrastructure and human capital. Table 3 shows Bangladesh's ranking (out of a total of 193 countries) in EGDI as wells as those of its neighboring countries.

Table 2.6: EGDI ranking of Bangladesh and its neighboring countries

COUNTRY	2014	2012	2010
Afghanistan	173 (score 0.1900)	184	168
Bangladesh	148 (score 0.2757)	150	134
Bhutan	143 (score 0.2829)	152	152
India	118 (score 0.3834)	125	119
Maldives	94 (score 0.4813)	95	92
Myanmar	175 (score 0.1869)	160	141
Nepal	165 (score 0.2344)	164	153
Pakistan	158 (score 0.2580)	156	146
Sri Lanka	74 (score 0.5418)	115	111

Source: Luthfar Rahman, Daily Star, March 23, 2015

2.7 Bangladeshi Culture

Culture influences and shapes consumer behavior. There is a positive correlation between wealth and culture because growing income of people at micro and macro level drives them to material culture i.e., materialism. In last one decade, Bangladesh economy experienced a positive growth (7% growth in GDP) and per capita income of its population reached to US\$1605 in 2017 from \$350 in 2005. This level of wealth of nations ranks as well as categories them in different leveling of developed, developing, least developed etc. The evidence shows that as incomes rise beyond a certain level, culture replaces wealth as a predictor variable of behavior (De Mooij, 2011). Historically, the world is divided into east and west or spiritualistic and materialistic and Bangladesh as an Asian nations strongly holds spiritualistic culture and orthodox behavior. But, recent strong wave of some forces such as, globalization, rapid expansion of information technology, emergence of mass Medias and their global reach has been reshaping its cultural behavior along with other nations of the world. Greet Hofstede (2001) has become very famous for his six dimensional model of analyzing and categorizing nations based on their cultural values. The dimensions are power distance, individualism vs collectivism, masculinity vs femininity, uncertainty avoidance, long term orientation, and indulgence. Srite and Karahanna (2006) performed a study that identifies national cultural values of low masculinity and high uncertainty avoidance as an important set of individual difference moderators in technology acceptance. D Mooij (2011) also posits that people in feminine cultures are less interested in technology than those in masculine cultures, and Lynn and Gelb (1996) reported significant correlations between ownership of several technological devices and individualism. Developing countries typically have higher levels of UA, with 77 percent of them scoring in the upper half of Hofstede's (2001) UA index compared to only 50 percent of developed countries. Buying brand-new products or services, especially the more costly and sophisticated ones, may constitute a matter of anxiety for individual in high UA countries, who tend to adopt innovation at a lower speed than those in low UA cultures (De Mooij, 2011).

If we explore the Bangladesh culture through the lens of the 6-D Model, we can get a good overview of the deep drivers of its culture relative to other world culture. According to the Hofstede's national cultural values index, Bangladesh culture scores in all six dimensions are given in the table 2.7.

Table 2.7: Score of Bangladeshi Cultural Value Dimensions

Values Dimensions	Scores (in 100 points)
Power Distance	80 points
Individualism	20 points
Masculinity	55 points
Uncertainty avoidance	60 points
Long term orientation	47 points
Indulgence	20 points

2.7.1 Power Distance

Bangladesh scores high on this dimension (score 80) which means that people accept a hierarchical order in which everybody has a place and which needs no further justification. Hierarchy in an organization is seen as reflecting inherent inequalities, centralization is popular, subordinates expect to be told what to do and the ideal boss is a benevolent autocrat.

2.7.2 Individualism

Bangladesh, with a score of 20 is considered a collectivistic society. This is manifest in a close long-term commitment to the member 'group', be that a family, extended family, or extended relationships. Loyalty in a collectivist culture is paramount, and over-rides most other societal rules and regulations. The society fosters strong relationships where everyone takes responsibility for fellow members of their group. In collectivist societies offence leads to shame and loss of face, employer/employee relationships are perceived in moral terms (like a family link), hiring and promotion decisions take account of the employees in group, management is the management of groups.

2.7.3 Masculinity

A high score on this dimension indicates that the society will be driven by competition, achievement and success, with success being defined by the winner/best in field – a value system that starts in school and continues throughout the life. A feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable. Bangladesh scores 55 on this dimension and can be considered a Masculine society. In Masculine societies people “live in order to work”, managers are expected to

be decisive and assertive, the emphasis is on equity, competition and performance and conflicts are resolved by fighting them out.

2.7.4 Uncertainty Avoidance

Bangladesh scores 60 on this dimension and it is a high score. Countries exhibiting high scores in UA maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. In these cultures, there is an emotional need for rules, time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, innovation may be resisted, security is an important element in individual motivation.

2.7.5 Long Term Orientation

Normative societies, which score low on this dimension, for example, prefer to maintain time-honored traditions and norms while viewing societal change with suspicion. Those with a culture, which scores high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in modern education as a way to prepare for the future. Bangladesh has an intermediate score at 47, this does not indicate a strong preference in either direction.

2.7.6 Indulgence

Culture can be described as Indulgent or Restrained based on the way the children of society are raised. Relatively weak control is called “Indulgence” and relatively strong control is called “Restraint”. Bangladesh has a very low indulgence score of 20. This makes it a Restrained-country. Societies with a low score in this dimension have a tendency to cynicism and pessimism. Also, in contrast to Indulgent societies, Restrained-societies do not put much emphasis on leisure time and control the gratification of their desires. People with this orientation have the perception that their actions are Restrained by social norms and feel that indulging themselves is somewhat wrong.

2.8 Asian Consumer Behavior

Asia is considered as a growth engine of the global economy, therefore companies all over the world are looking toward Asia for their future. According to Prof. Schmitt, “Asia is undergoing a massive transformation. And Asian consumers are going to have new hopes and dreams. Their values are changing and there are growing tensions between tradition and modernity; saving versus spending, fitting in versus standing out from the crowd.”To

build a strong brand in Asia, companies need to understand the marketplace very well and offer more than just functional superiority because Asian consumers are more emotional and expressive (Schmitt, 2016). A new study by the Institute on Asian Consumer Insight (ACI) at Nanyang Technological University (NTU) revealed that Asian consumers value the family, believe in hard work, and are financially conservative. They desire respect for the tremendous progress they made, and yet shun flashy expressions of wealth. Proper behavior, fun and enjoyment, and nature are also highly regarded (Batra, 2016). Instead of substantial amount of variation among Asian consumer values, this study identified four distinct segments of consumer:

- Inner-Directed Traditionalists (19% of population), who value religion and tradition, tend to be thrifty and less materialistic;
- Outer-Directed Strivers (29% of population) tend to have lower education and incomes. They value work success highly, seeking endorsement in the form of fame and material wealth;
- Survivor Oriented (13% of population) consumers tend to be older, less educated, with lower incomes, and are financially less optimistic; and
- Mainstream Asian Values (39% of population)

The study also found that consumers under 25 and those above 45 have little difference in attitudes towards the importance of education; hard work; high savings and debt-aversion; value-seeking; consuming inconspicuously; fun, enjoyment and leisure; and the importance of one's larger social groups.

CHAPTER 3

Literature Review

3. Literature Review

The literature relevant to key concepts underlying the development of the conceptual model and hypotheses for this study is divided into four main sections: (1) customer satisfaction; (2) customer brand loyalty; (3) technology and customers; and (4) a conceptual model.

1. Customer Satisfaction
 - a. Customer satisfaction versus service quality
 - b. Customer satisfaction with service encounters
 - c. Customer satisfaction with Interpersonal service encounters
 - d. Customer satisfaction with technology-based service encounters
2. Customer Loyalty
 - a. Brand loyalty versus Service loyalty
 - b. Customer loyalty drivers
 - c. Customer satisfaction-customer loyalty relationships
3. Technology and the Customer
 - a. Customer perception of technology
 - b. Technology readiness of customers
4. Conceptual Model
 - a. The impact of technology readiness of customers on service encounter satisfaction
 - b. Service encounter satisfaction-loyalty relationships
 - c. Moderating effects of technology readiness
 - d. Definitions
 - e. Hypothesis for the study

3.1. Customer Satisfaction

Customer satisfaction is one of the important outcomes of marketing activity (Oliver, 1980;; Spreng et al, 1996; Mick and Fournier, 1999). It serves to link processes

culminating purchase and consumption with post purchase phenomenon such attitude change, repeat purchase, and brand loyalty (Surprenant and Churchill, 1982). This opinion has been supported by Jamal and Naser (2003) and Mishra (2009). Customer satisfaction has been considered the essence of success in today's highly competitive service industry. Prabhakaran and Satya (2003) mentioned that customer is the king. Heskett et al. (1997) argued that profit and growth are stimulated primarily by customer loyalty. Satisfied customers tend to be less influenced by competitors, less price sensitive, and stay loyal longer (Dimitriadis, 2006; Sit et al., 2009). Ndubisi (2005), Gee et al. (2008) and Pfeifer (2005) pointed out that cost of serving a loyal customer is five or six times less than a new customer. Several researchers including Tariq and Moussaoui (2009), Han et al. (2008) and Ehigie (2006) and other researchers (see table 1) found that loyalty is a direct outcome of customer satisfaction. The importance of customer satisfaction can be realized with statement of Sangwan (2009). If a satisfied customer has potential to influence and bring in 100 new customers, a dissatisfied customers can potentially influence 1000 customers. Nasserzadeh et al. (2008) mentioned that dissatisfied customers will most probably switch to a different brand; this will lead to negative advertising. The significance of satisfying and keeping a customer in establishing strategies for a market and customer oriented organization cannot be ignored (Kohli and Jaworski, 1990).

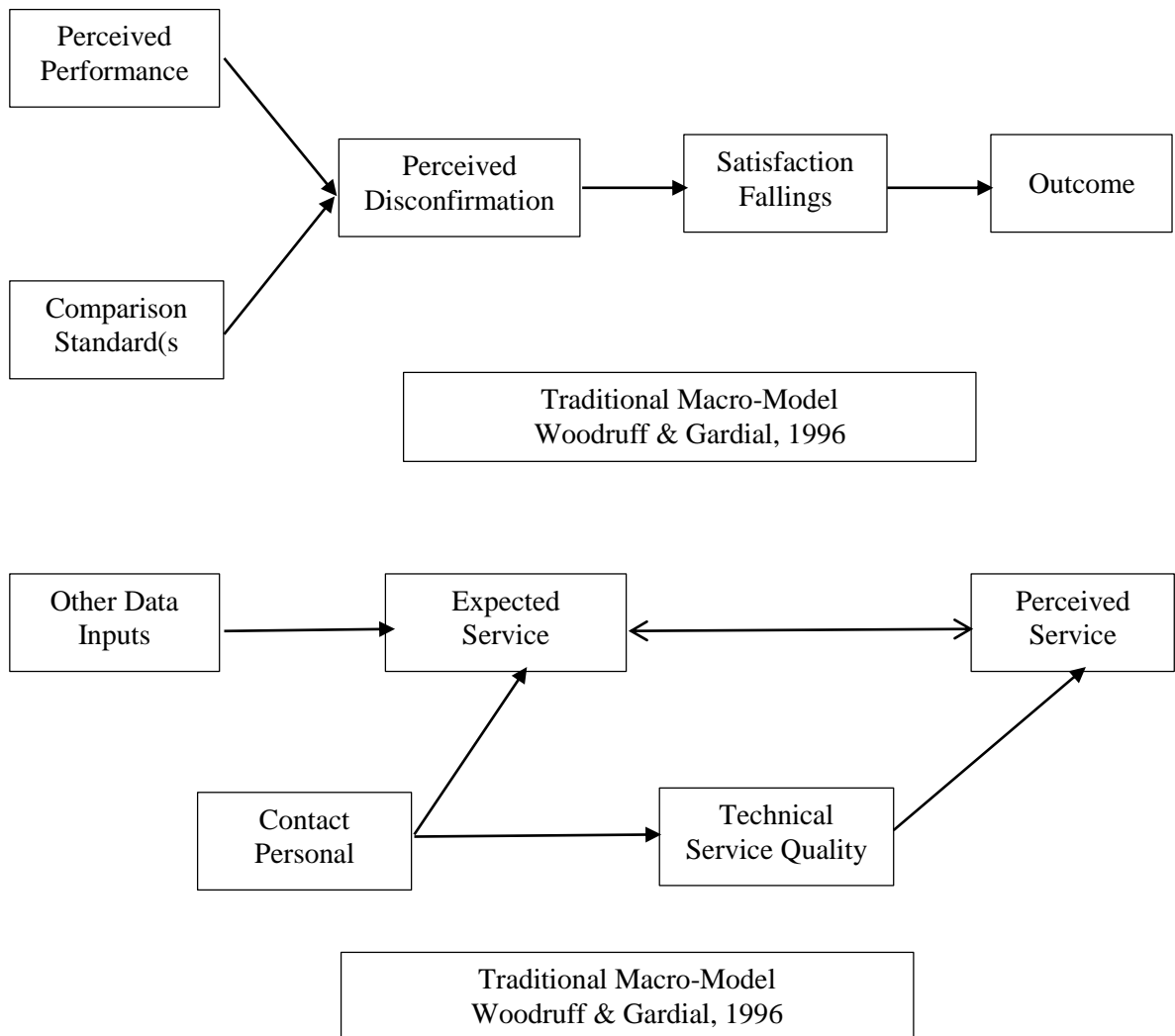
Customer satisfaction has been conceptualized differently based on a variety of product/service settings (Erevelles and Leavitt 1992). Customer satisfaction is generally viewed as a measure of how well a product or service supplied by a firm meets customer expectations (Saleem and Rashid, 2011). The marketing and consumer behavior literature has traditionally suggested that customer satisfaction is a relative concept, and is always judged in relation to a standard (Olander, 1977). Consequently, in the course of its development, a number, a number of different competing theories and models based on various standards have been postulated for explaining customer satisfaction. Table 3.1 lists a few of them including two models (Fig: 3.1). Early researchers, including Engel, Kollat & Blackwell (1968), Howard and Sheth (1969), Cardozzo (1965), relied on the dissonance theory developed by Festinger (1957). Subsequent studies (Anderson, 1973; Olshavsky & Miller, 1972) drew on the assimilation- contrast theory proposed by Sheriff & Hovland, (1961). Later, Oliver (1977), drawing on the adaptation level theory (Helson, 1964), developed the Expectancy-Disconfirmation model for the study of consumer satisfaction. Among the customer satisfaction models that have been widely applied since the early

1980s are the expectancy disconfirmation model (e.g., Oliver 1980), the perceived performance model (Churchill and Suprenant 1982), the multiple process model that investigates the influence and relationship of different comparison standards on customer satisfaction judgment (Tse and Wilton 1988), and the equity model which examines the relationship between customer satisfaction and the concept of fairness (Oliver and Swan 1989). However, the disconfirmation of expectation model has been the dominant one used by both researchers and practitioners, according to Patterson (2000).

Table 3.1: A list of Satisfaction Theories and Models

Theories / Models	Contributor(s)	Year
The Dissonance Theory	Festinger	1957
The Contrast Theory	Sheriff & Hovland	1961
The Expectancy Disconfirmation Paradigm	Oliver	1977, 1980
The Comparison Level Theory	Yi	1990
The Value-Percept Theory	Westbrook and Reilly	1983
The Importance –Performance Model	Barsky	1992
The Expectancy- Value Model	Fishbein and Ajzen	1975
The Attribution Theory	Weiner, Frieze and Kuklas	1971
The Equity Theory	Swan & Oliver	1989
The Evaluative Congruity Theory	Sirgy	1984
The Pearson Situation-Fit-Concept	Pearce & Mascardo	1984

Fig 3.1: Models of Customer Satisfaction



[Source: Adopted from: Woodruff & Gardial (1990)]

In recent satisfaction literature, the customer satisfaction concept still frequently follows the disconfirmation of expectations paradigm (e.g., McCollough, Berry, and Yadav 2000; McQuitty, Finn and Wiley 2000; Spreng, Mackenzie, and Olshavsky 1996). Customers form expectations then compare these to the perceived products/service performance. Expectations are defined as predictions of future performance (e.g., Oliver 1980). Thus, the outcome measured against expectations suggests that products/services fulfilling high expectations are predicted to generate greater satisfaction than product /services that meet low expectations. Some prior research has also investigated a perceived performance when studying the customer satisfaction concept. For instance, Churchill and Surprenant (1982) suggest that customer satisfaction with tangible products could be affected by the actual performance and could be measured by a summation of satisfactions with various attributes. Other previous research has used disconfirmation of various comparison

standards (i.e., customers' perceived discrepancy between prior expectations and the actual performance) as the antecedent of satisfaction (Tse and Wilton 1988).

Oliver (1989) supports that customers compare performance with their standards, then form confirmation or disconfirmation perceptions, and then form summary satisfaction judgments. Thus, in the expectations-disconfirmation paradigm, a comparison of expectations and perceptions of performance will result in either confirmation or disconfirmation. Confirmation is when service perceptions exactly meet expectations. Disconfirmation, when there is a discrepancy, may be either positive or negative. Customer satisfaction is the result of either confirmation or positive disconfirmation, when service performance exceeds prior expectations. In general, the more positive the disconfirmation, the greater the satisfaction, thus, simple confirmation may have less impact on customer satisfaction than positive disconfirmation. When expectations exceed service performance, negative disconfirmation leads to dissatisfaction, and the more negative, the greater the dissatisfaction.

Customer assesses customer satisfaction based on either disconfirmation or perceived performance (Halstead, Hartman, and Schmidt 1994). Some research, however, found that only the perceived performance had direct impact, or that it had a strong direct effect on customer satisfaction than the disconfirmation, particularly in the high-involvement situation (Churchill and Surprenant 1982; Patterson 1993). Other research presents some conflicting findings that both disconfirmation and perceived performance had impact on customer satisfaction of goods/services (Anderson and Sullivan 1993; Patterson 2000).

Thus, customer satisfaction has been defined various ways, though some ways are more widely accepted than others. However, Giese and Cote (2000) reviewed the definitions of customer satisfaction published during 1969 to 1997 and suggested that some of the definitions have overlapping components. Particular, customer satisfaction is the response to either emotional or cognitive cues. It is the response to a particular focus such as expectations or perceived product/service performance, which occurs at a particular time. The particular time could be after consumption, after choice, and based on either accumulative experience or a singular time of interaction between customer and service provider. For example, Oliver (1997) defined customer satisfaction as the consumer's pleasurable fulfillment response during consumption, whereas Westbrook and Oliver

(1991) tie the specific time of customer satisfaction to a post choice evaluative judgment concerning a specific purchase selection.

Simintiras, Diamantopoulos, and Ferriday (1997) conceptualized customer satisfaction of pre-purchases as the emotional outcome of anticipated satisfaction in order to investigate the relationship with the purchase behavior of first-time buyers. Anticipated satisfaction is the anticipatory cognitive evaluation concerning the extent to which a planned purchase will result in satisfaction (e.g., Oliver 1980). Thus, anticipated satisfaction relates to a future period, whereas pre-purchase satisfaction reflects the feelings of satisfaction that occur in the present time (i.e. before a purchase has been occurred). Nevertheless, customer satisfactions have been extensively conceptualized as the post-purchase evaluation of product/service performance and as the combination of either cognitive (i.e., the expectancy disconfirmation) or affective components (e.g., Oliver 1980; Roest and Pieters 1997).

Oliver (1980) suggests that customer satisfaction can be classified into five affective prototypes (e.g., contentment, pleasure, relief, novelty, and surprise). Additionally, Stauss and Neuhaus (1997) propose the qualitative satisfaction model, which takes the emotional, cognitive, and intentional dimension of the satisfaction into account. Bodker et.al.,(2009), presents five consumption values to technology use – functional, social, emotional, epistemic, and conditional values- that jointly influence consumer choice behavior and make differential contributions in a given choice situation. Thus, customer satisfaction includes both affective (emotional) and cognitive components and is evaluated from a summary attribute phenomenon coexisting with other consumption emotions (Liljander and Strandvik 1997; Oliver 1993). For instance, Dube and Menon (2000) suggested that emotions are one of the core components of post-purchase satisfaction, especially with extended service transactions.

However, recent research continues to debate whether satisfaction is a cognitive construct which includes an emotional component or is itself an emotional construct (Babin and Griffin 1998; Bagozzi, Gopinath, Nyer 1999; True loyalty antecedents 2010?). Recently, some research has focused on the affective component to compare the role of emotions and cognitive evaluation in satisfaction and in the relationship with customer loyalty. It found that both emotional and cognitive components correlate with customer loyalty (Yu and Daen 2001). However, it has been argued that the traditional cognitive disconfirmation

of expectations model is inadequate in modeling satisfaction, especially in the context of services (Jayanti 1995; Wirtz and Bateson 1999). Fournier and Mick (1999) supported this, suggesting that the disconfirmation of expectations paradigm has likely underrepresented the emotional aspects of satisfaction.

Further issues in the previous customer satisfaction research, which, as noted, has relied heavily on the expectancy disconfirmation paradigm, relate to questions about whether the measure of disconfirmation should be calculated from the difference between expectation and actual performance or whether the individual's customer's disconfirmation should be directly measured. The latter method is currently more often applied because of higher scale reliability (e.g. Yi 1990). However, the disconfirmation measurement issue is still under controversy among customer satisfaction researchers. In addition, some empirical studies have questioned even the application of the disconfirmation of expectation paradigm, quite apart from the issue of how to measure it (e.g. Fournier and Mick 1999; Patterson 2000).

Customer satisfaction evaluation processes are sometimes more complex than expectancy disconfirmation can account for, particularly in high involvement context (e.g., technological products and consulting service). Patterson (2000) showed that the relative impact of performance and disconfirmation on satisfaction vary with service complexity, stakeholding, and experience conditions, particularly in a business service context. Practitioners, in this case, business-to-business managing consultants, may not assess expectancies and satisfaction in such a complex manner, and measuring their views may not be consistent with the expectancy disconfirmation paradigm. Other approaches could develop more realistic ways of measuring customer satisfaction. For instance, Fournier and Mick (1999) explore and describe satisfaction from the first hand viewpoints of customers in order to develop a more realistic account of satisfaction as it is displayed in the course of daily life by employing lengthy and unstructured home interviews with new owners of technological products. Thus, in investigating customer satisfaction, the reliance on single paradigm or method may pose serious limitations for some marketing contexts (Fournier and Yao 1997).

Previous satisfaction research has investigated either transaction-specific satisfaction or overall satisfaction at the individual-level (Jones and Suh 2000), even cumulative satisfaction at the national level in several countries such as Sweden, Switzerland, and the

USA (Anderson, Fornell, and Lehmann 1994; Bruhn and Grund 2000; Fornell et al. 1996). However, another issue in studying customer satisfaction is the divergence between the concept of overall satisfaction and transaction specific satisfaction, which is defined as the customer's satisfaction with a discrete service encounter. This is particularly important to account for in the relationship of satisfaction with repurchase intention (Jones and Suh 2000).

Further, some observers point out that customer satisfaction is a dynamic process. Thus, customer satisfaction might be perceived as either a singular occurrence of an evaluative judgment following the purchase occasion (De Ruyter and Bloemer 1999) or as an aggregated impression of a number of events (Oliver 1997). Some also argue that customer satisfaction is not an evaluative state at all, but a process extending across the entire consumption horizon (Tse, Nicosia, and Wilton 1990). Thus it has been suggested that customer satisfaction should be investigated in longitudinal surveys (e.g., Bolton and Drew 1991; Fournier and Mick 1999). However, the longitudinal study of customer satisfaction in some specific context might be affected by some factor such as technological adoption level of service encounters. Particularly in this study, customer satisfaction with service encounters – either interpersonal service encounters or technology-based self service encounters – are better studied as a current state, even if the satisfaction state might change in future encounters; thus the cross sectional approach is preferable to the longitudinal one.

All the discussion above suggests, the concept of customer satisfaction needs to be further explored, since the exact concept is still an issue under debate. Although the debate is just part of the current argument about definitions and measurements of customer satisfaction in the literature, as some of the discussion hints, there has been substantial wider debate as to whether customer satisfaction is an attitude or a relative transient consumption-specific construct, or whether it is an outcome or an evaluation (Yi 1990).

Though, previous studies on customer satisfaction measurement employed expectations as a comparison standard against customers' perceptions of actual performance, recent literature tends to down play the importance of expectation in forming satisfaction judgment. Therefore, this study employed the perceived performance to evaluate customer satisfaction. Furthermore, this study aims to gain more understanding of customer satisfaction at the service encounter/ interaction level, thus, the customer satisfaction

measurement is focused on either overall satisfaction with service encounter satisfaction or the service encounter dis/satisfaction derived from customer dis/satisfaction drivers.

Also, this research defines customer satisfaction as customers' positive response to the perceived service performances during the interaction with service providers. The definition of customer satisfaction is based on three components, (1) a positive response pertaining to (2) a particular focus determined at (3) a particular time, following guidelines of a context specific definition of customer satisfaction proposed by Giese and Cote (2000). The particular responses include both cognitive and affective components as seen in service encounter satisfaction drivers.

3.1.1 Customer Satisfaction versus Service Quality

Another issue that need to be recognized or acknowledged when studying customer satisfaction is that there is still some uncertainty about how much satisfaction is distinguished from the concept of service quality (e.g., Danaher and Mattsson 1994; De Ruyter, Bloemer, and Peeters 1997). Some observers argue that there is still some questions concerning the two concepts and their relationships (De Ruyter, Bloemer, and Peeters 1997). A few have said that it is still not clear service quality and customer satisfaction are similar concepts (Athanasopoulos, Gounairs, and Stathakopoulos 2001). Before reaching to any conclusion regarding their relationship, it is important to know the nature and composition of those constructs.

Service Quality: The concept of service quality has been considered one of the most debated subjects in the services literature and no consensus is reached yet in defining it (Babakus and Boller, 1992; Gupta et al., 2005). Two of the available models (given in table no:1) that have been most important in attempting to conceptualize service quality are the gap model of service quality or SERVQUAL (Parasuraman et al., 1985) and the Technical/Functional Quality framework (Gronroos, 2001; Sanchez-Rodriguez and Martinez-Lorente, 2011).

Table 3.2: Service Quality Measurement Models

Model Type	Authors	Dimensions
Technical and functional quality model	Gronroos, 1984	Technical quality; functional quality; and image
Gap model	Parasuraman, 1985	Reliability; responsiveness; tangibles; assurance; and empathy
Attribute service quality model	Haywood-Farmer, 1988	Physical facilities and processes; people's behavior; and professional judgment
Synthesized model of service quality	Brogowicz et al., 1990	Company image; external influences; traditional marketing activities
Performance only model	Cronin and Taylor, 1992	Consumer attitude and performance attributes
Ideal value model of service quality	Mattsson, 1992	Value level and attitude level
EP and NQ model	Teas, 1993	Evaluative performance; normed quality model
IT alignment model	Berkley and Gupta, 1994	Reliability; responsiveness; competence; access; communications; security; understanding; and knowing customers
Attribute and overall affect model	Dabholkar, 1996	Speed of delivery; Ease of use; reliability; enjoyment; control
Model of perceived quality and satisfaction	Spreng and Mackoy, 1996	Expectations; performance desires; desired congruency; expectation disconfirmation
PCP attribute model	Philip and Hazlett, 1997	Pivotal attributes; core attributes; and peripheral attributes
Retail service quality and perceived value	Sweeney et al., 1997	Product quality and price perceptions; functional service quality; technical service quality perceptions
Service quality, perceived value and customer satisfaction model	Oh, 1999	Perceptions; service quality; customer satisfaction; customer value; and intention to repurchase
Antecedent and mediator model	Dabholkar et al., 2000	Perceived price; perceptions; perceived quality; perceived value; customer satisfaction; retentions
Internal service quality model	Frost and Kumar, 2000	Internal customers and internal suppliers expectations

E-Service Quality: E-service quality is defined as “the extent to which a Web site facilitates efficient and effective shopping, purchasing, and delivery” (Zeithaml et al., 2000). Santos (2003) defined e-service quality as “the consumers’ overall evaluation and judgment of the excellence and quality of e-service offerings in the virtual marketplace”. An extensive review in the e-service quality literature reveals various definition as well as measurement scales (table 2). E-S-QUAL developed by Parasuraman (2005) one of the most widely used e-service quality measurement model.

Table 3.3: e-service Quality Measurement Scales

Scales	Authors	Dimensions
WebQual	Loiacono et al., 2000	Informational fit to task, interaction, trust, response time, design, intuitiveness, flow-emotional appeal, visual appeal, innovativeness; integrated communication; business processes; and substitutability
SITEQUAL	Yoo and Donthu, 2001	Ease of use; aesthetic design, processing speed; and security
WebQual	Barnes and Vidgen, 2002	Usability, design, information, trust, and empathy
PIRQUAL	Francis and White, 2002	Web site; transaction system; delivery; customer service; and security
eTailQ	Wolfinger and Gilly, 2003	Website; design; reliability/fulfillment; privacy/security; and customer service
E-S-QUAL	Parasuraman, 2005	Efficiency; system availability; fulfillment; and privacy
E-A-S-QUAL	Kim et al., 2006	Personalization; information; and Graphic styles
eTransQual	Bauer et al., 2006	Functionality/design; reliability; process; responsiveness; and enjoyment
PeSQ	Cristobal et al, 2007	Customer service; web design; assurance; and order management
E-SELFQUAL	Ding et al., 2011	Perceived control; service convenience; customer service; and service fulfillment

Customer Satisfaction: Customer satisfaction can be defined as a person’s felt state, either pleasure or discontent, ensuring from comparing a product’s perceived performance in relation to the person’s expectations (Kotler et al., 1996; Fecikova, 2004; Lin et al., 2010).

The link between service quality and customer satisfaction has been the focus of research. Sureshchandar et al. (2002), found that the service quality and customer satisfaction were

highly related. Ladhari (2009), Dahiyat et al. (2011), Samen et al., (2013) and Earnest (2015) all claim that service quality is an important antecedent of customer satisfaction. Most observers, however, accept that they are distinct, but still debate whether service quality is an antecedent of customer satisfaction or the consequence of customer satisfaction (e.g., Cronin and Taylor 1992; Hurley and Estilami 1998; Taylor and Baker 1994; Shemwell, Yavas, and Bilgin 1998; Spreng and Mackoy 1996). TQM has become the key element for improving the performance of companies and satisfaction of customers (Terziovski, 2006; Sakthivel et al., 2005). According to Sakthivel et al., (2005), customer satisfaction is deemed to be the leading criterion for determining service quality delivered to customers. Gronroos (1984) proposes ‘technical and functional service quality model’ assuming that managing perceived service quality means that the firm has to match the expected service and perceived service to each other so that customer satisfaction is achieved. Mattsson (1992) ‘Ideal value model of service quality’ admits satisfaction is the consequence of service quality. The theory of attractive quality given by Kano (2001) addresses the relationship between the objective performances of a given quality attribute and customer satisfaction with that quality attributes. It reveals that the greater the fulfillment of desired quality attributes, the higher would be customer satisfaction. According to Kano’s model, the relationship between the degree of sufficiency and customer satisfaction with a quality attribute can be classified into five categories of perceived quality which are must-be, one-dimensional, attractive, indifferent, and reverse. However, recent research indicates that service quality and customer satisfaction concepts are quite distinct and that the service quality concept is antecedent to the satisfaction concept (Bedi, 2010; Kassim and Abdullah, 2010; Kumar et al., 2010; Yee et al., 2010; Naeem and Saif, 2009; Balaji, 2009; Parasuraman et al., 1988; McDougall and Levesque 2000). Brady and Robertson (2001), further determine the causal order of service quality and satisfaction in the formation of customer loyalty, and investigate whether the relationships are context-specific or uniform across varying service environments. This cross cultural research revealed that satisfaction mediates the effects of service quality on repurchase intentions, loyalty, and word of mouth, and is consistent across cultures (Kim and Kim, 2010; Akinci et al., 2010).

This is probably representative of the majority view – service quality and customer satisfaction is distinct and service quality is antecedent. The prior service quality research conceptualizes satisfaction is the difference between customer perceptions of the service

received, compared with their expectations based on previous service experiences. This is similar to the expectations disconfirmation paradigm discussed above, but conceptualized somewhat differently, however either way, there is a clear distinction between service quality and customer satisfaction (Parasuraman, Zeithaml, and Berry 1985, 1988). Often, the distinction between satisfaction and service quality is discussed in terms of customer satisfaction as related to a specific service encounter. Service quality, though, is essentially an attitude based on the difference between the expectations about a service and perception of the way the service has been performed. Such differences are called the performance-expectations gap.

The gaps model of service quality differs from the disconfirmation model of customer satisfaction in that the gaps model leaves out the issue of disconfirmation. It investigates an entire psychological process by the simple subtraction of expectations from perceptions (Caruana, Money, and Berthon 2000). Further, the basis of comparison for each construct is slightly different. For instance, expectations in customer satisfaction are viewed as what customer believes will actually occur. There is some overlap, e.g., Boulding et al. (1993) summarize three definitions of expectations in service quality research, one of which is very similar to the expectations in the satisfaction literature: (1) will expectation, or what the service will deliver in the next encounter. However, usually expectations in service quality are referred to as customer ideals or what customer would expect of excellent services from an excellent service provider; as Boulding et al. (1993) summarize: (2) should expectation representing the normative standard about what the service should deliver, and (3) ideal standard expectations.

Some form of these ideal expectations seems to be majority view. The ideal expectations are classified into several dimensions, although the exact number of dimensions is not consistent, and probably depends on service type and customer profile. For example, the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1988), one of the most commonly used measurement tools for service quality, is based on expectations or desire of customers about what service should be offered. Parasuraman, Zeithaml, and Berry (1985) originally determined ten dimensions of service quality, which then were combined into five dimensions in later work (Parasuraman, Zeithaml and Berry, 1988). However, other researchers have found different numbers of dimensions, leading Carman (1990) to recommend that the original ten dimensions for services in general, as proposed by

Parasuraman, Zeithaml, and Berry (1985), should be used in early research until the dimensionality in a particular industry is well established.

These service quality dimensions are quite context specific compare to customer satisfaction drivers. The satisfaction drivers include both product/service attribute evaluation and affective/emotional assessment (Mano and Oliver 1993). Customer satisfaction is more similar to attitude of customer. However, it can be assessed as the sum of satisfaction with the various attributes of product/service (Caruana, Money, and Berthon 2000; Churchill and Surprenant 1982). Furthermore, Jones and Suh (2000) mentioned that customer satisfaction could be investigated either as levels of overall satisfaction or satisfaction with the transaction/encounters.

While the majority of researchers probably agree that service quality and satisfaction are separate concepts, and that quality is antecedent to satisfaction, there is still some possible overlap in how different observers measure each concept. Some of these problems is reduced by focusing on satisfaction with service encounters rather than overall satisfaction. The following section examines customer satisfaction with transaction-specific occurrences. It is critical to investigate transaction-specific satisfaction, or customer satisfaction with service encounters, since it directly affects overall satisfaction in most service industries.

3.1.2 Customer satisfaction with service encounters

Besides debate about the concept of customer satisfaction at the overall level, customer satisfaction with the service encounter is also under discussion. Even the definition of service encounter has been conceptualized in different ways. For instance, Shostack (1985) defines the service encounter as “a period of time during which a customer directly interacts with a service” (p.243). This definition is broader than those of Surprenant and Solomon (1987) and Keaveney (1995), which are specific to the personal interaction between a customer and employees of service firms. Although, Chandon, Leo, and Philippe (1997) followed the definitions of Shostack (1985), the study only focused on face-to-face encounters. On the other hand, Bitner, Booms, and Tetreault (1990) explained that Shostack’s definition does not limit the encounter to employee-customers interactions.

However, this study defines service encounter satisfaction as customer satisfaction derived during times of the direct interactions by customers with service providers. The particular times that are of interest are the times of service encounter, but this interaction is not limited to employee-customer interactions. Thus, the service encounters can occur with or without the element of human interaction (Shostack 1985; Bitner, Booms, and Tetreault 1990).

Service encounter has direct link with customer satisfaction. Customers expect and demand customization in service encounter (Bettencourt and Gwinner, 1996; Bitner et al., 1990). Customized offers are likely to satisfy a customer more than standardized offers would, because they facilitate a real match between customer and product (Ostrom and Iacobucci, 1995). Role theory support this relationship: through adjusting their behavior for different customers, frontline employees can better meet individual customer's expectations (Solomon et al., 1985). Bettencourt and Gwinner (1996) conclude that consumers who experienced customized treatment will be more satisfied with the interaction than those who experience a standard treatment. It summarizes that satisfaction level of customer in service encounter relies on the mode of encounter: interpersonal service encounter creates more customized services than technology encounter.

Previous research often assumes that customer expectations about service encounters are static in nature. Thus, they measured service encounter satisfaction at a point of time after consumption. For instance, some prior research measured level of customer satisfaction based on the last interaction between customers and service providers (Jones and Suh 2000; Nicholls, Gilbert, and Roslow 1998; Peterson and Wilson, 1992). In contrast, other researchers have argued that expectations can change during each stage of an encounter (pre-consumption, consumption, and post-consumption) by permitting expectations to change as the customer obtains information (Walker 1995).

Generally, service encounters often consists of several attributes (Nicholls, Gilbert, and Roslow 1998). The service literature has focused heavily on attributes for which customers have substantial prior experience, and therefore have well-formed expectations. However, prior experience and well-developed expectations are not always present, particularly in the high involvement services such as financial services and management consulting services (Patterson 2000). Thus, this study shifts slightly, and also uses attributes that customers perceive to be part of the encounter. The main reason for including the perceived

attributes is to understand and identify more broadly source of customer dis/satisfaction with service encounters. Moreover, it is useful to explore sources of customer dis/satisfaction with service encounters. Moreover, it is useful to explore sources of customer dis/satisfaction with service encounter from new customers or even prospective ones (Fournier and Mick 1999).

The following sections present what the literature says about some sources of service encounter satisfaction, both in interpersonal service encounters and technology-based service encounters.

3.1.3. Customer satisfaction with interpersonal service encounters

Previous research on services shows differences in how consumers experience satisfaction or dissatisfaction depending on the service performances and the nature of service encounters. The drivers of customer dis/satisfaction with interpersonal service encounters have been identified in detail through critical incident technique, CIT, (Bitner, Booms, and Tetreault 1990; Bitner, Booms, and Mohr 1994). CIT is a qualitative methodology which has proven useful in providing more understanding of the nature of the dissatisfaction phenomenon. With CIT, respondents are not asked to identify the cause of their dissatisfaction directly, but rather to describe a specific incident in as much detail as possible. Analysis of such responses allows the researcher to develop a schema for categorizing the elements of dis/satisfaction drivers (Bitner, Booms, and Tetreault 1990; Bitner, Booms, and Mohr 1994).

Interpersonal service encounters, the interaction of customers and employees of service provider firms, influence customer satisfaction substantially. Bitern, Booms, and Tetreault (1990) found several key categories of customer satisfaction with interpersonal service encounters: (1) employees response to service delivery failures, (2) employee response to customer needs and requests, and (3) unprompted and unsolicited employee actions. These service encounter satisfaction drivers were originally uncovered from the customers' view point in the context of hotels, restaurants, and airlines. They are described as follows:

Employee response to service delivery system failures: Customer satisfaction with interpersonal service encounter is driven by employee responsiveness to service failures. The examples of service failures are unavailable service, unreasonably slow service, and other core service failures (Smith, Bolton, and Wagner 1999). Thus, when service delivery

system failures occur, contact employees should acknowledge the failures, apologize when appropriate, explained what happened, and offer to compensate in order to increase customer satisfaction (Bitner, Booms, and Tetreault, 1990). This is called service recovery, which consists of actions that service providers take in response to service failures (Gronroos 1988). Both academics and practitioners have come to the recognition that there is a need to respond to service failure.

Recently, Colgate (2001) found that service recovery is almost exclusively the reason that banking customer stay with the bank they use after a serious service failure. Swanson and Kelley (2001) also found that customers who are satisfied with service recovery actions of service providers show a strong propensity to share positive information about their experience. Smith, Bolton, and Wagner (1999) found that customers prefer to receive a service recovery that matches the type of failure they experience, in amounts that are commensurate with the magnitude of the failure. Other studies confirm that employee response to service failures is one of the most critical factors influencing customer satisfaction (Keaveney 1995; Smith and Bolton 1998; Spreng, Harrell, and Mackoy 1995). However, some research has found that customer satisfaction is still lower after service failure and recovery, even given high-recovery performance, than in the case of error-free service (Boshoff 1997; McCollough, Berry, and Yadav 2000).

Employee response to customer needs and requests: The ability and willingness of a contact employee to respond to special needs and special requests, to deal with admitted customer error, and to handle with some customers who are potentially disruptive to others, all affect customer satisfaction with interpersonal service encounters (Bitner, Booms, and Tetreault 1990; Bitner, Booms, and Mohr 1994). Examples of special needs in the services they investigated are special language, special chairs for children, and special food for dietary needs. Many customers demand these special requests, but some customers preferences are beyond the scope of firm norms. However, the contact employee must show an interest in helping the customer in order to keep customers satisfied. For instance, if request cannot be accommodated for some reason (customer error, against policy, etc.) customer may still be satisfied if employees explain very carefully and try to work out an alternative solution. Customers also expect service employees to help deal with others who might disrupt the quality of the service encounter (e.g., another customer who cuts the service queue, smokes in a no smoking area etc.).

Employees spontaneously delight customers: Customers are greatly satisfied (mainly through the emotional component of satisfaction) with unexpected elements of a service encounter if the service employee pays special attention to the customer without having been requested (Bitner, Booms, and Tetreault 1990; Bitner, Booms, and Mohr 1994). One example of attention paid to customers is provision of more intelligence information to stock trader customers. Some truly out-of-the-ordinary employee behavior, such as unrequested acknowledgement of an occasion with a special gift, also affect customer satisfaction. Other employee behaviors in the context of cultural norms also influence customer satisfaction, for instance, when contact employees treat women and children customers very respectfully. If a contact employee can cope with difficult situation effectively, called exemplary performance under adverse circumstances, customers are also impressed or empathize.

Research has found views on causes of customer satisfaction with interpersonal service encounters even from employees' viewpoint (Bitner, Booms, Mohr, 1994; Gremler, Bitner, and Evans 1994). However, employees also identified the customer's own misbehavior (e.g., drunkenness, verbal and physical abuse, breaking laws, and company policies, and uncooperative customers) as a source of dissatisfaction. Generally, though, service providers seem to agree with customers on the kinds of things which satisfy customers.

Empirically, service encounter dis/satisfaction is not exactly a bipolar concept, with positive and negative sides of the scale. Customers perceive that interpersonal service encounter dissatisfaction drivers are somewhat different from satisfaction drivers. Thus, even though the terminology for dissatisfaction drivers often sounds like the opposite of the satisfaction drivers, conceptually, customers seem to perceive satisfaction and dissatisfaction separately.

Thus in the following sections, sources of dissatisfaction with interpersonal service encounters are discussed. Although from the employees' viewpoint, the customer's own misbehavior may sometimes cause customer dissatisfaction with interpersonal service encounters (Bitner, Booms, and Mohr, 1994), customers do not see it this way. Customers perceive dissatisfaction with interpersonal service encounters when human interaction services do not perform exactly as they want.

Do not respond to service delivery system failures: Smith, Bolton, and Wagner (1999) suggested that the customers were even more dissatisfied after inattentive service or unreasonably slow service than after unavailable service. Thus when service delivery system failures occur and employees do not respond immediately, this lack of attention by contact employees causes greater customer dissatisfaction with interpersonal service encounters, and finally can even result customer switching behaviors (Keaveney 1995).

Even if employees respond to service failures and made corrections, but do so with obvious reluctance, customers are still dissatisfied with interpersonal services. In other words, reluctant responses, failure to respond, and patently responses of contact employees drive customer satisfaction with interpersonal service encounters.

Do not respond to customer needs and requests: Some customer requests are the violation of company policies, thus some contact employees do not respond in helping the customers. However, this non-response causes strong dissatisfaction, since customers usually made the request because they need something (Bitner, Booms, Tetreault, 1990). Whatever the reason for non-response, it would be the interest of service providers to find a way to cope with customer requests in a more positive manner, even if they cannot be fulfilled. Ignoring the request or inappropriate and inadequate response of contact employees to special needs and requests is a significant driver of customer dissatisfaction with interpersonal services.

Spontaneously disappoint customers: customers are emotionally dissatisfied with unexpected behaviors of contact employees such as yelling or rudeness. Keaveney (1995) showed that if contact employees were impolite, customers often switched service providers. Such extra-ordinary employee behavior might strongly dissatisfy the customer in interpersonal service encounters.

3.1.4. Customer satisfaction with technology based service encounters:

Many industries, such as travel, health care education, retail, and financial services, have traditionally provided service through interpersonal service encounters, but recent developments have introduced technology in service encounters. Since the beginning of the twenty-first century, some industries have been deploying self-service technologies, SSTs, to provide a technology interface service for their customers (Bitner, Brown, and Muter 2000). Despite a great amount of studies concerning customer satisfaction,

relatively few studies concerning customer satisfaction with SSTs usage (Kim and Qu, 2014). SSTs are the technological interfaces that customers can use to produce a service independently, without human interaction. Services via the Internet, such as on-line brokerage and online banking services, ATMs, or automated hotel check out are examples of SSTs. Of course, taking the interpersonal interaction out of the service encounter is not new, and, as noted above, many researchers believe that the concept of service encounter does not require the interpersonal aspect. Service encounters could happen when customers interact through the mail, over the phone, or now, over the internet. However, there has been less research investigating satisfactions in interactions with technological interfaces than with interpersonal encounters in Bangladesh context, probably partly because service encounters without the interpersonal aspect have been far less common than those with interpersonal interaction. Moreover, previous research on technological interfaces has mainly investigated critical factors in the decision to use technology-based services. For instance, Dabholkar (1996) found ease of use, reliability, expected speed of delivery, enjoyment and control to be important determinants for using technology-based services. Other studies (Chathoth, 2007; Beatson et al., 2006; Meuter, 2005; Yen, 2005) concerning SSTs adoption revealed that efficiency, convenience, perceived control, and ease of use are the key elements associated with the SSTs. One significant contribution made by Zhilin et al., (2004). They conducted a content analysis based exploratory study specific to online brokerage services and revealed that responsiveness, competence, service reliability, courtesy, service portfolio and continuous improvement are leading satisfiers as well as dissatisfiers to customers' adoption of and satisfaction with online service.

Bitner, Brown, and Muter (2000) have explored the ability of technology to effectively gain customer satisfaction through service encounter satisfaction drivers. These satisfaction drivers were adopted from the interpersonal satisfaction drivers (Bitner, Booms, and Tetreault, 1990), including customization and flexibility, service recovery, and spontaneous delight. For example, Amazon.com utilizes SSTs to customize the service offerings. Amazon's customers can interact directly with the company, purchasing via internet, and receiving customized advice about books based on past ordering history. In other examples related to service recovery, Hartness international employs SST, a Video Response System (VRS) to enhance its customers' ability to solve problems independently and rapidly. As a result, Hartness International's customers could increase their

satisfaction through effectively rectify service failures by themselves. SST may even generate spontaneous delight. Furthermore, Cisco System's customer can independently resolve common networking problems, thus the customers will be pleasantly surprised by their own accomplishment.

Bitner, Brown, and Meuter (2000) presented only examples of technology infusion in service companies where there has been a positive impact on customer satisfaction. SSTs may also cause negative outcomes in a service setting (Meuter et al., 2000), and companies should be aware of the possible negative outcomes of deploying SSTs. Moreover, managers need to motivate and educate their customers to understand and accept the SST for rectifying service delivery failures without any interpersonal contacts. Even, if they do, it is likely that not all customers will accept and appreciate serving themselves without interpersonal interaction.

Further, the discussion in Bitner, Brown, and Meuter (2000) comes from the service providers' point of view about satisfied customers is. The study did not actually test and verify that technology can increase customer satisfaction in the customer mindset in the same way as in interpersonal satisfaction. Customer dissatisfaction with technology-based service encounters, which do not contain the element of human interaction, is likely to form somewhat differently than in an interpersonal service encounter. Therefore, the drivers of customer dissatisfaction with SSTs may be different from the customer viewpoint, and direct investigation of customers is needed before accepting that drivers of satisfaction with SST encounters are exactly the same as with interpersonal service encounters.

In fact, Meuter et al. (2000) explored customer experiences with SSTs through the qualitative CIT method, which, as noted above, has often been used to investigate satisfaction with interpersonal service encounters. They found that SSTs have both positive and negative impact on customer satisfaction. However, the sources of customer dis/satisfaction with SSTs are somewhat different from the dis/satisfaction drivers discussed by Bitner, Brown, and Meuter (2000). The key sources of customer satisfaction with SSTs in Meuter et al. (2000) are as follows:

Solve intensified need: SSTs are able to solve the immediate problem that customers face and provide service to satisfy intensified need, by which is meant the situations where

external environmental factors add a sense of urgency to the transaction. Thus, satisfaction is derived from the ability of SSTs to help customers out of their difficult situations. For example, ATMs provide service for longer hours of operation and wider ability than traditional teller service, hence ATMs are able to make it easier for customers to withdraw money when they urgently need it, particularly at night time.

Better than the alternative: A technology-based service encounter, the direct interaction of customers and service providers without human service encounters, may be perceived as better choice than an interpersonal service encounter, in terms of “easy to use”, “avoid service personnel” “saved time”, “When I want”, and “saved money” (Meuter et al. 2000). Customer satisfaction can be driven by such differential benefits, but not all are equally common. Some customers in the research of Meuter et al. (2000) perceived that the SST was easier to use than the interpersonal service option. Others were satisfied with the SST because it allows the actual transaction to be performed more quickly than the interpersonal alternative. Very few respondents perceived not having to interact with service personnel as an advantage, or that through the SST they could provide the service more effectively than firm’s employees could. A small portion shows that most customers still need human contacts in service settings, at least sometimes. Bitner, Brown, and Meuter (2000) also suggest that it is dangerous strategy to force customers to use technology in the service encounter without other viable options. However, it might be similarly harmful to exclusively provide the interpersonal service encounters, as some customers perceive some advantages, and many would like to use it sometimes.

Did Its Job: SST can satisfy customers simply by doing exactly what it was intended to do. Some customers are fascinated with the capabilities of SSTs, which is an emotional component of customer satisfaction. Some customers are pleasantly surprised if they can interact with SST and succeed in providing service themselves without any human service. Interestingly, SSTs that only did what they supposed to do were enough to satisfy some customers. The reason is that customers were excited when SSTs performed their functions successfully. This case may only occurred when SSTs are in their infancy. For example, on-line bank customers are satisfied when they can check their bank account balance or transfer their money via the internet. However, it is likely that this source of satisfaction may diminish over time, as consumers become used to the technology. For instance, it is

hard to imagine that simply being able to access the bank account via the ATM delivers similar satisfaction, because consumers are long used to using ATMs.

Fun/Enjoyment: The hedonic element of service quality are the strong determinants of customer satisfaction (Bauer et al., 2006). Although a good number of studies regarding the adoption of SSTs have been devoted on extrinsic attributes such as, perceived usefulness, ease of use, technology anxiety (Collier and Sherrel, 2010), waiting lines (Kokkinov and Cranage, 2015), and system quality, relatively insufficient emphasis has been placed on intrinsic attributes, such as hedonic-driven factors with few exceptions (e.g., Kim et al., 2012). Intrinsic values are subjective in nature and emphasize the hedonic consumption of fun, enjoyment, and playfulness rather than their consequences (Meintosh and Siggs, 2005). Intrinsic motivation represents doing something because of the intrinsic feelings of accomplishment and pleasures than emerge from one's engagement in an activity (Gagne and Deci, 2005). In service consumption, some consumers choose to use SSTs for the perceived fun/enjoyment, novelty (Dabholkar, 1996), feelings of accomplishment, prestige and personal growth (Cheng and Tan, 2004). In number of research, these hedonic factors were found to have a significant effect on using SST, such as by pharmacy customers (Meuter et al., 2005), hotel, motel, and resort customer (Kim et al., 2012). In addition, Morosan and Jeong (2008) suggested that in a travel context, consumers' attitudes toward using websites in current business world should be assessed not only by the site's ease of use and the usefulness perceived by customers, but also by playfulness.

In addition of extrinsic/functional attributes, intrinsic or hedonic attributes of SSTs also play a significant role in contributing to customer satisfaction at SST-mediated encounters. In previous studies, the intrinsic attributes associated with SSTs, such as the felt independence, accomplishment (Kim et al., 2012), confidence novelty (Meuter et al., 2005), and enjoyment (Morosan and Jeong, 2008) were found have significant contribution in enhancing satisfaction with SSTs.

Consumers' experience of using SSTs appear to influence how satisfied they are with the service experience. Both the attributes of personal service and SSTs were shown to influence consumers' service satisfaction (e.g., Beatson et al., 2006; Meuter et al, 2000). However, prior studies (e.g., Beatson et al., 2006) focused only on the extrinsic attributes associated with SSTs, while skipping the intrinsic attributes. With the growing popularity

of technology in everyday life, consumers have become more intimate with the basic functionality of SSTs. Consumers started to use SSTs not only for utilitarian benefits such as convenience and efficiency; but also for the experience at a service encounter. The experiential view point values the hedonic and symbolic aspects of consumer experience (King, 2002) by placing an emphasis on understanding the playful nature of leisure activities as well as the significance of enjoyment, sensory pleasures, and emotional responses associated with consumption experience (Meintosh and Siggs, 2005).

Dissatisfaction drivers with SSTs

Bitner, Brown, and Meuter (2000) noted that not all customers would necessarily be enthusiastic about the increasing role of technology in service encounters. Some perceive that technology negatively affects customer privacy and confidentiality of information. Therefore, researchers must also investigate sources of dissatisfaction with SSTs. Meuter et al. (2000) found four key drivers of customer dissatisfaction with SSTs as follows:

Technology failure: Contrary to “did its job”, failure occurred when technology did not work as intended. This failure is a malfunction of delivery when the customer is interacting with technology. Such failure causes customer unhappiness with the performance of SSTs, and even more, sometimes this malfunction affects the customer’s emotions. For example, if an on-line brokerage customer is not able to trade when the system refuses to log on, then the stockbrokerage customer may be disappointed at losing his/her opportunity to access the stock market for a trade.

Process failure: Failure in the process after the customer-technology interaction has taken place is defined as “process failure”. For example, an online banking customer might pay his or her bill on-line. However, process failure can result in the customer not being credited with payment. This process failure may cause even more frustration since customers do not know about the failures until they are notified later that they have not done something when they actually have done it.

Poor Design: “Technology Design Problem” and “Service Design Problem” are two components of “poor design” causing customer dissatisfaction with SSTs. Though the SST functioned as designed, it performed in such a way that the customers dislike the service encounter. For example, a customer might be unhappy with an automated phone system if it has unclear directions and the customer cannot navigate the system.

Sometimes, the SST is user-friendly and functions well, but some follow-on aspect of the service design leads to dissatisfaction. For example, bank rules limiting the amount that an ATM user can withdraw each day might lead to dissatisfaction, even though the ATM SST works perfectly well.

Customer-driven failure: Some customers accept that the failure sometimes occurs because of their own actions. However, few customers seem to except their mistakes when directly interacting with a technology interface in a technology based service encounter (Meuter et al. 2000). For example, ATM users may realize that entering the password incorrectly might have contributed to dissatisfaction with the service encounter. However, no empirical study has revealed that customers expressly acknowledge that their own mistakes are a part of customer dissatisfaction drivers. They are more likely to believe that service systems should be structured to overcome small customer mistake (Bitner, Brown, and Meuter, 2000).

Research on service encounter satisfaction both with technology-based and interpersonal services has shown that customers and service providers sometimes view source of service encounter dis/satisfaction differently. For instance, service providers expressed that customer's own misbehavior cause some customer dissatisfaction with interpersonal service encounters, but customers are more likely to blame employees if they cannot deal with the disruptive customers (Bitner, Booms, and Mohr, 1994). In technology-based service encounters, service providers simply perceive that the sources of SST encounter dis/satisfaction are similar to sources of customer dis/satisfaction with interpersonal service encounter. However, customer had a different perspective.

The discussion makes it clear that customers explicitly regard sources of satisfaction with service encounters as a different set of issues from customer dissatisfaction drivers, particularly in technology-based service encounters. Service providers have also pointed out that the drivers of customer satisfaction and dissatisfaction, especially with interpersonal service encounters, are not exactly alike in concept. Thus, this study considers service encounter satisfaction to be somewhat different from service encounter dissatisfaction for both interpersonal and technology-based service encounters.

Hence, in the present research, sources of customer satisfaction with service encounters are conceptualized differently from sources of dissatisfaction. Further, the drivers of

service encounter dis/satisfaction with interpersonal services are assumed to be distinct from with technology-based services. However, there is some discrepancy between customer perceptions and service provider perceptions about details of sources of service encounter dis/satisfaction. It is also well established that the details of conceptualization depend partly on the specific service type. Therefore, this research initially conducted qualitative works on how the customers and service providers view service encounter satisfaction and dissatisfaction concepts. The pilot interviews revealed the different sources of service encounter dis/satisfaction for the two types of service encounters, as discussed in the next chapter.

After all, service encounter satisfaction with both interpersonal and technology-based is critical to service firms, since most customers can receive services only when they contact the service organizations through either human or technology-based channels. If customers are dissatisfied with their interactions with service providers they might switch to other available service firms (Keaveney 1995; Mittal and Lassar 1998). In contrast, if they are satisfied with service encounters, they are more likely to exhibit positive attitudes and behaviors such as customer loyalty to the service providers (Yu and Dean, 2001). The next sections review this customer loyalty concept and its relationship with customer satisfaction.

3.2 Customer Loyalty

At a very general level, loyalty is something that consumers may exhibit to brands, services, stores, product categories and activities. This is to emphasize that loyalty is a feature of people, rather than something inherent in brands. This section reviews customer loyalty in general, then discusses loyalty especially toward service providers. The drivers of customer loyalty are also presented in this section. In addition, the end of this section investigates the relationship between customer satisfaction and customer loyalty.

The concept of customer loyalty has intrigued researchers because it is an arguable concept. Relationship marketing shifts the focus of marketing exchange from transactions to relationships (Foss and Stone, 2001; Peck et al., 1999; Christopher, 1991; Buttle, 1996). Relationship marketing acknowledges that a stable customer base is a core business asset. It returns firms the number of benefits such as, lower customer price sensitivity, reduced expenditure on attracting new customers, and improved organizational profitability

(Jenifer, 2005). Generally, customer loyalty has been and continues to be defined quite different ways for several decades. Some researchers view customer loyalty as what customers do or how they act concerning repeat purchase behavior over time. Other researchers conceptualize customer loyalty as what customer feel, or view this concept as a reflection of the emotional attachment to brand and service firms. The most widely accepted definition of loyalty is by Jacoby and Kyner (1987), who defined loyalty as the biased (i.e., non-random), behavioral response (purchased) by some decision making units, with respect to one or more alternative brands out of a set of such brands and is a function of psychological (i.e., decision making, evaluation) process. According to Jacoby and Chestnut (1978) more than 300 articles published in the customer loyalty literature employed 53 definitions of customer loyalty. However, former research had a tendency to conceptualized loyalty specific to brand loyalty (e.g., Newman and Werbel, 1973). Furthermore, this prior research concentrated mainly on customer behavior that expresses loyalty to a product/ service brand. For instance, Newman and Werbel (1973) called customers loyal if they repurchased a brand and considered only that brand when repeat purchasing the product/service.

Later, loyalty research began to look at attitudes as well as behavior. Jacoby and Chestnut (1978) explored the psychological meaning of loyalty in an effort to distinguish it from behavioral (i.e., repeat purchase) definitions. Their analysis concluded that consistent purchasing as an indicator of loyalty could be invalid because of eventuality buying or a preference for convenience and that inconsistent purchase on a single specific brand could still be loyal if consumers were multi-brand loyal. Jacoby and Chestnut (1978) also concluded that it would be unwise to infer loyalty or disloyalty solely from repetitive purchase patterns without further analysis. It may not be the true loyalty to a specific product/service brand.

Thus, although much previous research assumed that customer loyalty could be described sufficiently by patterns of repeat purchase, when multi-brand and attitude based models of customer loyalty were proposed that the use of only repeat purchase behaviors as a measure came to be doubted. Some researchers conceptualized customer loyalty as an attitude-based framework. Dick and Basu (1994) proposed customer loyalty models as the cognitive-affective-conative models. They suggested that research also acknowledge and assess customer beliefs, affect, and intention within the traditional customer attitude

structure when investigating customer loyalty. For instance, if customers prefer a particular product/ services brand to competitive ones (beliefs/cognitive), then they transform these beliefs to correspond with an affective preference for the brand (attitude/affective). This leads to consumers having a higher intention to use the brand compared with alternative brands (conation).

Dick and Basu (1994) also argue that loyalty is determined by the strength of the relationship between relative attitude and repeat patronage. Thus, they distinguished customer loyalty into four types (loyalty, spurious loyalty, latent loyalty, and no loyalty) based on different combinations of high and low levels of behavioral and attitudinal loyalty. The loyalty construct in Dick and Basu's (1994) framework seems to be a true loyalty since it is high in repeat patronage and high in relative attitude. Spurious loyalty is conceptualized as high repeat purchase but low in relative attitude or retention/commitment to the particular brand. Some researchers, mainly those who define loyalty in behavioral terms, would generally accept this as true loyalty, but others, who look for some form of commitment, would not. Latent loyalty is defined as loyalty that has low repeat patronage but high in relative attitude – i.e., it has no behavioral loyalty component, so is really only potential. No loyalty is the opposite side of loyalty since it is low in both repeat patronage and relative attitude toward the particular brand.

Other recent frameworks tend to follow this cognition-affect-conation pattern, but differ in some extents (e.g., Oliver 1997, 1999). The difference is that customers could be loyal at each attitudinal phase, relating to different elements of the attitude development structure. Customers are conceptualized to develop into loyal in a cognitive sense first, then later in an affective sense, and consequently in a conative manner, and finally in a behavioral manner/action inertia. In the first loyalty phase, cognitive loyalty exists when the product/service brand is preferable to its alternatives. Thus the depth of cognitive loyalty is no deeper than mere attribute performance. However, affective loyalty is encoded in the consumer mindset as a liking toward particular product/service based on cumulative satisfaction.

The next phase of the loyalty development is the conative (behavioral intention) stage, as influenced by repeated episodes of positive affect toward the brand. Conative loyalty is a loyalty phase that contains the deeply held commitment to buy. Then the fourth stage, completing the preceding cognitive-affective-conative frameworks with an action phase,

brings the attitude-based loyalty model to the actual purchase behavior. Therefore, cognitive loyalty is mainly focused on the product/service brand performance aspects, whereas affective loyalty is customer attitudes toward the brand, or liking. While conative loyalty exists when the consumer focuses on intention to repurchase the brand, action loyalty is the action of rebuying the brand.

As a result, Oliver (1999) defined customer loyalty as “a deeply held commitment to rebuy or patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts with having the potential to cause switching behavior”. This definition includes two different aspects of customer loyalty on the behavioral and attitudinal concepts of customer loyalty that have been mentioned in previous studies (Jacoby and Chestnut 1978; Oliver 1997). Behavioral loyalty consists of repeated purchases of the same brand, while attitudinal loyalty includes a degree of commitment to repurchase the brand or customer intention to buy the same brand (Chaudhuri and Holbrook 2001). Since Oliver (1999) hypothesizes that customer’s move from positive attitudinal loyalty to positive behavioral loyalty, there is an implicit assumption that there exists a strong positive relationship between both perspectives.

However, the attitude-behavior relationship might be weaker than expected. In addition, attitude and behavior loyalty may not be compatible in some circumstances, or even sometimes attitude may be consequence of behavior (Uncles and Laurent 1997). These issues are behind Dick and Basu’s (1994) discussion, noted above, which distinguished customer loyalty into four types of customer loyalty concept. Further, customer loyalty has been conceptualized differently as repurchase behavior (Loveman 1998), repurchase intention (Soderlund 1998), willingness to provide positive word-of-mouth to potential customers (Andreassen and Lindestad 1998) and repurchase behavior combined with an attitudinal component (Lemmink and Mattsson 1998).

It is clear that customer loyalty is still under debate, similarly to the customer satisfaction concept. In addition, customer loyalty is a construct that includes behavioral, attitudinal, and cognitive dimensions. The early customer loyalty research focused heavily on the behavioral perspective, and then lately research has shifted to include an attitudinal approach (de Ruyter, Wetzels, and Bloemer 1998). Furthermore, recent studies have had

a tendency to specifically investigate service loyalty separate from product brand loyalty. Both concepts are discussed in the following section.

3.2.1 Brand Loyalty versus Service Loyalty

Much of the customer loyalty literature has investigated customer loyalty primarily on product –related or brand loyalty, whereas loyalty to service providers has remained underexplored (Dowling and Uncles 1997; Javalgi and Moberg 1997). Many observers believe that product loyalty or brand loyalty cannot be generalized to loyalty toward service providers, called service loyalty, as services have their own characteristics that might make loyalty for services different from loyalty for products (Gremler and Brown 1996). Therefore, acknowledgement of the service characteristics is needed to better understand loyalty for services. In the services literature, the consumer service evaluation process is different from product evaluation since service has four distinguishing characteristics: intangibility, heterogeneity, perishability, and inseparability of production and consumption (Parasuraman, Zeithaml, and Berry 1985). Since services are intangible and heterogeneous, customers tend to perceive higher risk in services than in goods. Thus, customers are more likely to show loyalty to the brand that they are used to, or less likely to switch to other available service providers (Keavenney 1995). In addition, service loyalty is more dependent on the development of relationships between customers and service providers, since services are inseparable thus customers may be less likely to switch after they have developed a relationship with a service provider (Javalgi and Moberg 1997).

As mentioned in the customer loyalty section above, previous research on customer loyalty originated from the field of packaged consumer goods (Jacoby and Chestnut 1978). The concept of brand loyalty which is mainly based on products may be questionable for direct application to investigations of loyalty to service providers (Javalgi and Moberg 1997). Thus, service loyalty has been conceptualized somewhat differently from product brand loyalty, although some similar debates are still current. Some recent work conceptualizes service loyalty based more strongly upon behavioral components (e.g., Gwinner, Gremler, and Bitner 1998; Wulf, Odekerken-Schroder and Lacobucci, 2001), but some researchers still treat service loyalty as the interaction between behavioral and attitudinal perspectives (Bloemer and de Ruyter 1998). Other recent research views service loyalty as a three dimensional construct including preference loyalty, price indifference loyalty, and

dissatisfaction response (de Ruyter, Wetzels, and Bloemer 1998). This multi-dimensional construct of service loyalty includes both attitudinal (positive and negative) and cognitive components of loyalty (i.e., price indifferent loyalty).

Examples of this debate can be found in recent research which conceptualizes service loyalty exclusively based on attitudinal aspects. In one case which uses attitudinal prospects, service loyalty is defined as “the enduring psychological attachment of a customer to a particular service provider” (Butcher, Sparks, and O’Callaghan 2001, p.312). For example, loyal customers are likely to advocate the service to others and to have a relative preference for the service ahead of other competitors. Another recent definition of service loyalty is also based on attitudinal approach, but is moving toward behavioral aspects by focusing on behavioral intentions (considered attitudinal); calling service loyalty “customers’ intention to repatronize their current service provider or company based on past experiences and future expectations” (Lee and Cunningham 2001, p.114). The intention to repatronize in their study is the same as repurchase intention.

However, some research more explicitly includes the behavioral component into service loyalty definitions. For instance, Gremler and Brown (1999) defined service loyalty as “the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises” (p.273). This definition refers to both behavioral and attitudinal component of service loyalty similarly to the aforementioned definition of product brand loyalty in Dick and Basu (1994) and Oliver (1999).

Specific to some service contexts (e.g., banks and hospitality), there have been specific definitions of service loyalty. For example, Bloemer, Ruyter, and Peeters (1998) defined bank loyalty as “the biased (i.e. non-random) behavioral response (i.e. revisit), expressed over time, by some decision-making unit with respect to one bank out of a set of banks, which is a function of psychological (decision making and evaluative) processes resulting in brand commitment” (p. 277). This definition is based on Jacoby and Chestnut (1978). Methlie and Nysveen (1999) conceptualized loyalty of on-line bank customers following Oliver’s (1999) definition, which includes the behavioral and attitudinal concepts of customer loyalty. However, they separately investigated affective loyalty and conative loyalty. While affective loyalty means customers must perceive the bank better than

competitors and that customers must like the bank better than the competitors, conative loyalty means customers must have an intention to keep on using the bank in the future.

A loyal customer in the hotel industry is defined as “a customer who repurchases from the same service provider whenever possible, and who continues to recommend or maintain a positive attitude towards the service provider” (Kandampully and Suhartanto 2000, p.346). Further, tourist destination loyalty also is measured by recommendation intention of travelers (Chen and Gursory 2001).

This discussion indicates that the concept of customer loyalty still needs further research, since no consensus has been reached about the definition and the concept is still an issue under debate (Oliver 1999). However, based on the literature review and considering how the study’s pilot work with target respondents (discussed in detail in chapter 3) fits in with parts of the literature, this research focuses on a conative definition of loyalty. That is loyalty is conceptualized following Singh and Sirdeshmukh’s (2000) definition as a behavioral intention to continue an ongoing positive response to the service provider. However, the loyalty concept in this study slightly differs from loyalty concept in Singh and Sirdeshmukh (2000) since the loyalty in this research focuses on an evaluative judgment context (satisfaction), rather than in a relational context (i.e., trust), which was investigated in their research.

Therefore, customer loyalty in this study is defined as “customers’ behavioral intention to continue and ongoing positive response to the service provider whenever possible”. The definition of customer loyalty is based on two components, favorable behavior intention and positive attitude (i.e., willingness) to retain and recommend the service provider to others. The specific drivers of customer loyalty are discussed in the next section.

3.2.2 Customer Loyalty Drivers

In service literature, customer loyalty toward service providers is influenced by several classes of predictor variables including 1) evaluative judgments, 2) relational factors, and 3) switching barriers (Butcher, Sparks, and O’Callaghan 2001). The evaluative judgments are satisfaction, quality, value and image, whereas personal bonds or trust are examples of relational factors driving customer loyalty. In addition, switching barrier factors which drive customer loyalty are contractual obligation, switching cost, and search cost. Most studied dependent and independent variables in SSTs found in the literature are given in

the table. One previous study which explored customer loyalty in bank and dental services found that all three classes of customer loyalty drivers (satisfaction, interpersonal bonds, and switching costs) influenced service loyalty (Gremler 1995). Other research has also employed both evaluative judgments (quality and satisfaction) and switching barriers such as switching cost and search cost (e.g., de Ruyter, Wetzels, and Bloemer 1998; Lee and Cunningham 2001); Methlie and Nysveen 1999). However, Butcher, Sparks and O’Callaghan (2001) focus on only the first two classes of customer loyalty drivers, service encounter satisfaction and personal friendship. Another recent study proposed those relational factors such as trust and relational exchanges between customers and service providers drive customer loyalty (Singh and Sirdeshmukh 2000). One study reveals that customer commitment (both affective and cognitive) to service provider is an important driver of customer loyalty in service industries (Fullerton, 2003). Gilliland and Bello (2002) argued that customers who are committed to the relationship intend to purchase from the organization. Customers with lower affective commitment intend to switch more than consumers with higher affective commitment (Mattila, 2001) and customers who are affectively committed to an organization intend to purchase from that organization (Rauyruen and Miller, 2007).

Table 3.4: Most studied Dependent and Independent variables with SSTs

Self-Service Technologies (SSTs)		
Independent Variables to SSTs		
<p style="text-align: center;">Attitude/Intension/ Behavior</p> <ul style="list-style-type: none"> • Bobbit et.al., 2001; • Dabholkar and Bagozzi, 2002; • Meuter et.al, 2003; • Weijners et.al., 2007; • Oyedele and Simpson, 2007; • Theotokis et.al., 2008; • Dabholkar et.al, 2003; • Beuningen et.al, 2007 etc 	<p style="text-align: center;">Satisfaction</p> <ul style="list-style-type: none"> • Meuter et.al, 2000; • Meuter et.al, 2003; • Yen, 2005 	<p style="text-align: center;">Loyalty/commitment/use/continued interactions</p> <ul style="list-style-type: none"> • Beatson et.al., 2007 • Shamdasani et.al, 2008; Ho and Ko, 2008; Chen et.al, 2009 • A-Hawari et.al, 2009; Campbell and Frei, 2010 (retention) • Meuter et.al., 2003 (repeated usage intention) • Reinders et.al, 2010 (Switching intention) • Lin and Hsieh, 2006 • Lin and Hsieh, 2007 • Zhao et.al., 2008 • Makarem et.al., 2009

Attitude to SSTs (Dependent)	Satisfaction (Dependent)	Loyalty (dependent)
Independent Variables to the above three dependent variables		
<ul style="list-style-type: none"> • Ease of use • Control • Enjoyment / Fun • General attitude to technology • Self-efficacy • Technology Anxiety • Reliable 	<ul style="list-style-type: none"> • Ease of use • Service quality • Saving time • Convenience • Technology readiness • Perceived control 	<ul style="list-style-type: none"> • Satisfaction (Chen et.al, 2009; Lin and Hsieh, 2007; Zhao et.al., 2008; Makarem et.al., 2009; Lin and Hsieh, 2006) • Service quality • Technology readiness • Customer Value • Perceived ease of use

As discussed above, customer loyalty may contain several drivers. For instance, each customer perception of service quality may drive perceived value, overall customer satisfaction, and then drive customer loyalty (Ghosh et al., 2014; 2015; 2016; McDougall and Levesque 2000). However, some drivers certainly have more effect than others do. The problem, then, is how to distinguish the few important drivers from the trivial many. In addition, without the ability to identify strong drivers, managers are inclined to waste resources by improving perceptions that contribute very little or miss opportunities to improve customer loyalty (Ryan, Rayner and Morrison 1999). **However, much prior research has found that an evaluative judgment, particularly customer satisfaction, is frequently the most significant driver directly influencing customer loyalty (Anderson and Mittal 2000; Brady and Robertson 2001; Patterson and Spreng 1997; Yu and Dean 2001). Thus, this research focuses on only the evaluative judgment context (i.e., customer satisfaction with the service encounter).**

The following section discusses more deeply the customer satisfaction – customer loyalty relationship. Although, as noted, there have been several studies which investigated customer loyalty drivers, the specific study of the important customer loyalty driver which is customer satisfaction with service encounters and its relationship to customer loyalty is not very extensive. Furthermore, some researchers have questioned whether customer satisfaction has a positive effect on customer loyalty, particularly when there is some contingency factors such as personal determinism or social bonding (e.g., Oliver 1999).

Thus, there is a need to investigate the customer satisfaction- customer loyalty link more carefully.

3.2.3 Customer Satisfaction – Customer Loyalty Relationships

The nature of relationship between customer satisfaction and customer loyalty has also been a subject of debate amongst academics. Some researchers demonstrated that customer satisfaction influence customer loyalty (Ilias and Panagiotis, 2010; Dhandabani, 2010; Olorunniwo et al., 2006; Benjamin, 2006; Caruna et al., 2000). Some evidence indicates that customer satisfaction is a necessary but insufficient condition for loyalty enhancement (e.g., Augustin and Singh, 2005). Although some evidence from the tourism industry shows that corporate image rather than customer satisfaction directly impacts customer loyalty (Andreassen and Lindestad 1998), other results in financial services in the banking industry indicate that customer satisfaction has the strongest impact on loyalty, followed by corporate image, switching cost and search costs (Methlie and Nysveen, 1999). Additionally Patterson, Johnson, Spreng (1997) found that client satisfaction has a strong relationship with intention to re-use a supplier in management consultancy services. There have also been several other studies of satisfaction and the consequences, mostly on customer loyalty (e.g. Anderson and Fornell, 1994; Athanassopoulos, Gounaries, and Stathakopoulos 2001; Dick and Basu 1994; Edvardsson et al. 2000; Gremler 1995; Gremler and Brown 1999; Soderlund 1998). However, the specific relationship between customer satisfaction and customer loyalty has been not well investigated (Oliver 1999).

As noted above, there is a need to specifically investigate the relationship of customer satisfaction with service encounters and customer loyalty. Customer satisfaction with service encounters could be derived from several sources of dis/satisfaction with service encounters. However, some observers believe that an overall customer satisfaction with the service encounter would be better able to directly measure customers' perceptions by using a single question, particularly when investigating the relationship of customer satisfaction and customer loyalty (Iacobucci, Ostrom, Braig, Bezjian-Avery 1996; Kekre, Krishnan, and Srinivasan 1995). It is important to explore the sources of dis/satisfaction with service encounters in order to deeply understand satisfaction with service encounters. However, in investigating the customer satisfaction –loyalty link, particularly in service encounters, an overall satisfaction based on overall previous experiences is a better determinant of customer loyalty (Jones and Suh 2000).

Further, the customer satisfaction –customer loyalty relationship is not simple and straightforward (Bloemer and Kasper 1995), since some variables (e.g., customer characteristics, prior experiences, and switching cost) may act as moderators between satisfaction and loyalty (Homburg and Giering 2001; Lee, Lee, and Feick 2001; Sharma and Patterson 2000). Recently some large-scale studies in the automobile industry show that customer characteristics moderate the satisfaction, repurchase intent and repurchase behavior relationships. For instance, repurchase rates are systematically different among different customer groups even at the same satisfaction rates (Mittal and Kamakura 2001). Customer characteristics (e.g., age, income, and variety seeking) also act as moderators of the relationship between customer satisfaction and loyalty in consumer durables and consumer products contexts (Homburg and Gierring 2001).

Research in the services context has found that psychographic characteristics (e.g., value attainment and positive mood of customer) significantly moderate the relationship between customer satisfaction and customer loyalty (de Ruyter and Bloemer 1999). Oliver (1999), for example, analyzed the relationships between satisfaction and customer loyalty and concluded that customer satisfaction is required in order to form loyalty. However, the satisfaction-loyalty link becomes less significant as loyalty begins to be determined through psychographics variables such as personal determinism and social bonding. The individual's determinism/ fortitude, for example, is "the degree to which the customer fights off competitive overtures on the basis of his or her allegiance to the brand and not on the basis of market-generated information" (Oliver, 1999, p.37). Thus, in a broad variety of contexts, including services, customer satisfaction has a positive effect on customer loyalty, though the direct relationship between customer satisfaction and customer loyalty has remained somewhat ambiguous.

Most prior studies demonstrated the importance of customer satisfaction and its impact on customer loyalty mainly by looking at overall customer satisfaction, rather than focusing on some of the specific attributes of product or services. However, the customer experience in services depends strongly on a service encounter that can significantly affect the level of overall satisfaction. Therefore, it is useful to understand how customer perceptions of the encounter with service providers influence loyalty. Furthermore, companies in the financial services industry have progressively employed technology to enhance efficiency in managing their services. More and more brokerage

firms have even started providing on-line trading via either internet or mobile phones for gaining market share advantage. Nonetheless, these firms are offering technology based self-services that do not contain the element of human interactions, without having carefully studied the true results of this technology interface service.

In fact, as the previous discussion shows, there are not many studies which specifically investigate the relationship between customer loyalty and customer satisfaction either with interpersonal service encounters (Butcher, Sparks, and O'Callaghan 2001) or technology-based service encounters (Meuter et al. 2000). **Thus, there is a need to conduct more careful study regarding the direct impact of customer satisfaction with service encounters on customer loyalty.**

Furthermore, while we do at least have some studies of customer satisfaction toward service firms and the resulting customer loyalty, even if only a few of them are specifically about satisfaction with the service encounter, there is not much work yet on the moderating effect of customer psychographics on the customer satisfaction-loyalty link, particularly at the level of service encounter satisfaction. Oliver (1999) proposed that the satisfaction and loyalty relationship is moderated by customer attitude. Thus, customer attitude toward technology may act as a moderator in the satisfaction-loyalty link, particularly in technology-based service encounters.

3.3 Technology and the Customer

Customer service operations are being concentrating on rapid and technology-driven change (Froehle, 2006). The enormous market capitalization Google, Apple, Microsoft, and Facebook achieved indicates that the growing importance of technology in people's daily lives (Dutta and Mia, 2010). While the online experience became more matured, e-service companies can realize that internet act as a bridge between the companies and customers and provide better and more personal services to each customer. Many service providers and retailers have begun to use various technologies at an accelerating pace (Economist Intelligence Unit, 2010) and at a faster rate in developing than developed countries (International Telecommunication Union, 2012), which can allow customers to consume services electronically without direct personal contact (Chen et al., 2009). SSTs are capable of solving consumers' intensive needs, and performing better than the alternative interpersonal way of service delivery, owing to the fact that SSTs can achieve

more saving money, exclusive time or space constraints. With technological interfaces, SSTs enable customers to produce a service independent of direct service employee involvement (Meuter et al, 2000, 2003). This is based on the explicit or implicit assumption that consumers will also prefer and adopt the new technologies over traditional service methods (e.g. Westjohn et al., 2009). However, both intuitive insight and existing research (Lin and Hsueh, 2007) clearly suggested that not everyone may be equally ready to adapt technology based innovations – and this makes the matter of target e-readiness one of obviously acute interest to both the developers and the users of new technologies.

On account of technologies' broadening characters in service delivery, and the uncertainty (Pavlou, 2003) of the adoption of online service due to the spatial and temporal separation between customers and electronic service providers, and the unpredictability of the internet infrastructure, it is necessary to comprehend customers' readiness to use technology-based systems such as SSTs (Parasuraman, 2000; Burke, 2002). Some studies also revealed that the personalities of consumers play a principal role while they adopt a new technology or service either in the context of work or home (for example, Chen et al., 2009,). Some individuals whether as employees or customers, may not be as psychologically ready as others to adopt technologies in their personal and professional lives. For example, many consumers are experiencing feelings of anxiety (Meuter et al., 2003), or technophobia (Tsikriktsis, 2004), remain skeptical of the additional benefits, or are resistant to change (Burner and Kumar, 2007). In turn, this affects their beliefs and behavior toward newer technologies. Thus, it is critical to study the users' attitude to adopt technology as an alternative to deliver services replacing human –interface.

Although technology has been implemented in service firms for several years, much of the research about technology application in services have investigated determinants and degree of technology acceptance by the employees who directly employ technology (e.g., Davis 1989; Venkatesh and Davis 1996). Some studies have found that external factors such as social norms and the nature of the employee job are important in predicting use of technology (e.g., Lucas and Spittler 1999). Recently, however, Au and Enderwick (2000) investigated the cognitive process determining attitudes toward technology adoption and found that mainly individual internal factors (e.g., belief in perceived benefits and perceived difficulty) influence the formation of behavioral intention to adopt technology. These studies of technology acceptance are particular to employees or internal customers,

not to external customers who are in direct contact with the service provider through either interpersonal service or technology-based service encounters. Therefore, there is a need for further investigation of customer perceptions toward technology, particularly when they interact with a technology interface in technology-based service encounters.

Such work has only just begun, but at least there is some awareness of the need to address customer perceptions toward embracing technology in service delivery. Parasuraman and Grewal (2000) proposed that a technology dimension be integrated into two dimensional triangle of service marketing in Kotler (1994), called the pyramid model. This additional dimension was considered since service firms have been rapidly adopting technology for providing the services. As noted above, much previous research has focused on examining a technology-employee link or a technology-company link, rather than a technology-customer link in the pyramid model. There is a need for further investigation into technology-customer linkages, particularly in customer perceptions.

In addition, customers are different in how they perceive technology as well as in their willingness to interact with technology. As a result, understanding customer perceptions toward technology is a challenge to the present study, since such understanding would provide broader views of customer attitudes when interacting with either interpersonal or technology –based service providers. Thus, the following section presents what the literature discusses about customer perceptions of technology.

3.3.1 Customer Perceptions of Technology

Although technology plays a growing role in the service industry, including rapid growth of SST implementation, there is still some evidence of increasing customer frustration in dealing with technology-based systems (Bitner 2001; Mick and Fournier 1998). As new technologies increasingly penetrate into the population, growing rates of consumer dissatisfaction may be emerging. One plausible explanation for this inverse relationship between penetration and satisfaction, or even usage, is that later adopters of new technologies may not be as technology –savvy as are early adopters. Thus, they may not be enthusiastic users (Parasuraman 2000). The complexities of technology-based service as well as lack of user-friendly instructions also cause customer disappointment.

Therefore, forcing customers to use technology in the service encounter without other viable options is a risky strategy. Even if the problems associated with dissatisfaction are

mostly solved, not all customers will accept and appreciate SSTs without human interaction. Technology can lead to feelings of ignorance or ineptitude (Mick and Fournier 1998). On the other hand, it might be similarly harmful to exclusively provide the international service encounters, as some customers perceive some advantages, and many would like to use it sometimes (Bitner, Brown, and Meuter 2000) . Customers might have a positive view of technology and a belief that it facilitates feelings of more control over things (Dabholkar 1996). Some believe that it offers people more flexibility and efficiency in their lives and a few even have a tendency to be technology pioneers (Meuter et al. 2000). They perceive that technology enhances the ability of service firms or even the customers themselves to provide better service than the conventional human services, in terms of saved time, easy to use, saved money, where / when the customer wants, and avoidance of service personnel (Meuter et al. 2000).

In other words, a combination of positive and negative feelings about technology underlies the domain of technology proneness of customers. While positive feelings toward technology may enhance adoption of new technologies, negative feelings may curtail adoption. Recently, Bobbitt and Dabholkar (2001) proposed a comprehensive conceptual framework to explain the critical role of customers' attitudes toward using technology and technology-based service self-service in influencing customer intentions and behavior related to technology-based self-services.

Previous research has indicated that customer attitudes and beliefs about technology were positively correlated with intentions to adopt technology-based self-services. For instance, customer's attitudes toward interactive teleshopping are good predictors of their propensity to adopt this mode of shopping (Eqastlick and Liu 1997). Certainly, there has been increasing incidence of customers serving themselves through self-service technology-based systems (Bitner, Brown, and Meuter et al. 2000).

A few previous studies have investigated customer evaluation when interacting with technology-based services, particularly in financial services of several countries. For instance, results from three hundred electronic banking users in Australia revealed that customers were satisfied with their overall on-line transaction services even though the perceived performance of the banking service was not at a high standard (Joseph, McClure, and Joseph 1999). It could be argued that customers have a propensity toward positive perceptions of technology and technology-based services. Another recent study found that

Turkish consumers who had accepted internet banking services expressed higher levels of customer satisfaction and retention than the other customers (Polatoglu and Ekin 2001). A recent study in the UK specifically investigated bank customer attitudes toward both human services and automated banking services and their impact on bank customer overall satisfaction, switching and loyalty behavior. In this case, customer attitudes toward either human or technology services had a direct impact on satisfaction, but an indirect impact on satisfaction, but an indirect impact on switching and loyalty behavior (Moutinho and Smith 2000).

3.3.2 Technology Readiness of Customers

The discussion above makes it clear that to study dis/satisfaction with technology-based service encounter and its impact on customers' response such as customer loyalty, it is therefore necessary to investigate the customers' attitude toward technology. Furthermore, customers are different in using technology based service since they have different level of proneness to interact with technology services. Parasuraman (2000) conceptualized technology readiness of customers as a combination of positive and negative feelings/attitudes toward technology at an overall state-of-mind, resulting from a gestalt of mental enablers and inhibitors that collectively determine a customer's predisposition to adopt new technologies. Thus, it was defined as people's propensity to embrace and use new technologies for accomplishing goals in home life and at work (Parasuraman2000). In other word, the technology readiness of customers is based on in-depth view of beliefs and attitudes toward technology. Technology readiness is now a renowned construct in innovation adoption and diffusion literature (Lin et al., 2007; Lin and Hsieh, 2006, 2007; Walczuch et al., 2007). Understanding the consumer readiness towards SSTs is an important consumer psychographic (Massey et al., 2007).

Several empirical findings in the USA have revealed that customer perceptions of technology fall into four broad dimensions (optimism, innovativeness, discomfort, and insecurity) of the technology readiness (Parasuraman, 2000; 2005). Indeed, customers' propensity to embrace technology varies widely, resulting from interaction between drivers (optimism, innovativeness) and inhibitors (discomfort, security) of technology readiness.

Optimism is defined as a positive view of technology and a belief that it offers people increased control, flexibility and efficiency in their lives, while innovativeness is defined as a tendency to be technology pioneer and thought leader. These two dimensions are the

drivers of technology readiness of customers. In contrast, discomfort and insecurity are inhibitors of technology readiness.

When customers perceive technology positively they will use technology more than they did in the past. These optimistic and innovative consumers enjoy using technology since it allows them to be more efficient in their jobs and it lets them conduct business at any time. Some technologically innovative customers enjoy figuring out how high-tech product/services work, without help from others; further, they indicate that others often come to them for help and advice. These customers naturally desire to acquire and test the newest technologies, as well as to be an opinion leader. While customers who perceive technology positively may evaluate or judge technology-based services positively even before having experiences with the services. On the other hand, pessimistic customers (low optimism) want to see the benefits of technology proved before they make a decision to use it. Many pessimistic customers believe that the benefits of new technologies are often overstated. Such customers who perceive technology negatively may prefer to deal with interpersonal services rather than engage in technology-based service encounters in business transactions.

Many customers may be uncomfortable with technology. They believe that it was not designed for use by “ordinary people”. Thus, they are often overwhelmed with all the details needed to learn to operate new technologies, and often think that technology can be too complicated to be useful. Consumers with very low discomfort levels (i.e., highly comfortable with technology) toward operating new technologies usually believe that they have fewer technological problems than most people. They also would rather solve problems on their own than ask for help, and see the benefits of a detailed manual.

Some consumers can be insecure about a technology’s ability to operate properly and safely. These consumers, for example, believe that electronic business transactions need to be confirmed in writing. They also worry that the privacy of personal information (e.g., financial data) sent over the Internet is at risk when doing business with a company that can only be reached online. Furthermore, insecure customers also see risks, especially; other customers are watching when they have trouble with new technologies. On the contrary, technologically secure (confident) consumers believe that technology can be more reliable and consistent than a human when performing a task and that the risks of new technologies are often exaggerated.

Research evidence shows the positive relationship between the technology readiness of customers and the use of technology-based services (Parasuraman, 2000; 2005). Massey et al., (2007) investigated consumer readiness across five tech-ready kinds of personalities

in two distinct SST contexts (hedonic vs. utilitarian), and found that distinct tech ready segments differed in their SST usage, and their evaluations of SST usage were moderated by the SST type or context. Besides, some findings revealed that customers owning a cellular phone, having a computer at home, and using an internet service at home are significantly more technology ready than the customers with no plans to have or use the technology-based products and services. Current users are even more technologically ready than those who already plan to get the technology in next 12 months. This result is consistent with previous research findings (e.g., Dabholkar 1996; Eastlick 1997) that customers' attitudes and beliefs about technology are positively correlated with intentions to use. Consequently, consumers who have high levels of technology readiness have more tendency to adopt technology-based services, and are likely to be more satisfied with them.

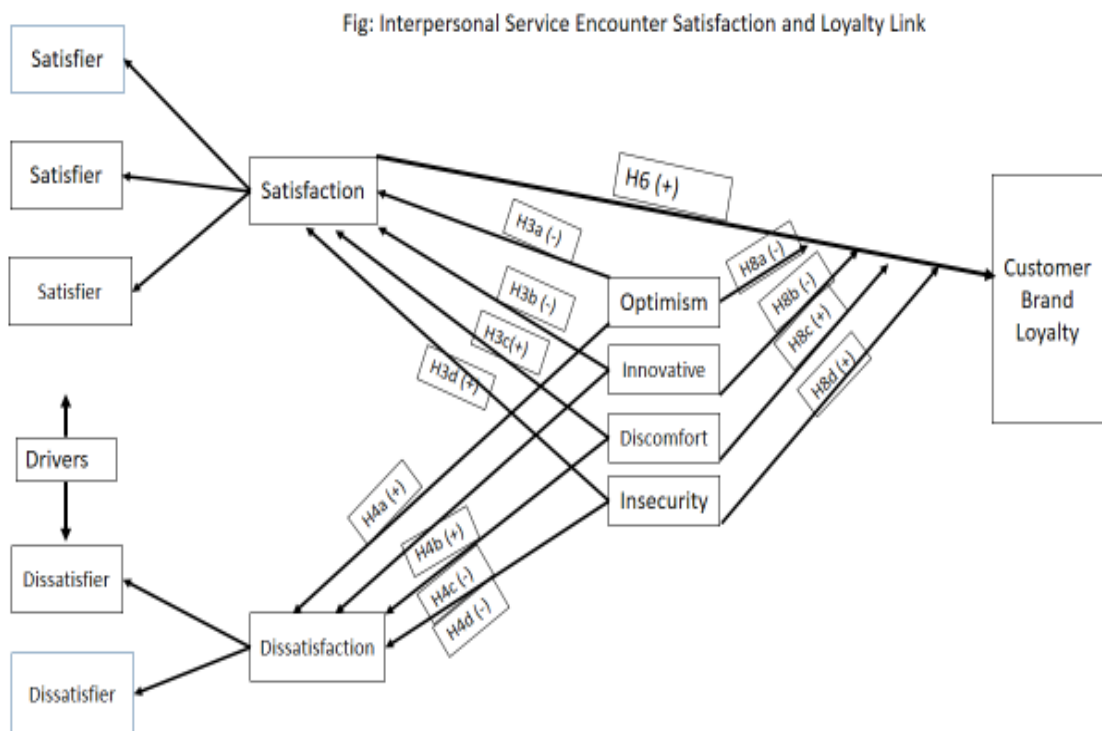
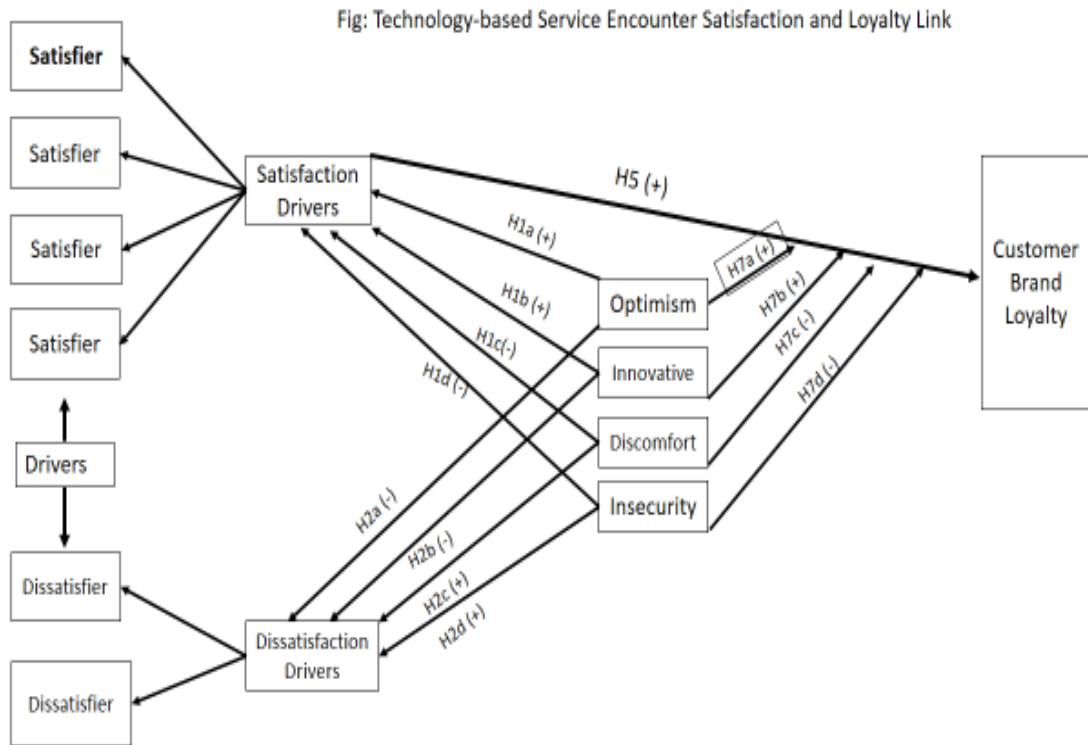
3.4 Conceptual Model

Based on the preceding discussion of the three underlying concepts (satisfaction, loyalty, technology readiness), this section presents a proposed conceptual model for the current research. The overall perspective for the conceptual model is to examine the impact of satisfaction with technology-based service encounters on customer loyalty. However, in order to thoroughly investigate the effects of technology-based service encounters in the context of evaluative judgments, it is necessary to simultaneously examine the impact of interpersonal service encounter satisfaction on customer loyalty. Therefore, the conceptual model proposed for both types of service encounter satisfaction (interpersonal and technology-based) and their relationships with customer loyalty to a service provider. However, customers' attitudes or beliefs about technology are critical to their evaluations of service encounters, particularly related to satisfaction. This statement is supported by the aforementioned literature, though somewhat limited because this is a relatively new area of inquiry in developing countries where technological advancement is a new experience. But it was also strongly evident in the findings of the exploratory pilot work for the present study, which are discussed in more detail in the next chapter. Therefore, the proposed conceptual model consists of three main relationships as follows:

1. The impact of technology readiness of customers on service encounter satisfaction,
2. The service encounter satisfaction-customer loyalty relationship, and
3. The moderating effects of technology readiness of customers on the service encounter satisfaction-customer loyalty link.

These relationships are summarized in Figure 2.1.

Fig 2.1: Conceptual Model



As presented in the section on customer perceptions of technology, customers evaluate service performances based on not only cognitive process but also attitude components, such as attitude toward technology. Thus, technology readiness of customers could have direct impact on customer satisfaction with service encounters, especially technology-based service encounters. Customers who prefer technology to human services could be inclined to be satisfied with technology-based service encounters, and would tend to be less dissatisfied with technology based service failures since they like to embrace the technology. Thus this study, following much of the literature (and the pilot work), conceptualizes satisfaction separately when investigating the impact of technology readiness of customers on service encounter satisfaction in the following section.

Figure 2.2: The impact of technology-based service encounters on customer loyalty

Overall Satisfaction of Technology-Based Service Encounters	Technology Readiness of Customer	
Satisfaction Factors <ul style="list-style-type: none"> • Solved Intensified Need • Better than the Alternative • Did Its Job 		
Dissatisfaction Factors <ul style="list-style-type: none"> • Technology Failure • Process Failure • Poor Design • Customer-driven failure 		Customer Loyalty/ Brand Loyalty Conation Loyalty (Behavioral Intention)
Overall Satisfaction of Interpersonal Service Encounters	<ul style="list-style-type: none"> • Optimism • Innovativeness • Discomfort • Insecurity 	
Satisfaction Factors <ul style="list-style-type: none"> • Response to Service Delivery System Failures • Response to Customer Needs and Requests • Spontaneously Delight Customers 		
Dissatisfaction Factors <ul style="list-style-type: none"> • No Response to Service Delivery System Failures • No Response to Customer Needs and Requests • Spontaneously Disappoint Customers 		

3.4.1 The Impact of Technology Readiness of Customers on Service Encounter Satisfaction

Service encounter dis/satisfaction is evaluated in this study from customer satisfaction derived during the time of direct interaction by customers with service providers. Results from initial qualitative pilot work shows that the satisfaction and dis/satisfaction drivers should be handled separately. This is consistent with the literature, which has suggested that service encounter dis/satisfaction is not exactly a simple bipolar concept. Therefore, when investigating the impact of customers' attitudes toward technology on service encounter dis/satisfaction, it would be better to separately investigate the impact on either satisfaction or dis/satisfaction with service encounters.

When customers interact with service providers they may evaluate services differently based upon service performances (Butcher, Sparks, and O'Callaghan 2001), or other individual internal factors such as customer attitudes toward either human or technology based services. Moutinho and Smith (2000) found that bank customers' attitudes toward human tellers and automated banking are positively and directly related to perceived satisfaction, whereas Thornton and White's (2001) findings supported that technology oriented customer currently use SSTs for their financial transactions. Thus, customers who have positive attitudes toward technology are likely to embrace technology with positive feelings. Consequently, they are more likely to evaluate technology based services positively (i.e., more satisfaction), or even when technology-based services malfunction, these customers tend to have less dissatisfaction than others.

In contrast, customers who are unfavorable toward technology have a tendency to dislike technology-based services and thus they tend to evaluate the service such that they have lower satisfaction with technology interface services. Particularly when technology-based services delivery systems fail, these non-technology prone customers are likely to be more dissatisfied with technology-based service encounters.

According to the theory of reasoned action (TRA) indicates that the behavior is influenced by individual perceptions and attitudes as well as by social influences (Fishbein and Ajzen 1975). Recent empirical study shown that positive attitudes toward technology of internal customers resulted in increased new technology usages and higher productivity levels

(Keillor, Bashaw, and Pettijohn, 1997). Technology prone of internal customers has been found to be positively associated with satisfaction of working with technology (Rajaeli, 1986).

Recently, Bobbitt and Dabholkar (2001) proposed that customer attitudes toward using technology (i.e., internet for shopping) will have a direct effect on intention to behave (i.e., shop through internet) then will have a direct effect on their behavior. Empirical study in Australia and Turkey supported that consumers who like and use internet banking services expressed higher levels of customer satisfaction than the other customers (Joseph, McClure, and Joseph 1999, Polatoglu and Ekin 2001). In addition, Dabholkar (1986) have found that customers who enjoying with using technology tend to evaluate technology-based self-service positively.

Technology prone customers have a propensity to enjoy using new technologies for accomplishing goals in home life and at work since they have positive attitudes about technology. Technology prone customers are more likely to cite satisfaction with online trading (Srijumpa, SPeece, and Paul 2002). However, if they have to engage in encounters with human services, they are likely to compare interpersonal service performances with the technology-based ones that they like, particularly interms of standardization of human services quality. As a result, if interpersonal services encounter fail, these technology ready customers tend to more dissatisfied with human services. However, they are more likely to have lower satisfaction with interpersonal service encounter since they like and prefer to interact with technology based services.

As mentioned in the technology readiness section, customers who have optimistic perceptions toward technology may evaluate or judge technology-based services positively even before having experience with the services. However, customers who have negative attitude believe that the benefits of new technologies are often overstated. Thus, these non-technology prone customers prefer to deal with interpersonal services over technology based service encounters in business transactions. Consequently, they are more likely to positively evaluate (i.e., more satisfaction) if human services are provided. Even if human services are failures these customers tend to have lower dissatisfaction than other customers.

Thus, customer satisfaction with service encounters not only varies based on service performances but also on customer's attitude toward technology (Moutinho and Smith 2000). For instance, customers who like and enjoy using technology since it allows them to be more efficient in their jobs or even as technologically innovative customers, prefer technology-based services to other services (Parasuraman 2000). On the other hand, customers who dislike and distrust technology are more likely to embrace human human services (Bitner, 2001). These unfavorable toward technology, customer might prefer interpersonal service encounters to technology interface services, thus they are likely to perceive human services more positively even when the services fail. As a result, these customers are likely to less dissatisfy with interpersonal service encounters.

3.4.2 Service Encounter Satisfaction –Service Loyalty Relationships

Service encounter satisfaction has a positive effect on customer loyalty (Butcher, Sparks, and O'Callaghan 2001; Jones and Suh 2000; Meuter et.al. 2000). Therefore, the present study proposes similarly that customer satisfaction with service encounters in either technology-based services or interpersonal services have positive relationships with customer loyalty.

As discussed above, an overall customer satisfaction with service encounters is more critical to determine when investigating the service encounter satisfaction – service loyalty relationships. Consistent with the pilot work, the current study proposes that the relationships between an overall satisfaction with either technology-based or interpersonal service encounter and customer loyalty is positive.

3.4.3 Moderating Effects of Technology Readiness

Technology continuous to radically and rapidly change the nature of service, customers' service experiences, and customers' relationships with service providers (Ostrom et al. 2015; Rust and Huang 2014). Service firms that want to leverage SSTs should be aware of customer dispositions that can influence their experiences with technology. Accordingly, understanding consumers' technology readiness is critical for successful leveraging. Technology readiness is defined as one's propensity to embrace, adopt, and use new technologies in any aspect of one's life (e.g., home, work, leisure; Parasuraman 2000; Parasuraman and Colby 2015). Academic research on the moderating impact of psychographic characteristics or customers (i.e., customer attitudes) on the customer

satisfaction and customer loyalty relationships in service encounters is not very extensive (de Ruyter and Bloemer, 1999). This is even though the little bit of such research in the literature suggests that some psychological characteristics, including attitudes toward technology, may act as moderators on the satisfaction – loyalty link, particularly in technology-based service encounters. Therefore this research proposes to investigate the moderating effects of the technology readiness of customers on the satisfaction-customer loyalty link in service encounters. This satisfaction – customer loyalty link is particularly to overall satisfaction with the service encounter and customer loyalty to service providers.

According to the literature, the relationship of overall service encounter satisfaction to customer loyalty is positive. However, the satisfaction – loyalty link is likely to be moderated by levels of technology readiness of customers, particularly in technology-based service encounters. TR moderates the association between satisfaction and loyalty. When TR is high (positive) the link between satisfaction and loyalty will be stronger than under alternative TR conditions (i.e. low or negative).

The relationship of overall satisfaction with technology-based service encounters to customer loyalty is likely to be more strongly positive for customers who are favorable toward technology or show more readiness to use technology. Conversely, the relationship would be weakened for customers who are uncomfortable to use technology. The relationship between overall satisfaction with interpersonal service encounters and customer loyalty would be more strongly positive for customers who have discomfort with and distrust of technology (Discomfort and Insecurity in the TRI), and this relationship would be weakened for customers who prefer to use technology (Technology optimism and innovativeness in TRI). The next section presents definitions of these main concepts underlying the conceptual model of the current study.

3.4.4 Definitions

Customer Satisfaction is defined as customers' positive response to the perceived service performance during the interaction with service providers. The definition is modified from the guidelines of a context-specific definition of customer satisfaction proposed by Giese and Cote (2000), and this definition implemented by looking at customer dis/satisfaction drivers which include both cognitive and affective components.

Service encounter satisfaction is defined as customer satisfaction derived during times of the direct interaction by customers with service providers. This interaction can occur with or without the element of human interaction, as suggested in Shostack (1985). As just noted, this involves customers' assessment of service performance during the service encounter, as presented in the customer satisfaction definition.

Overall satisfaction with technology-based service encounters is defined as service encounter satisfaction of the customer resulting from a global evaluation based on all previous service encounter (modified from Jones and Suh 2000, p.149), during when they interact with self-service technology of service providers without direct human contact or services. Self-service technology is the technological interface that customers can use to produce a service independently.

Overall satisfaction with interpersonal service encounters is defined as service encounter satisfaction of customers resulting from a global evaluation based on all previous service encounters (adapted from Jones and Suh 2000, p.149) when they interact with contact employees of service providers.

Customer loyalty in this study is defined as customers' positive response to repeat using the same service provider whenever possible, modified from Singh and Sirdeshmukh's (2000) and Kandampully and Suhartanto's (2000) definitions.

Technology readiness of customer is defined following Parasuraman (2000) as "people's propensity to embrace and use new technologies for accomplishing goals in home life and at work." It consists of four subdimensions:

- **Optimism** is defined as "a positive view of technology and a belief that it offers people increased control, flexibility and efficiency in their lives," following Parasuraman (2000).
- **Innovativeness** is defined following Parasuraman (2000) as "a tendency to be a technology pioneer and thought leader".
- **Discomfort** is defined as "a perceived risk of control over technology and a feeling of being overwhelmed by it," as in Parasuraman (2000).
- **Insecurity** is defined as "distrust of technology and skepticism about its ability to work properly," also following Parasuraman (2000).

All of the constructs related to satisfaction, loyalty, and technology readiness follow current thinking as expressed in the literature review. They were confirmed through in-depth pilot work with both expert opinion and typical respondents, which is discussed in the next chapter.

3.4.5 Hypotheses for the study

Formalizing the statement of the conceptual model, the hypotheses for the three main relationships are presented as follows:

The impact of technology readiness of customers on service encounter satisfaction is the first direct relationship between the two concepts, technology readiness of customers and service encounter dis/satisfaction.

- H1: Technology readiness of customers will influence satisfaction with technology based service encounters.

- **H₀: TRI of customers do not influence satisfaction with SSTs**
- **H₁: TRI of customers influence satisfaction with SSTs**

The first hypothesis is divided into four sub-hypotheses, as the TRI has four sub dimensions. Customers who like and enjoy using new technologies are more likely to be satisfied with technology interface services (H1a and H1b) whereas customers who are uncomfortable using technology and distrust its ability would be less satisfied with technology-based service encounters (H1c and H1d).

- ❖ H1a: Customers who have a high level of optimism toward technology tend to have higher satisfaction with technology-based service encounters.

- **H₀: There is no positive relationship between optimism and satisfaction with SSTs**
- **H1: Optimism toward technology positively influence satisfaction with SSTs**

- ❖ H1b: Customers who have a high level of innovativeness toward technology tend to have higher satisfaction with technology based service encounters.
 - **Ho: There is no positive relationship between innovativeness and satisfaction with SSTs**
 - **H1: Innovativeness toward technology positively influence satisfaction with SSTs**

- ❖ H1c: Customers who have high level of discomfort toward technology tend to have lower satisfaction with technology based service encounters.
 - **Ho: There is positive relationship between discomfort and satisfaction with SSTs**
 - **H1: Discomfort toward technology negatively influence satisfaction with SSTs**

- ❖ H1d: Customers who have a high level of insecurity toward technology tend to have lower satisfaction with technology-based service encounters.
 - **Ho: There is positive relationship between discomfort and satisfaction with SSTs**
 - **H1: Insecurity toward technology negatively influence satisfaction with SSTs**

- H2: Technology readiness of customers will influence technology-based service encounters dissatisfaction
 - **Ho: TRI of customers do not influence dissatisfaction with SSTs**
 - **H1: TRI of customers influence dissatisfaction with SSTs**

Customers, who prefer to embrace technology, even when technology provides failed services, are more likely to understand and accept technology failures. Thus, these

customers have a tendency to be less dissatisfied with technology-based service encounters (H2a and H2b).

- ❖ H2a: Customers who have a high level of optimism toward technology tend to have lower dissatisfaction with technology-based service encounter failures.
 - **Ho: There is positive relationship between optimism and dissatisfaction with SSTs**
 - **H1: Optimism toward technology negatively influence dissatisfaction with SSTs**

- ❖ H2b: Customers who have a high level of innovativeness toward technology tend to have lower dissatisfaction with technology-based service encounter failures.
 - **Ho: There is positive relationship between innovativeness and dissatisfaction with SSTs**
 - **H1: Innovativeness toward technology negatively influence dissatisfaction with SSTs**

In contrast, customers dislike and distrust technology would tend to be more dissatisfied with the failures of technology services (H2c and H2d)

- ❖ H2c: Customers who have a high level of discomfort toward technology tend to have more dissatisfaction with technology based service encounter failures.
 - **Ho: There is no positive relationship between discomfort and dissatisfaction with SSTs**
 - **H1: Discomfort toward technology positively influence dissatisfaction with SSTs**

- ❖ H2d: Customers who have a high level of insecurity toward technology tend to have more dissatisfaction with technology-based service encounter failures.
 - **Ho: There is no positive relationship between insecurity and dissatisfaction with SSTs**

- **H1: Insecurity toward technology positively influence dissatisfaction with SSTs**

Technology readiness of customers is not only hypothesized to have direct impact on technology-based service encounter dis/satisfaction but also on interpersonal service dis/satisfaction:

- H3: Technology readiness of customers will influence interpersonal service encounter satisfaction.

- **H₀: TRI of customers do not influence satisfaction with Interpersonal Encounter**
- **H₁: TRI of customers influence satisfaction with Interpersonal Service Encounter**

The third hypothesis also can be stated in several components to account for how the subdivisions of technology readiness of customer affect interpersonal service encounter satisfaction:

- ❖ H3a: Customers who have a high level of optimism toward technology tend to have lower satisfaction with interpersonal service encounters (ISE).
- **H₀: There is positive relationship between optimism and satisfaction with ISE**
- **H₁: Optimism toward technology negatively influence satisfaction with ISE**
- ❖ H3b: Customers who have a high level of innovativeness toward technology tend to have lower satisfaction with interpersonal service encounters.
 - **H₀: There is positive relationship between innovativeness and satisfaction with ISE**
 - **H₁: Innovativeness toward technology negatively influence satisfaction with ISE**
- ❖ H3c: Customers who have a high level of discomfort toward technology tend to have higher satisfaction with interpersonal service encounters.

- **Ho: There is no positive relationship between discomfort and satisfaction with ISE**
 - **H1: Discomfort toward technology positively influence satisfaction with ISE**
- ❖ H3d: Customers who have a high level of insecurity toward technology tend to have higher satisfaction with interpersonal service encounters.
- **Ho: There is no positive relationship between Insecurity and satisfaction with ISE**
 - **H1: Insecurity toward technology positively influence satisfaction with ISE**
- H4: Technology readiness of customers will influence interpersonal service encounter dissatisfaction:
- **H₀: TRI of customers do not influence dissatisfaction with Interpersonal Encounter**
 - **H₁: TRI of customers influence dissatisfaction with Interpersonal Service Encounter**

Customers who have a willingness to use technology are more likely to be dissatisfied with human interface services (H4a and H4b) since they might prefer to interact with the service form they like, whereas customers who dislike using technology would be less dissatisfied with interpersonal service encounters (H4c and H4d):

- ❖ H4a: Customers who have a high level of optimism toward technology tend to have more dissatisfaction with interpersonal service encounters
- **Ho: There is no positive relationship between optimism and dissatisfaction with ISE**
 - **H1: Optimism toward technology positively influence dissatisfaction with ISE**

- ❖ H4b: Customers who have a high level of innovativeness toward technology tend to have more dissatisfaction with interpersonal service encounters.
 - **Ho: There is no positive relationship between innovativeness and dissatisfaction with ISE**
 - **H1: Innovativeness toward technology positively influence dissatisfaction with ISE**

- ❖ H4c: Customers who have a high level of discomfort toward technology tend to have lower dissatisfaction with interpersonal service encounters.
 - **Ho: There is positive relationship between discomfort and dissatisfaction with ISE**
 - **H1: Discomfort toward technology negatively influence dissatisfaction with ISE**

- ❖ H4d: Customers who have a high level of insecurity toward technology tend to have lower dissatisfaction with interpersonal service encounters.
 - **Ho: There is positive relationship between insecurity and dissatisfaction with ISE**
 - **H1: Insecurity toward technology negatively influence dissatisfaction with ISE**

The service encounter satisfaction – loyalty relationship is the second relationship investigated in the present study. Previous research has found that the relationship of service encounter satisfaction with either interpersonal or technology-based customer loyalty is positive (Butcher, Sparks, and O’Callaghan 2001; Meuter et.al. 2000).

The more customers are satisfied with technology-based services of service providers, the more likely they are to recommend the good services of the service firms to other

customers (Meuter et al. 2000) or to have more intention to reuse and retain to use the service firms for few years (H4).

- H5: The impact of technology-based service encounter satisfaction on customer loyalty will be positive.
- **Ho: There is no significant positive relationship between satisfaction with SSTs and loyalty**
- **H1: There is significant positive relationship between satisfaction with SSTs and loyalty**

Other research has also shown that service encounter satisfaction has a positive impact on customer loyalty (i.e., repurchase intentions) for interpersonal services (e.g., Butcher, Sparks, and O’Callaghan 2001; Jones and Suh 2000). Thus, the sixth hypothesis (H6) is as follows:

- H6: The impact of interpersonal service encounter satisfaction on customer loyalty will be positive.
- **Ho: There is no significant positive relationship between satisfaction with ISE and loyalty**
- **H1: There is significant positive relationship between satisfaction with ISE and loyalty**

Moderating Effect of TRI on Satisfaction Loyalty Link

The moderating effect of technology readiness of customers on the service encounter satisfaction-loyalty link is the third relationship investigated. Previous studies presented evidence that overall satisfaction with service encounters has a positive effect on customer loyalty (e.g., Butcher, Sparks, and O’Callaghan 2001; Meuter 2000). However, the specific investigation of the relationships between either type of service encounter satisfaction and customer loyalty was not intensively examined in the context of psychological characteristics which may moderate the relationship. Here, the study is specifically interested in the customer’s psychological response to technology, and technology

readiness. This study hypothesizes the satisfaction-loyalty relationships as presented above in H5 and H6; and looks at the moderating role of technology readiness in H7 and H8.

➤ H7: Technology readiness of customers will moderate the relationship between technology-based service encounter satisfaction and loyalty.

- **Ho: There is no moderating effect of TRI of customers on the relational link between satisfaction with SSTs and loyalty**
- **H1: TRI of customer moderates the relational link between satisfaction with SSTs & loyalty**

Customer perception toward technology has an impact on their evaluations of service performances, particularly technology-based services. As the research shows, and as we show in this study, customers who like and enjoy using technology are likely to positively evaluate technology interface services and service provider firms. Some works also indicate that technology oriented customers use some SSTs such as ATM and telephone banking more frequently (Thornton and White 2001). There is a missing link here, which we hope to show; that the satisfaction-loyalty relationship for technology-based services and customer loyalty will tend to be stronger for customers who are technology prone (i.e., optimism and innovativeness), as hypothesized as H7a and H7b.

❖ H7a: The impact of overall satisfaction with technology-based service encounters on customer loyalty will be stronger for customers who have a high level of optimism toward technology.

- **Ho: Optimism weaken the relational link between satisfaction and loyalty**
- **H1: Optimism strengthen the relational link between satisfaction and loyalty**

❖ H7b: The impact of overall satisfaction with technology-based service encounters on customer loyalty will be stronger for customers who have a high level of innovativeness toward technology.

- **Ho: Innovativeness weaken the relational link between satisfaction and loyalty**

- **H1: Innovativeness strengthen the relational link between satisfaction and loyalty**

However, the moderating effects of technology readiness of customers on the satisfaction-loyalty link are hypothesized to be negative for customers who dislike and distrust technology, as presented in H7c and H7d.

- ❖ H7c: The impact of overall satisfaction with technology-based service encounters on customer loyalty will be weaker for customers who have a high level of discomfort toward technology.

- **Ho: Discomfort strengthen the relational link between satisfaction and loyalty**
- **H1: Discomfort weaken the relational link between satisfaction and loyalty**

- ❖ H7d: The impact of overall satisfaction with technology-based service encounters on customer loyalty will be weaker for customers who have a high level of insecurity toward technology.

- **Ho: Insecurity strengthen the relational link between satisfaction and loyalty**
- **H1: Insecurity weaken the relational link between satisfaction and loyalty**

- H8: Technology readiness of customer will moderate the relationship between interpersonal service encounter satisfaction and customer loyalty.

- **Ho: There is no moderating effect of TRI of customers on the relational link between satisfaction with ISE and loyalty**
- **H1: TRI of customer moderates the relational link between satisfaction with ISE & loyalty**

Customer perceptions toward technology also have an impact on customer evaluations of human services of firms. Thronton and White (2001) revealed that technology oriented

customers do not use human teller services much since they prefer to contact directly with service provider firms through SSTs. There is also a missing link here where the satisfaction-loyalty relationship for interpersonal services is moderated by technology readiness. Therefore, we hypothesize that customer who technology prone are likely to weaken the degree of positive relationship between interpersonal service encounter satisfaction and service loyalty (H8a and H8b). While the moderating effects of technology readiness of customers are hypothesized to strengthen the overall interpersonal service encounter satisfaction-loyalty link for customers who are not ready to embrace technology (H8c and H8d).

- ❖ H8a: The impact of overall satisfaction with interpersonal service encounters on customer loyalty will be weaker for customers who have a high level of optimism toward technology.
 - **Ho: Optimism strengthen the relational link between satisfaction and loyalty**
 - **H1: Optimism weaken the relational link between satisfaction and loyalty**

- ❖ H8b: The impact of overall satisfaction with interpersonal service encounters on customer loyalty will be weaker for customers who have a high level of innovativeness toward technology.
 - **Ho: Innovativeness strengthen the relational link between satisfaction and loyalty**
 - **H1: Innovativeness weaken the relational link between satisfaction and loyalty**

- ❖ H8c: The impact of overall satisfaction with interpersonal service encounters on customer loyalty will be stronger for customers who have a high level of discomfort toward technology.
 - **Ho: Discomfort weaken the relational link between satisfaction and loyalty**
 - **H1: Discomfort strengthen the relational link between satisfaction and loyalty**

❖ H8d: The impact of overall satisfaction with interpersonal service encounters on customer loyalty will be stronger for customers who have a high level of insecurity toward technology.

- **Ho: Insecurity weaken the relational link between satisfaction and loyalty**
- **H1: Insecurity strengthen the relational link between satisfaction and loyalty**

CHAPTER 4

Methodology

4. Methodology

The purpose of this chapter is to describe the research design of the study and to present the pilot work in the qualitative phase and the quantitative test for the study. The results of the qualitative work (in-depth interviews and Delphi) are discussed. Furthermore, survey instruments development, and the data collection process for the study are illustrated in this chapter.

4.1 Research Design

The impact of satisfaction with technology-based service encounters on customer loyalty was investigated by focusing on three relationships. **The first** relationship concerns the direct effect of technology readiness of consumers on service encounter satisfaction. **Then the second** relationship is between service encounter satisfaction (either technology-based or interpersonal) and customer loyalty. **The third** relationship investigates the moderating effects of technology readiness of customers on the satisfaction –loyalty link in the service encounters. It is important to note that as there is no established quantitative scale to measure service encounter driven dis/satisfaction, the study followed complete procedures of developing psychometric scales for measuring service encounter (both interpersonal and technology encounter) dis/satisfaction.

This research was designed to investigate these relationships in a context where respondents could potentially access service either through technology-based service encounters or interpersonal ones. Emergence of service sector and the growing use of technology in service delivery are relatively new experience to the consumers of Bangladesh. With the proliferation of information technology through mobile phone service since 2005, service rendering firms have been using Internet for communicating and delivering services to gain competitive advantages, enhance customer satisfaction, improving firm's image, and improving profitability. Recently, a growing number of firms have been progressively using Internet but only a few firms offer services completely online. For example, banks offer low-involvement services through ATM but still rely on interpersonal encounter for high-involvement services, such as loan services. There is only

one service sector - retail stock trading firms in Bangladesh- that presently provide both modes of service encounter were selected as the context for the research.

Most of the concepts in this study were generated and have been applied, sometimes extensively, in the western context (e.g., the USA and European countries). However, little research has been conducted in an Asian context. Thus, this research initially conducted a pilot study to explore how existing concepts were conceptualized or understood from the perspective of Bangladeshi retail stock trading customers' perceptions. The pilot qualitative work, including both in-depth interviews and Delphi with expert opinion, was used to explore the relationships of the three concepts and later to develop a survey instrument for the study.

The first pilot work was the in-depth interviews with both customers (retail stock traders) and service providers (marketing officers / brokers) in order to understand and identify the service encounter dis/satisfaction drivers. Since these dis/satisfaction drivers have not been developed into quantitative measures, this work was the basis for developing questionnaire items.

Further, in-depth interviews also helped ensure the understanding of concepts and existing measurements for customer loyalty and technology readiness of customers.

In addition to the extensive literature review and the first pilot study, the second pilot work was conducted using expert opinion to continue development and modification of measurements for the three concepts. For instance, the existing measures for the concepts of customer loyalty and especially technology readiness of customers were modified to fit the context of stockbrokerage industries in Bangladesh.

An additional expert opinion survey was used to establish content validity. Each expert was requested to assign each of the possible measurement items into any one of the existing concept sub-dimensions (e.g., optimism, innovativeness, discomfort, and insecurity for the technology readiness concept). The items with high consensus rates for each concept were selected and used as measurement items for the concepts of customer loyalty and technology readiness of customer. Finally, then the quantitative research was designed to collect data from customers who were exposed to either technology-based or interpersonal service encounters.

4.2 Qualitative Research

The qualitative research phase of the study was conducted through a series of either face-to-face or telephone in-depth interviews with typical customers and service providers, and through expert opinions with both typical customers and academic experts as described in the next sections.

4.2.1 In-depth Interviews

The in-depth interviews were conducted separately in four stages in order to investigate the three main concepts in the specific context of brokerage services. The first stage of the in-depth interviews was for understanding and identifying service encounter dis/satisfaction drivers, either in technology-based service encounters or interpersonal service encounters. Such qualitative approaches are very appropriate, even necessary, in the beginning stages of developing knowledge about unfamiliar situations (Krik and Miller 1986; Spiggle 1994). Certainly, research on dis/satisfaction with technology-based service encounters is an area which has not received extensive research in South Asian context, and the concepts are not well developed or extensively tested. For application of SSTs to high level services, this is particularly true. In contexts such as use of internet for brokerage services, the SST is so new that almost no research is available on dis/satisfaction in Bangladesh perspective.

However, there is disagreement about the research approach for identifying sources of customer dis/satisfaction with service encounters. Much of the work uses a method called critical-incident technique (CIT). As mentioned in the previous chapter, respondents in the CIT method are asked to describe a specific critical incident in as much detail as possible, then the researchers develops a schema for categorizing the incidents, such as the schema for drivers of dis/satisfaction with interpersonal service encounter (Bitner, Booms, and Tetreault 1990; Bitner, Booms, and Mohr 1994). There are several versions of this research methodology, focusing on one or several critical incidents, or sometimes only on incidents which are strong enough to induce switching, but they all share this attention to details of specific interactions, and depend upon the respondent to remember these details (Edvardsson and Roos 2001).

Nonetheless, Chandon, Leo, and Phillippe (1997) argue that the dimensions of service encounters should be measured by questionnaires, not derived from CIT, as in Bitner,

Booms, and Tetreault (1990) and Bitner, Booms, and Mohr (1994). The main reasons are that CIT uses data heavily based on the customers' memories and judgment about critical incidents, which are relatively scarce in most services. Thus, Chandon, Leo, and Phillippe (1997) believe that CIT does not give cues to assess ordinary encounters.

Although CIT is essentially a qualitative exploratory approach (Marshall and Rossman 1989), this research performed a different qualitative approach, not CIT, in looking at the drivers of customer dis/satisfaction with service encounter in stock trading. Partially, this is because the point by Chandon, Leo, and Philippe (1997) has some validity. Furthermore, high context Bangladeshi culture, with femininity and collectivism (in Hofstede's (1994) terminology), is more accustomed to verbal expression, and comfortable with in-depth interviews, rather than with detailed explanations of situations in critical incidents, as in CIT. Bangladeshi prospective respondents would not be familiar with extensive expression of their service experiences, particularly complaints when service delivery fails, since politeness is a key cultural value, even to providers of poor service. Therefore, in-depth interviewing seemed to be more appropriate in this case.

4.2.1.1 The first stage of in-depth interviews

Previous research has shown that some sources of customer dis/satisfaction with service encounters can be perceived differently between customers and service providers. Too much of gap can lead to poor service, as it indicates that the service providers may not understand the customer very well. Thus, it is important to examine sources of customer dis/satisfaction with service encounters not only from the service provider's point of view, but also from the customer view point. Therefore, in-depth interviews were conducted separately with service providers (marketing officers of stockbrokerage firms), and with customers (retail stock traders) to identify sources of customer dis/satisfaction with service encounters.

According to the literature, customer satisfaction with technology-based service encounters is likely to form somewhat differently than with interpersonal service encounters, thus the exploratory in-depth interviews were performed to investigate the dis/satisfaction drivers of each of the two service encounters.

Interviewing of the two respondent bases –brokers and customers-was parallel, not consecutive. The in-depth interviews took about four months from November 2015 to

February 2016. The interviews were conducted in the Bengali language, with only one interviewer in order to reduce inconsistencies across interviews. The interviewer took detailed notes during the interview and wrote up a complete interview report immediately after the interview. The main reason for not recording is that most Bangladeshi are not comfortable giving their opinions if their words will be recorded. Analysis was continuous throughout the interview process in order to follow up on emergent ideas and to organize insights and incorporate them into further interviews. Triangulation of insights across informants (and with the literature) was employed to elevate the trustworthiness of the findings (Fournier and Mick 1999).

At the beginning, an in-depth interview was initially conducted with a former assistant vice president responsible for the on-line trading division for a big stockbrokerage firm (Lanka-Bangla Finance; IDLC Finance; United Finance etc) in Bangladesh, who also had extensive previous experience with direct contact in serving customers. This interview took four hours. Additional interviews were conducted with marketing officers who have direct contact with customers and with retail stock traders (the customers). These qualitative interviews followed a guide covering the sources of customer dis/satisfaction known from the literature. In most of the interview, specific categories from the literature were not mentioned, so that responses about dis/satisfaction came from the respondent, not the interviewer. Through probing, the categories which had not been mentioned later in the interview were brought in to see if respondents recognized them as independent elements. Retail stock traders were also interviewed following the aforementioned approach, with twenty interviews conducted either face to face or by telephone as described in the following sections.

4.2.1.2 In-depth interviews with service providers

The first respondent had extensive experience with direct contact in serving customers and also as a former frequent stock trader. Thus, this in-depth interview provided valuable insights on service encounter dis/satisfaction drivers for either technology-based or interpersonal service encounters from both a service provider and (semi-)customer viewpoint. Further interviews were conducted with twenty marketing officers who have direct contact with customers in the eight stock brokerage firms in Chittagong, Bangladesh which concurrently provided both offline and on-line trading at the time the qualitative research was conducted. After initial informal conversation about general issues and the

respondent's profile and experience, the interview followed an interview guide covering the sources of customer dis/satisfaction when customer traded through the marketing officer and when the customer used on-line trading independently (Appendix A). In the last part of each interview, the respondents were asked to classify sources of customer dis/satisfaction with service encounters into the dimensions identified in the literature. The in-depth interviewing was conducted during weekdays at lunch hours or immediately after office hours in the late afternoon. The interviews with the twenty marketing officers took about four months and each in-depth interview lasted between two to three hours.

4.2.1.3 In-depth interviews with typical customers

Retail stock traders (the customers) were the main target group of this research. The in-depth interviews with retail stock traders were also conducted following the aforementioned approach. However, ten of the in-depth interviews were conducted face to face, and another ten were telephone interviews. Although in-depth interviews are best conducted face to face, in some situations telephone interviewing can be successful (Lofland and Lofland 1995). The main reason to employ telephone interviews was that many typical retail stock traders do not come in to trade on the trading floor or directly with the broker, but rather conduct business over the phone or, now, by internet. There may be differences in thinking about technology-based versus interpersonal service encounters across these two groups, so it was necessary to include both. Therefore, the face to face in-depth interviews were conducted with retail stock traders who typically stay and trade in the trading rooms, whereas telephone in-depth interviews were conducted with retail stock traders who usually trade via telephone or internet from their remote locations.

The face to face interviews aimed at getting sixteen customers, two from each broker. Ten interviewees participated. The response rate was moderately high, about sixty percent, since the stock market was not busy during the interviewing times and traders were interested in talking about trading. These face to face interviews lasted one to two hours.

While face to face interviews were conducted with convenience samples at trading floors without advance appointment, the telephone in-depth interviews required introductions, sometimes by brokers, sometimes by other retail traders. Appointments were made for the call, thus, most of those approached were willing to be interviewed. Therefore, the response rate was higher, at eighty percent. The interview length ranged from 45 to 90 minutes, slightly shorter, on average, than the face to face ones.

The respondents' ages ranged from 25 to 62 years, and the gender split was approximately even. Occupations were quite varied, from housewives to professors, from investors to speculators and even from non-professional traders to very sophisticated investors. However, most respondents were members of the middle to upper-middle class. The respondents who trade at a trading room usually execute orders every day. All respondents have traded for 3 to 10 years. However, those who trade on-line had about two years' experience trading on-line.

Previous research noted differences in how service suppliers and customers viewed sources of customer dis/satisfaction. The in-depth interviews with 20 service providers and 20 customers in stock brokerage services found that their views on the sources of customer dis/satisfaction in interpersonal service encounters were slightly different from the two perspectives. However, dis/satisfaction drivers with technology-based service encounters were perceived more similarly by both groups.

4.2.2 Results of In-depth Interviews

Results of the first stage of in-depth interviews indicate that the stockbrokers and marketing officers seem to understand their customers fairly well, at least in terms of knowing what makes them dis/satisfied, as can be seen in the following discussion. The exploratory interview findings support the literature that there are three main sources of customer dis/satisfaction with interpersonal service encounters as described below.

4.2.2.1 Satisfaction with marketing officer service encounters

Although service providers and customers perceived specifics of the drivers of customer dis/satisfaction with an interpersonal service encounter slightly differently, results showed three main sources of customer satisfaction, consistent with the literature (Table 4.1)

Response to customer needs and requests: Marketing officers perceived that retail traders would be satisfied with being instantly and continuously informed of relevant and useful information (e.g., inside or intelligent information). Traders, though, do not necessarily see provision of all information as an advantage; they want screening. They want their marketing officers to understand their needs and provide services on request. Typical requests are specific stock quotations and continuous reports only of requested information. Traders also need reasonable comments and advice for decision-making.

They are highly satisfied with this careful tailoring of information to fit their needs, and with help in evaluating the information, not with simply receiving masses of information.

Both sets of respondents perceived speed and accuracy in providing the information and executing trades as important to customer satisfaction. Marketing officers had somewhat different ideas about speed believing that traders would be satisfied with confirmation at the end of day. Traders wanted instant confirmation at the requested price. Both felt that traders would be satisfied when marketing officers took responsibility for small customer mistakes.

Response to service delivery system failures: Service delivery system failures were not top of mind issues, but came up with probing. Customers said that they would be more satisfied if their marketing officers apologized and compromised when the company's back office provided slow or poor service. Marketing officers also perceived that customers preferred this.

Employees spontaneously delight customers: Although the marketing officers perceived that checking and informing about inside information or intelligence instantly or continuously was simply "response to customer needs and requests" as previously discussed, some stock traders reported that this special service spontaneously delighted them. As in the literature, customers would be delighted if contact employees pay extra attention to customers by providing extra information to the customer and making the customer feeling unique.

Marketing officers perceived that their customers would be satisfied when provided with extra services. This might include visiting a company that they had recommended to verify and gain additional information, teaching the customer how to trade via the internet, and even sending a birthday card. Traders did not necessarily always want these things, but sometimes would be delighted if their marketing officers showed respect. One stock trader would remain satisfied with his marketing officer's service as long as the marketing officer provides service with friendship. But both agreed that spontaneous delight could come from certain privileges such as a hot line number, VIP room for trading, and extra discounts within market rules.

4.2.2.2 Dissatisfaction with marketing officer service encounters

The satisfaction literature does not provide a clear conceptualization of dissatisfaction. However, customer dissatisfaction with interpersonal service encounters is often essentially the opposite side of satisfaction in the literature. The interviews results generally supported this, with sources of dissatisfaction falling into three categories.

Lack of response to customer needs and requests: Traders were dissatisfied if their marketing officers did not immediately respond to requests, or put them on hold to answer another line. Marketing officers perceived things similarly, that traders would be dissatisfied if telephone lines were always busy (Table 4.2). They required their marketing officers to understand their style of trading. They felt that some marketing officers did not provide reasonable advice for good decisions since the marketing officers handle too many clients. Failure to provide relevant information quickly and continuously could be a source of dissatisfaction, but, as noted, information overload also caused dissatisfaction. Essentially, traders expected brokers to respond to customer trading interests and styles and screen information, and were unhappy if information was not customized this way.

Low skills levels of marketing officers also caused substantial dissatisfaction, such as when analysis was careless, or lacked professionalism, such as enticing customers to trade for no other purpose than to gain commissions. Customers were dissatisfied if their marketing officers did not pay attention closely enough to prevent customer mistakes. Slow and /or inaccurate execution of trades and dishonesty were critical drivers of customer dissatisfaction. Both customers and traders recognized failure to confirm an order or to inform customers of the benefits of holding a particular stock as serious problems. Miscommunication and human error could also cause customers to perceive that marketing officers were not responding to their needs and requests. Finally, simply the lack of direct contact could cause dissatisfaction.

No response to service delivery system failures: Some respondents revealed that they were dissatisfied when their marketing officers did not report company mistakes to them. This caused them to switch to other brokerage firms. Furthermore, both traders and brokers said that customers were dissatisfied when marketing officers took no action to speed up slow back office services.

Employees spontaneously disappoint customers: Some disappointing elements were the opposite of what delighted customers, such as no provision of certain privileges (hot line number, VIP room for trading). Unprofessional or unfriendly manners or voice also spontaneously drives customer dissatisfaction. Many elements were regarded as serious enough to switch stockbrokerage firms, such as trades on the customer account without explicit permission from the customer failure to keep customer information confidential and direct quarrels with customers.

Table 4.1 Sources of customer satisfaction with interpersonal service encounters with marketing officers of stock-broking firms:

Sources of customer satisfaction	From service provider's point of view	From customer's point of view
Response to customer needs and requests	<ul style="list-style-type: none"> -Inform customers with relevant and useful information -Check and inform about inside information or intelligence information instantly and continuously -Recommend potentially profitable stocks for trading everyday in order to gain profit -Higher ability of a marketing officer to inform and suggest for a better outcome -Execute orders immediately after receiving them from customers -Confirm an order to a customer at least by the end of day Speed and accuracy of marketing officers in receiving and making trading orders -Providing service with honesty. 	<ul style="list-style-type: none"> -Understand customer needs -Provide services following customer requests -Keep informed about stock quotations -Inform customer instantly and continuously of relevant and useful information -Provide reasonable comments that are useful to customers for making right decisions -Potential of a marketing officer to make recommendations to gain profits Execute orders immediately after receiving them from a customer -Always confirm orders at the price that customers requested. -Speed and accuracy of a marketing officer in receiving and making trading orders

		<ul style="list-style-type: none"> -Inform customers about customers benefits of holding stocks -Provide service with integrity -Provide service with friendship -Keep in contact with customers continuously -Take responsibility for small customer mistakes for a better trade-off.
Response to service delivery system failures	-Compromise with customers when back offices provide services slowly	<ul style="list-style-type: none"> -Report company mistakes to customers instantly -Instantly inform customers when back office services are slow -Cooperate with other departments to solve service failure problems
Spontaneously delight customers	<ul style="list-style-type: none"> -Give a birthday card every year -Teach a customer how to trade via Internet -Visit a company before making a recommendation that a customer invest in order to check and get intelligence information 	<ul style="list-style-type: none"> -Check and inform about inside information or intelligence information instantly and continuously. -Respect toward customers -Professional personality and voice of marketing officers -Provide some privileges such as a hot line number and VIP room for trading -Discount a commission, provided within set rules

Table 4.2 Sources of customer dissatisfaction with interpersonal service encounters – marketing officers of stock-broking firms

Sources of customer dissatisfaction	From service provider's point of view	From customer's point of view
Lack of response to customer needs and requests	<ul style="list-style-type: none"> -Don not inform about inside information or intelligence information instantly -Inform based on careless analysis -Lack of skill in making recommendations to traders for a better outcome -Recommend customers to trade frequently in order to gain commissions -Communication mistakes (human errors) in receiving and ordering stocks -Do not confirm an order Do not inform a customer about customer's benefits of holding stocks -Slowness and inaccuracy by marketing officers in receiving and making trading orders -Lack of continuous contact with customers. 	<ul style="list-style-type: none"> -Telephone lines of marketing officers always busy -Do not response immediately and usually hold customer's line in order to answer another line -Do not understand customer needs and customer styles of trading -Do not pay attention to mistakes by customers -Do not provide reasonable comments for helping customers to make right decisions -Do not check and inform about inside information or intelligence information instantly and continuously -Lack of skill in making recommendations to traders for a better outcome -Inform based on careless analysis -Do not conform orders -Recommend customers to trade frequently in order to gain commissions

		<ul style="list-style-type: none"> -Provide service with cheating -Lack of continuous contact with customers -Do not inform customers about customer benefits of holding stocks -Slowness and inaccuracy by marketing officers in receiving and making trading orders
No response to service delivery system failures	<ul style="list-style-type: none"> -Do not report company mistakes to customers Do not apologize when back office provides slow service or makes mistakes 	<ul style="list-style-type: none"> -Do not report service failures of the brokerage firm or company mistakes to customers -Do not take any action when back office provide slow service
Spontaneously disappoint customers	<ul style="list-style-type: none"> -Unprofessional or unfriendly personality and voice of a marketing officer -Marketing officer quarrels with a customer 	<ul style="list-style-type: none"> -Marketing officers make an order without customer permission -Tone of voice suggesting unwillingness by marketing officers to provide service for a small account -Marketing officer does not keep secrets of customers -Marketing officers who cannot control his or her emotion -Do not provide some privilege services

Satisfaction with on-line service encounters

Generally, respondents reported issues that roughly fall within the categories proposed in previous research (Table 4.3)

Better than the alternative fell into six subcategories of detail about exactly how the technology-based encounter is better:

- **Saved money:** The majority of respondents perceived that on-line trading could save money compared to off-line, since the commission on-line is usually lower. Moreover, some traders said that on-line traders do not need to travel to trading rooms, thus saving transportation costs. Some customers said that they even could save more money when they trade from abroad, since the internet costs less than international calls
- **Real-time:** Marketing officers in some firms providing real time quotations claimed that some clients switched from competitors for this advantage. However, only a minority of customer respondents view this as a major advantage, and only a very few brokerage firms in Thailand currently provide true real-time quotations.
- **When I want:** Retail stock traders generally worry about loading times, so that “when I want” is not quite as good as they would like. However, most believe that it is more convenient to search for stock quotations on-line than to contact a marketing officer when the market is busy. They felt that marketing officers cannot provide services to all clients in a busy market. Some marketing officers claim that retail traders could check the relevant historical information from the brokerage website at will, but customers rarely mentioned this, as they are more likely to want current information.
- **Avoid personal service:** This was mainly considered an advantage during a busy market, when marketing officers were either inaccessible, or too busy to give good service. Some respondents are more satisfied trading independently, either because they feel a sense of accomplishment, or because they believe they can reduce human error (by the broker). However, most retail traders did not prefer to always operate without personal contact, and only considered this a source of satisfaction during a busy market, not at all times.
- **Where I want:** A few retail traders like to be able to access information and stock quotations from anywhere they can connect, rather than travelling to trading room.

Although they could ask the marketing officer for stock quotations, they prefer to search and see complete information on quotations, similar to the extensive data at the trading room. These respondents are quite skilled in using the computer and internet, therefore they are able to search and execute orders easily from any location.

- **Broader information coverage:** Increasingly, all customers interviewed said that traders could receive better coverage on-line than from marketing officers. Some marketing officers even confirmed that the on-line information is similar to their own information sources, and that they cannot inform customers about all relevant information due to time constraints. One useful aspect of this is instant access to the personal trading history and investment portfolio, which an off-line marketing officer can usually only give at the end of the day.

Solved intensified need was especially evident in busy markets. The marketing officers claimed that on-line trading could serve clients if they urgently needed to execute an order when the market was very active. Most customers also felt this, and express more satisfaction if they are able to execute an order independently when the marketing officer's phone lines are busy.

Did its job: A very few respondents expressed fascination with technological capabilities when they can execute an order independently -via the Internet.

Fun/Playfulness: However, some retail traders felt happy when they are able to execute an order by themselves through on-line brokerage service.

Therefore, the technology supports on-line execution, and "did its job" might be a source of customer satisfaction, since the traders would be satisfied with the technological capability that can supply this function. However, this is somewhat more subtle than the prior literature would suggest, or, on-line transactions are considered rather mundane, even by those who do not use the technology often.

Dissatisfaction with on-line service encounters

Results of customer dissatisfaction from the customer perspective, including customers who do not have online accounts, showed that there are three main sources of customer dissatisfaction with technology-based service encounters, which follow some of the prior literature noted in Chapter 3

- **Worse than the alternative:** The mirror image of “better than alternative” is “worse than the alternative” which came out strongly as a source of customer dissatisfaction (Table 3.4). The interviews showed that this has four main subcategories of how an on-line trading service encounter is worse than an interpersonal service encounter.
- **Lack of human service:** Most respondents believed that on-line trading is worse than the off-line interaction with the marketing officer, since there is no intelligence information provided by a marketing officer. Although the information from the brokerage firm’s website may give broader coverage, some inside information could not be received from the web. Moreover, all trader respondents complained that online trading is unable to provide customized service, such as specific comments relevant to an individual trading profile. The retail traders even expressed dislike that they have to make decisions alone, without comments or consulting from the marketing officers. Furthermore, many customers were unhappy that they have to spend much time following market movements themselves when they trade online.
- **Insecurity:** Some respondents who do not have on-line trading accounts are frightened by perceived insecurity of trading via the internet. They do not trust the integrity of the system, and worry about intrusion by hackers. In contrast, respondents who have been trading on-line already trust the technology somewhat more, but even these worry about password security.
- **Customer-driven failure:** Although some respondents are satisfied when they can execute an order independently, most were uneasy with having to take responsibility for their errors. Therefore, “customer-driven failure” would be one of the reasons that a technology-based service encounter is worse than an interpersonal one.
- **Poor design:** Contrary to the literature, no respondent claimed that on-line trading is easier to use than off-line interpersonal service. The respondents complained that it is difficult to open an on-line brokerage account via the internet. Moreover, there are limitations to on-line trade volumes, because an online trader must deposit money before executing trades. Some respondents were dissatisfied with the unfamiliar web design, particularly the Stock Exchange of Thailand website and complex and confusing web designs of stockbrokerage firms.

Technology failure: Limitations of accessibility, such as incompatibility in computers or software could easily cause customer dissatisfaction. Some traders could not access the internet because of old hardware or lack of correct software. Brokers tended to view this as customer failure, but customers believed that brokers should help ensure connectivity if they are going to tout their on-line capability. Furthermore, some respondents encountered log-on problems, and others reported being unable to execute an order on-line because the broker's server was down.

Process failure: Retail traders expressed mild dissatisfaction with loading times of stock quotations. While brokers perceived that real-time quotes on-line were a big advantage, some of the advantage is offset by customer irritation at slow response. In terms of saving time, many felt that on-line quotations were actually worse than dealing with the broker. The respondents were unclear about whether this was a difficulty with the technology, or whether the process is set up poorly –some attribute it to poor design, not inadequate technology. Another problem is clearly process failure – many customers complained of the very slow confirmation of orders. They could execute orders quickly, but confirmation took a very long time.

Table 4.3 Sources of customer satisfaction with technology-based service encounters-online trading

Sources of customer satisfaction	From service provider's point of view	From customer's point of view
Better than the alternative: <ul style="list-style-type: none"> • Saved money • Real-time • When I want 	<ul style="list-style-type: none"> -An online trader pays a lower commission rate than traders through a marketing officer -Do not need to travel to trade rooms. Save transportation costs -Present and inform real-time stock quotations 	<ul style="list-style-type: none"> -An online traders pays a lower commission rate than trades through a marketing officer -Do not need to travel to trade rooms. Save transportation costs -Save telephone costs, especially long-distance call Present and inform real time quotation

<ul style="list-style-type: none"> • Avoid personal service • Where I want • Broader information coverage 	<p>-More convenient than contacting a marketing officer when the market is busy</p> <p>-An online trader can directly make an order without any contact with a marketing officer.</p> <p>-Comfortable accessibility to information and stock quotations from anywhere that can connect internet.</p> <p>-Possibility to make an order from where in the world where customers can connect internet.</p> <p>-An online trader receives more coverage information than from a marketing officer</p> <p>-Provide personal history of investing portfolios instantly.</p>	<p>More convenient than contacting a marketing officer when the market is busy.</p> <p>-An online trader can directly make an order without any contact with a marketing officer.</p> <p>-Comfortable accessibility to information and stock quotations from anywhere that can connect internet.</p> <p>-Possibility to make an order from where in the world where customers can connect internet.</p> <p>-An online trader receives more coverage information than from a marketing officer.</p> <p>-Provide personal history of investing portfolios instantly.</p>
Solved intensified need	-Ability to execute orders while marketing officers' phone lines are busy.	-Ability to execute orders while marketing officers' phone lines are busy.
Did its job	-Online traders are fascinated with technology capability when they can execute orders independently via the internet.	- Online traders are fascinated with technology capability when they can execute orders independently via the internet.

Table 4.4 Sources of customer dissatisfaction with technology-based service encounters – online trading

Sources of customer dissatisfaction	From service provider’s point of view	From customer’s point of view
<p>Worse than the alternative:</p> <p>Lack of human service</p> <p>Insecurity</p> <p>Customer-driven failure</p> <p>Poor design</p> <p>Process failure</p>	<p>-Lack of marketing officer comment</p> <p>-Lack of skill in making recommendations</p> <p>-Lack of any consultation. An online trader makes decision alone.</p> <p>-Lack of customized services and lack of specific comments for an individual trading.</p> <p>-Insecurity from hackers</p> <p>-An online trader must execute orders by himself or herself, therefore he or she cannot pass-on the button of failure to others.</p> <p>-Limitation of trade volumes because an online trader must deposit some money before executing trades.</p> <p>-Sometimes, it takes long time to load stock quotations.</p>	<p>-Lack of marketing officer comments.</p> <p>-Lack of intelligence information provided by marketing officers.</p> <p>-Lack of any consultation. An online trader makes decision alone</p> <p>-Lack of customized services and lack of specific comments for an individual trading.</p> <p>-Customers have to spend much time to follow up the movement of the market by themselves.</p> <p>-Insecurity from hackers.</p> <p>-Loss of personal password.</p> <p>-Have to take responsibility for customer mistakes, particularly when ordering stock.</p> <p>-Limitation of trade volumes because an online trader must deposit money before executing trades.</p>

Technology failure	-Often, broker's server gets down Traders face difficulties to log-in.	-Often it takes long time to load stock quotations. -Confirmation of orders is also slow. -Limited access to online brokerage, e.g., incompatible version of computer, log-in problems. -Sometimes, traders cannot execute order via online due to down of server.
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4.2.3 Delphi

In conducting quantitative research using structured questionnaire survey, questionnaire plays critical role to generate quality/healthy data, particularly in contexts where respondents are time conscious, intolerant (why should I give you interview?), and unwilling to read lengthy questions, like retail stock traders –trade via both off-line and online. Therefore, additional Delphi work was used to decide which items from the pool generated in the in-depth interviews were most suitable for the survey questionnaire.

The main objective of the Delphi technique is the reliable and creative exploration of ideas or the production of suitable information for decision-making. The Delphi method is based on a structured process for collecting and refining knowledge from a group of experts by means of a series of questionnaires scattered with control opinion feedback (Adler and Ziglio, 1996).

The items measuring the three concepts were investigated by the Delphi technique. A panel of experts including 5 long experienced brokerage officers, 5 marketing professors of public University, and additional five University teachers who have direct trading and consulting experience was formed and then sent them the generated items including 16 items of TRI separately.

The Delphi techniques was determined to be a feasible method for identifying good representative items for measuring each concept in the current research. Retail stock experts and the academics that participated in the panels appeared to understand and accept the technique as a practical method for determining the best group of items measuring the three concepts.

The Stages of Delphi Work

- Categorizing the 38 items of interpersonal service encounter dis/satisfaction into three sub-concepts as in the literature.
- Identifying the best representative items under each category.
- Categorizing the 51 items of technology-based service encounter into sub-concepts as in the literature.
- Identifying the best representative items under each category.
- Selecting the each three best representative items of satisfaction and loyalty.
- Categorizing the 16 items of technology readiness of customer into four sub-concepts as in the literature.
- Rank the items under each dimension represent the best of that category.

However, as the outcome of a Delphi sequence is still subjective depending upon expert opinions, it has received some criticism as being unscientific due to a low level of reliability of judgments among experts and the sensitivity of results to ambiguity in the questionnaire used for data collection in each round (Schmidt 1997). Therefore, further scale purification of the pool of items derived from Delphi work was implemented in the pretest survey. The next section describes this further development of the survey instrument used in this study.

4.3 Survey instrument development

This study followed well-accepted psychometric scale-development procedure (Churchill 1979; Gerbing and Anderson 1988; Nicholls, Gilbert, and Roslow 1998). Initially, a review of extensive literature on the three concepts was done to identify the key issues, as understood by other researchers. This was followed by qualitative work, both the in-depth interviews and Delphi with experts as described in the previous sections, which was performed to develop a survey instrument for the research. The steps of the survey instrument development are reviewed and summarized as follows.

4.3.1 Concept development from literature review: The literature review showed that research on the three concepts had been done mostly in Western context. For example, the sources of customer service encounter dis/satisfaction, for both interpersonal and technology-based self-service encounters were derived from CIT in the USA context. These drivers may work, but it cannot automatically be assumed that they will apply exactly in the Asian context. Essentially, the study followed one of the approaches recommended by many cross-cultural researchers (e.g., Malhotra and Paterson 2001; Malhotra, Agarwal and Peterson 1996); start with “etic”, i.e., “universal” concepts (and measures), but then confirm that they are relevant through in-depth understanding within the specific culture in which they will be used (“emic”). The in-depth understanding of how people in a culture view a concept, according to Malhotra, Agarwal and Peterson (1996), must come from qualitative research methods. Thus, the next step of survey instrument development was conducted through in-depth interviews.

4.3.2 Generation of items specific to brokerage service context: As mentioned in the qualitative research section, the in-depth interviews were with 25 retail stock traders (customers), with 20 marketing officers of stockbrokerage firms (see the list of firms in box), and with five marketing professors, all in Bengali language, to generate a pool of items for measuring each concept specific to the brokerage service context and Bangladesh perspective. The generated items in all categories from both literature review and in-depth interview are listed in the table:

Table 4.5: The generated Items in all categories (Qualitative primary data sources)

Interpersonal Service Encounter Satisfaction Items (Primary source)
Trader provides me reasonable comments for making right trading decisions.
Trader informs me instantly and continuously of relevant and useful information.
Trader receives and executes my orders accurately and rapidly.
Trader always serves me according to my preferences.
Trader informs me about available service.
Trader informs me about unavailable service
Trader informs me when and why brokerage service is very slow.
Trader reports me the brokerage firm’s mistake instantly.

<p>Trader responds to other core service failures quickly.</p> <p>Trader checks and informs me inside information or market intelligence report instantly.</p> <p>Trader provides me services with professional and friendly personality and voice.</p> <p>My Trader often gives me surprise gift.</p> <p>My Trader is able to perform well under adverse circumstances</p> <p>My trader is very smart and knowledgeable.</p> <p>My Trading firm's floor is well organized and equipped</p> <p>My Trading firm is a leading house in stock market.</p> <p>Trader who serves me regularly provides me an extra service as a client.</p> <p>Trader gives me interesting alternative suggestions even though it means more work for them.</p> <p>Trader Shows genuine concern toward my situation</p> <p>My Trader acts energetically and enthusiastically</p>
<p>Interpersonal Service Encounter Dissatisfaction Items (Primary source)</p>
<p>Telephone lines of my Trader are always busy.</p> <p>Trader does not respond to my calls immediately and usually keeps me waiting.</p> <p>Trader recommends me to trade frequently in order to gain commissions</p> <p>Trader is unable to solve the problems of service failures.</p> <p>Trader does not take any actions.</p> <p>Trader does not take any actions when back offices provide slow services.</p> <p>Trader provides service with unwillingness voice when I order a small volume</p> <p>Trader cannot control his or her emotions in keeping information confidential</p> <p>Trader does not keep details of my investing portfolios confidential.</p>
<p>Technology-Based Service Encounter Satisfaction Items (Primary source)</p>
<p>IT helps me to trade anytime during operating hour</p> <p>IT helps me to trade from anywhere</p> <p>IT saves my time of trading</p> <p>IT reduces my cost of trading</p> <p>IT allows me to complete trading quickly</p> <p>IT provides me real-time quotations of trading.</p> <p>IT doesn't disclose my stock trading behavior related information to others</p> <p>IT allows me to execute buying and selling orders accurately</p> <p>IT is reliable</p>

IT solves the problem of getting connected via phone with traders during pick hour

IT feels me good as I can avoid interaction with traders

IT gives me control

I enjoy trading via Internet

It is fun of trading by myself

I find Internet trading more convenient than trading via traders

IT helps me to check stock quotations instantly

IT helps to check trade volume instantly

IT also allows me to reach brokerage house via telephone to help

IT allows me to resolve transaction disputes via telephone

IT allows me to execute purchase / selling orders independently

IT provides me one-stop solution

IT gives access to my personal history of investing portfolio instantly

IT offers me wider and organized information compare to stock traders.

IT provides me the precise or customized information I need

IT provides me intelligence report regarding market behavior

My firm is expert in Internet Trading

My firm is a leading trading house with strong reputation

My firm delivers what it promises

My firm's Internet services meet my expectation

Technology-Based Service Encounter Dis/satisfaction Items (Primary Sources)

Sometimes I cannot execute an order because the broker server is down

Sometimes I am unable to log on

Internet trading is not secure because of hacking

Internet trading order is sometimes lost

IT is very time consuming when loading stock quotations

A confirmation of online trading order is very slow

Brokerage firm's website is difficult to navigate

Brokerage firm's Internet information is not up-to-date

I don't receive any e-mail alert of any significant change in trading policy

Sometime I make mistake of entering wrong number of buying and selling order

I cannot transfer responsibility of my mistake to traders

<p>Satisfaction Items (Secondary sources) <i>(Ganesh et al., 2000; Krepapa et al., 2003; Caruana et al., 2000; Oliver, 1980; Olorunniwo and Hsu, 2006; Collier, 2006)</i></p>
<p>I am happy about doing trade face –to-face or via mobile phone. I believe I did the right thing when I trade via trader. Overall I am satisfied with the performance of my traders.</p>
<p>Loyalty Items (Secondary sources) <i>(Caruana, 2002; Zeithaml et al., 1996; Dabholkar et al., 2000; Kim et al., 2004; Reichheld, 2003)</i></p>
<p>If I had to do it over again, I would choose trading via trader. I do trade via traders because it is the best choice for me. I consider myself to be a loyal patron trading via traders.</p>
<p>Technology Readiness Items (16 the modified version of Parasuraman, 2005)</p>
<p>New technologies contribute to a better quality of life. Technology gives me more freedom of mobility. Technology gives people more control over their daily lives. Technology makes me more productive in my personal life. Other people think I have better knowledge on new technologies I prefer to use the most advanced technology available. I can usually figure out new high-tech products and services without help from others. I keep up with the latest technological development in my area of interest. Technical support lines are not helpful because they don't explain things in terms I understand. Sometimes, I think that technology systems are not designed for use by ordinary people. Use manuals for a high-tech product or service are not written in plain language. Technology always seems to fail at the worst possible time. People are too dependent on technology to do things for them. Too much technology distracts people to a point that is harmful. Technology lowers the quality of relationships by reducing personal interaction. I do not feel confident doing business with a place that can only be reached online.</p>

4.4 Quantitative Research

The third stage of the research process is quantitative one for validating the conceptual model proposed in this study. It covers to select the relevant quantitative techniques and tools that ensure internal consistency and external validity of the measures for testing hypothesis. The jobs to be done at this stage are refinement of the constructs' items generated from literature review and qualitative research, development of structured questionnaire for survey, research design, sample size determination, data collection, and data analysis.

4.4.1 Refinement of the items

The initial pool of items, however, was too large to be used effectively, and needed further testing to assess reliability and validity issues. Thus, these context –relevant measures for each concept were refined and validated by other typical customers, marketing officers, and the marketing professors in the sets of Delphi work.

A few items were also added based on the literature because some of the sub-concepts established in the literature did not appear in the qualitative pilot work. Although this suggests that the issue may not be very relevant in the context, it is safer to check in the continued pre-testing process, rather than simply eliminate it at the beginning. There is ample opportunity to eliminate the items later if they truly have no relevance, as shown by further stages of the scale development process.

The results of the expert consensus, with the few added items, provided two sets of items. One set consists of 58 items for measuring the three concepts, including 36 items for the technology –based service encounter dis/satisfaction concepts, 6 for satisfaction and loyalty concepts, and the remaining 16 for technology readiness concept. And the other set consists of 51 items for measuring the three concepts, including 29 items for the interpersonal service encounter dis/satisfaction concepts, 6 items for satisfaction and loyalty concepts, and the remaining 16 items for technology readiness. Another 12 questions were added to get information about traders, based on information which seemed relevant from all the in-depth interviews. After this stage, the questionnaire was pre-tested in several stages using small sample quantitative survey work.

4.4.2 Questionnaire Development

Two different sets of structured questionnaire were developed for conducting self-administered survey, one for technology-based service encounter experience and the other for interpersonal service encounter experience. The items were worded using a five-point Likert-scale (1 = strongly disagree, 5 = strongly agree) to measure the respondents' perceptions toward the concepts. Since the survey was conducted among Bangladeshi respondents, Bangla version of the questionnaire was used. Double back translation was implemented to make sure of the consistency between the Bangla version and English version.

4.5 Data collection

The data collection for this survey was conducted by field survey, and the sample selection method was non-probability sampling, particularly convenience method for off-line traders and snow-ball technique for on-line traders. According to the nature of service as stock investors need to be associated with a registered brokerage firm in stock exchange, ten (10) registered brokerage firms that are registered in both the stock exchange and offer trading services in both online and offline were selected for the potential respondents for this survey. A total of 1000 retail stock traders were approached either personally via data collector or electronically via e-mail or Google form during June – August 2016.

Data were collected through three main channels, directly from retail stock traders, indirectly via marketing officers, and directly from retail stock traders via Internet. Whereas either the researcher or research assistants were able to directly interview respondents who usually trade from the trading rooms of brokerage firms, the marketing officers of brokerage firms helped the researcher to collect data from respondents, since they have longer relationships with their customers, even the online traders, than the researcher. The assigned marketing officers were direct students or personally known of researchers and some of them were given a small incentive, like valentine gift. This cooperation from marketing officers was very critical specially for reaching to online traders. Because of maintaining privacy and confidentiality most of the trading house didn't want to disclose the traders' address or list. Informally, these marketing officers helped researcher giving some of the online traders' e-mail id and phone number, and applying snow-ball sampling technique, researchers could reach to the required number of respondents for the study.

Total of 595 questionnaires were filled and returned, however, only 462 (240 online traders and 222 offline traders) were usable, the rest were rejected since they were not complete. The completed questionnaires included 250 respondents from trading rooms, and 212 questionnaire were filled via online directly by investors.

The average response rate was 46 percent, which is acceptable for testing the hypotheses since these respondents did represent the target population of retail stock traders. Based on the followed up investigation via both personal and telephone interviews, the main reason for no response from some prospective respondents is that they were uncomfortable to complete the questionnaire because of required time to fill, inability to respondent to some questions, technology readiness of customers, and general avoiding tendency of respondents. Despite this healthy response rate, it was important to rule out non-response bias. Therefore, the sample was spit into offline traders, who were mostly approached and interviewed in the trading room of brokerage firms, and online traders, who were mostly approached via Internet. The non-response rate was low in case of offline traders whereas, it was high in case of online traders as expected. The rate is supported by different scholarly research locally and internationally.

4.6 Characteristics of the sample

Data were collected from two groups of respondents using two different sets of questionnaire – one for the traders who trade via traditional trading system called off-line and the other one for the traders who trade directly via online. The detail of sample characteristics are separately presented for discussion into demographics and trading profiles.

4.6.1 Technology-Based Service Encounter Users

Out of 462 total complete and useable respondents 240 are online traders who trade through Internet directly. Both Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE) offer trade services online via Internet as well as mobile technology, and the users' frequency have been increasing gradually as with growing adaptation of innovating technology in delivering services. As predicted, relatively young, educated, and professionals who are technology prone prefer technology-based encounter in generating services. The demographic profiles of the sample that support the prediction is given below:

Table 4.6: Demographic Profile of the Respondents (n = 240)

Consumer Demographic Items	Attitude Mean	F	P	Scheffe & LSD test
Education Below HSC (2.1%) Graduate (40.8%) Post graduate (53.8%) Others (3.3%)	SAT LOY OPT INN DISC INS	1.483 3.320 3.467 1.713 4.142 1.248	.220 .021* .017* .165 .007** .293	Scheffe & LSD test
Age 21-25 (42.9%) 26-30 (30.4%) 30-40 (21.3%) 40 above (5.4%)	SAT LOY OPT INN DISC INS	2.059 0.615 1.746 0.461 1.285 1.414	.106 .606 .158 .709 .280 .239	Scheffe & LSD test
Occupation Students (20.8%) Self-employed (18.8%) Employees (40.0%) Professionals (14.2%) Others (6.3%)	SAT LOY OPT INN DISC INS	2.092 7.219 3.621 1.136 2.902 1.027	.083* .000*** .007** .340 .023** .394	Scheffe & LSD test
Trading Medium Only Online (44.6%) Both Online & Offline (22.1%) Earlier offline now online (33.3%)	SAT LOY OPT INN DISC INS	1.171 2.635 0.007 6.037 0.338 1.194	.322 .051 .999 .001 .798 .313	Scheffe & LSD test
Trading Experience Less than 3 years (26.7%) 4 – 5 years (39.2%) 6-8 years (25.0%) More than 10 years (9.2%)	SAT LOY OPT INN DISC INS	1.960 1.660 1.521 2.625 0.606 2.684	.143 .192 .221 .075 .547 .070	Scheffe & LSD test

4.6.2 Traditional Interpersonal-Based Service Encounter Users

222 respondents of total 462 were found off-line traders. They prefer only traditional interpersonal encounter for stock trading though the brokerage firms offer trading services via offline as well as online. The sample demographic profiles that matches with the projected profiles of users who are less prone to technology, relatively seniors with low academic profile, and non-professional customers are given below:

Table 4.7: Demographic Profile of the Respondents (n = 229)

Consumer Demographic Items	Attitude Mean	F	P	Scheffe & LSD test
Education Below HSC (2.6%) Graduate (36.7%) Post graduate (59.0%) Others (1.7%)	SAT LOY OPT INN DISC INS	3.341 0.607 0.125 0.626 2.847 2.392	0.020* 0.611 0.945 0.599 0.038* 0.049*	Scheffe & LSD test
Age 21-25 (23.69%) 26-30 (36.2%) 30-40 (25.3%) 40 above (14.8%)	SAT LOY OPT INN DISC INS	3.120 0.309 0.399 1.535 2.340 4.545	0.021* 0.819 0.754 0.206 0.049* 0.004*	Scheffe & LSD test
Occupation Students (10.5%) Self-employed (21.4%) Employees (43.2%) Professionals (15.7%) Others (9.2%)	SAT LOY OPT INN DISC INS	0.777 1.559 1.519 1.501 4.219 2.675	0.541 0.186 0.198 0.203 0.003* 0.033*	Scheffe & LSD test
Trading Medium Only Online (64.2%) Both Online & Offline (29.3%) Earlier offline now online (6.3%)	SAT LOY OPT INN DISC INS	1.414 0.896 0.814 1.610 0.478 1.372	0.240 0.444 0.487 0.188 0.698 0.252	Scheffe & LSD test
Trading Experience Less than 3 years (14.0%) 4 – 5 years (30.1%) 6-8 years (28.8%) More than 10 years (27.1%)	SAT LOY OPT INN DISC INS	0.670 0.708 0.316 0.729 2.634 4.631	0.571 0.548 0.814 0.536 0.048* 0.004*	Scheffe & LSD test

Data normality test analysis using z-test with standardized value of collected data revealed that both categories of data are normally distributed ($Z < 1.96$ and significant at 5% level of significance). This test supports the adequacy of sample size for the study to generalize the behavior of respondents as population behavior. Demographic profiles present that majority of the traders in stock trading are young and late young within the age range of 25 to 40 and educated minimum graduate. Stock trading or stock business is considered as part-time profession that is why employees, professionals, business people, and students are found main traders. Employees and students those who are relatively young found more frequent users of technology whereas senior professionals, employees, and self-employed prefer trading through traditional ways i.e., personal encounter. In order to find any significant difference in traders' behavior within the demographic profiles, the study compared mean values with one-way ANOVA and both Scheffe and LSD to identify

which two groups differ significantly. ANOVA with demographic profiles in both the cases demonstrate that online users differ in showing loyalty based on their age and education level, whereas they expressed no significant difference in satisfaction level. In case of technology readiness Young were found more optimistic in experiencing technology encounter and less dis-comfortable compare to the senior users; more educated respondents were found less afraid of technology failure and security. On the other hand, offline traders didn't differ in terms of loyalty but seniors expressed more satisfaction with interpersonal encounter than young traders.

CHAPTER 5

Data Analysis Results and Discussion

5.1 Measurement Model

After data collection prior to the principal analysis, data was screened for missing values and outliers. Based on preliminary examination of the data in this study, the proportion of the data points missing was negligible. Kline (2011, p.55) indicated that a few missing values (i.e., less than 5% on a single variable) in a large sample can be of little concern, especially when the reason for data loss is random. There was only a negligible percentage of randomly missing values on a single variable, ranging from 0% for the majority of key variables to 2% for only a few. More than 100 responses were discarded due to poor responses caused by inattention.

The researcher used the Statistical Package for Social Sciences (SPSS) version 22 and AMOS 23 for data analysis. Descriptive was performed for respondents' profile and characteristics of reported SST and conventional method used. The construct measurement of different variables was determined as follows. First, data reduction techniques (PCA & EFA) were applied to refine the measurement constructs, and then, the two-stage procedure of SEM was applied to conduct data analysis (Anderson and Gerbing, 1988). The first stage procedure examines scale validity from the measurement model by confirmatory factor analysis, while the second stage procedure interprets hypotheses testing by the structural model. Hair, Black, Bobin and Anderson (2010) referred that structural equation modeling (SEM) has become a popular multivariate approach because it provides a mean of assessing theories that is conceptually appealing. AMOS software (23.0) which includes an SEM package with maximum likelihood estimation, was used to test both the measurement and the structural models that are related to the research hypothesis listed. Hair et al. (2010) suggested a six-stage procedure for employing SEM, which the study also followed here. The study also made use of a number of criteria to determine the inclusion of items and the goodness of fit of the model.

Both PCA and EFA were used to pretest the questionnaire in order to reduce the items to a measurable and meaningful set of factors, and the cronbach's alpha was used to measure the reliability of the internal consistency. Results of KMO test and of Bartlett's test were obtained before performing factor analysis. The KMO test indicated whether a sufficient

number of items had been predicted by each construct, and the Bartlett's test indicated whether the items were sufficiently highly correlated to provide a reasonable basis for factor analysis. Leech, Barrett and Morgan (2005) recommended that KMO value should be greater than 0.50, and Bartlett's test should be significant. A factor loading of 0.50 or above was considered to be of practical significance (Hair et al. 2010). The lower limit for Cronbach's coefficient alpha values was 0.7 (Leech, Barrett, and Morgan, 2005).

The validity of the construct was measured using convergent and discriminant validity. The convergent validity was used to determine whether scale items converged on a single construct during measurement (Steen Kamp & Van Trijp, 1991). This was determined from the evaluation of the factor loadings (which must be at least 0.50), composite reliability (at least 0.60), and average variance extracted (AVE) at least 0.50 in the study (Hair et al. 2010; Fornell & Larcker, 1981). The discriminant validity is the extent to which a construct is truly distinct and unique, and this measure captures phenomena that other measures do not (Hair, et al.,2010).

Hair et al. (2010) indicated that the goodness of fit of the overall model refers how well it reproduces the observed covariance among the indicator items. It can be classified into the following four categories:

- Chi-square measures include chi-square, degree of freedom and probability
- Measures of absolute fit
 - o GFI
 - o RMSEA
 - o RMR
 - o SRMR
- Incremental fit measures
 - o NFI
 - o CFI
- Parsimony fit measures
 - o AGFI
 - o PNFI

Chi-square value is a basic measurement of the differences between the observed and estimated covariance matrices (Hair et al., 2010). A small value of χ^2 is more desirable in that it supports the proposed theoretical model, but the values of χ^2 also increase as the

sample size increases. The P value larger than 0.05 ($P > 0.05$) is not statistically significant between two matrices (Joreskog & Sorbom, 1992). The common measures of model fit under SEM and their respective recommended cut-off values or threshold levels are given in the table 5.1, that have been followed as reference value throughout the research report.

Table 5.1: SEM Model Fit Indicators and Recommended Cut-off Values

Measures	Recommended Value	Reference
GFI	➤ 0.90	Hair et al. 2010
GFI	➤ 0.90	MacCallum and Hong, 1997
RMSEA	< 0.08	Hair et al., 2010
RMSEA	< 0.10	Steiger, 1990
RMR	< 0.05	Joreskog & Sorbom, 1992
SRMR	< 0.05	Joreskog & Sorbom, 1992
X2	< 3.00	Hair et al. 2010
NFI	= 1.00	Hair et al. 2010
NFI	➤ 0.90	Bentler, 1992
CFI	➤ 0.90	Hair et al. 2010; Gerbing & Anderson, 1982
AGFI	➤ 0.80	MacCallum & Hong, 1997
PNFI	➤ 0.50	Wu, 2009

Both SPSS 21 and AMOS 23.0 were adopted as the tools for analyzing the data. The same procedures are followed for both the service encounters.

5.1.1 Reliability and Factor Analysis

Reliability can reflect the internal consistency of the items/indicators measuring a given factor. The study used the value of Cronbach's alpha (α) for identifying the reliability. If cronbach's alpha is greater than 0.70, Nunnally (1978) and Hatcher (1994) suggested that a scale can be considered to have high reliability and 0.60 is tolerable.

5.2 Dis/satisfaction Drivers of Technology-Based Service Encounter

In order to identify the drivers of dis/satisfaction to technology-based service encounter that are not only reliable but also valid, the study has gone through three stage process of factor analysis: (i) Principal Component Analysis (PCA), (ii) Exploratory Factor Analysis (EFA), and finally (iii) Confirmatory Factor Analysis (CFA) applying structural equation modeling (SEM) of AMOS.

Confirmatory factor analysis (Table:5.8) reports that four constructs, namely better than alternatives, solve intensified needs, customized information service, and fun, drive users satisfaction when encounter technology interface, and technology failure during service encounter and absence of customer driven approach in delivering services reduce customers satisfaction level in technology-based service encounter. Where qualitative data including secondary as well as primary sources generated 29 items under 6 major constructs, CFA refined them into 12 items under four constructs through principal component analysis (see in the table 5.3). It discarded two constructs, namely quick help and ease of use, not for having strong contribution to enhance satisfaction.

Quantitative outputs weren't match perfectly with in-depth interview data, for instance hedonic attribution items were not in qualitative study whereas quantitative study revealed it a significant contributor that is supported by recent studies measured satisfaction with SSTs. But, the major attributes such as better than alternative that covers perceived usefulness of technology and quick relief of stress (); solve intensified needs that include one-stop-solution, check stock quotation and trade volume instantly; customized services; and fun that refers enjoying or playful encounter etc. were found similar with previous study findings. On the other hand, some drivers such as, perceived ease of use, quick help were revealed insignificant satisfiers of SSTs.

In consistence with previous studies, this study also found technology failure and customer driven failure constructs as major dissatisfiers in technology-encounter services. Customers also perceived technology failure and process failure as a similar construct. They considered user-friendliness and updated firm's website is precondition of quality service and absence of them increase customer dissatisfaction and presence of them may enhance satisfaction level.

5.2.1 Factor Analysis: Principal Component Analysis (PCA)

Table 5.2: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.100	23.726	23.726	12.100	23.726	23.726
2	5.509	10.802	34.528	5.509	10.802	34.528
3	4.727	9.269	43.797	4.727	9.269	43.797
4	2.218	4.350	48.146	2.218	4.350	48.146
5	1.798	3.526	51.672	1.798	3.526	51.672
6	1.547	3.033	54.705	1.547	3.033	54.705
7	1.448	2.839	57.544	1.448	2.839	57.544
8	1.388	2.721	60.265	1.388	2.721	60.265
9	1.301	2.550	62.815	1.301	2.550	62.815
10	1.163	2.280	65.095	1.163	2.280	65.095
11	1.077	2.111	67.206	1.077	2.111	67.206
12	1.024	2.008	69.214	1.024	2.008	69.214
13	.989	1.939	71.153			
14	.936	1.835	72.988			
15	.887	1.739	74.727			
16	.804	1.576	76.303			
17	.782	1.533	77.836			
18	.738	1.447	79.282			
19	.696	1.365	80.648			
20	.690	1.352	82.000			
21	.640	1.254	83.254			
22	.612	1.199	84.454			
23	.523	1.025	85.479			
24	.513	1.006	86.484			

25	.484	.948	87.433			
26	.459	.900	88.333			
27	.450	.882	89.216			
28	.409	.803	90.018			
29	.387	.759	90.777			
30	.368	.721	91.498			
31	.353	.692	92.189			
32	.341	.669	92.858			
33	.335	.657	93.515			
34	.301	.590	94.105			
35	.288	.565	94.670			
36	.271	.531	95.200			
37	.255	.500	95.700			
38	.231	.453	96.153			
39	.224	.440	96.593			
40	.206	.403	96.996			
41	.202	.396	97.392			
42	.190	.373	97.766			
43	.171	.335	98.100			
44	.168	.330	98.431			
45	.163	.319	98.749			
46	.140	.274	99.023			
47	.121	.238	99.261			
48	.105	.207	99.467			
49	.104	.204	99.671			
50	.090	.177	99.848			
51	.078	.152	100.000			

Extraction Method: Principal Component Analysis.

Table 5.3: Construct Items Mean, Standard Deviation, Loadings, KMO and Cronbach's Alpha

Constructs	Items / Indicators	KMO ; α	Mean	SD	Loadings
Better Than Alternative	IT saves my time of trading (3)	0.848; 0.823	4.52	.606	0.54
	IT reduces my cost of trading (4)		4.33	.590	0.45
	IT allows me to complete trading quickly (5)		4.35	.751	0.75
	IT doesn't disclose my stock trading behavior related information to others (11)		4.13	.834	0.53
	IT allows me to execute buying and selling orders accurately (21)		4.33	.687	0.50
	IT is reliable (22)		4.23	.784	0.62
Fun/ Enjoyment/ Playfulness	IT solves the problem of getting connected via phone with traders during pick hour (18)	0.788; 0.789	4.24	.697	0.56
	IT feels me good as I can avoid interaction with traders (19)		4.06	.858	0.62
	IT gives me control (20)		4.11	.892	0.56
	I enjoy trading via Internet (25)		4.32	1.059	0.51
	It is fun of trading by myself (26)		4.06	.875	0.68
	I find Internet trading more convenient than trading via traders (27)		4.23	.826	0.60
Solve Intensified Needs	IT allows me to execute purchase / selling orders independently (14)	0.755; 0.817	4.49	.556	0.47
	IT provides me one-stop solution (15)		4.26	.551	0.75
	IT helps me to check stock quotations instantly (16)		4.39	.582	0.81
	IT helps to check trade volume instantly (17)		4.46	.570	0.77
Quick Help	IT also allows me to reach brokerage house via telephone to help (23)	0.700	3.94	.996	0.75
	IT allows me to resolve transaction disputes via telephone (24)		3.75	.930	0.70
Ease of Use	IT helps me to trade anytime during operating hour (1)	0.678	4.52	.517	0.68
	IT helps me to trade from anywhere (2)		4.62	.495	0.73
Customized Information	IT gives access to my personal history of investing portfolio instantly (8)	0.623; 0.624	4.06	.896	0.53
	IT provides me the precise or customized information I need (9)		3.84	.749	0.67
	IT provides me intelligence report regarding market behavior (12)		3.42	1.183	0.70

Technology Failure	Sometimes I cannot execute an order because the broker server is down (31) Sometimes I am unable to log on (32) Internet trading is not secure because of hacking (33) Internet trading order is sometimes lost (34) IT is very time consuming when loading stock quotations (35) A confirmation of online trading order is very slow (36)	0.821; 0.843	3.25 3.15 2.88 2.91 2.89 2.79	1.201 1.159 1.204 1.310 1.152 1.123	0.79 0.81 0.62 0.71 0.61 0.62
Customer Driven Failure	Brokerage firm's website is difficult to navigate (37) Brokerage firm's Internet information is not up-to-date (38) I don't receive any e-mail alert of any significant change in trading policy (39) Sometime I make mistake of entering wrong number of buying and selling order (40) I cannot transfer responsibility of my mistake to traders (41)	0.661; 0.746	2.82 2.83 2.99 3.20 3.64	1.112 1.272 1.326 1.169 1.033	0.70 0.64 0.62 0.49 0.56
Satisfaction	Overall I am satisfied with Internet trading (42) I am happy about my decision to choose Internet trading (43) I believe I did the right thing when I used Internet trading (44) I always like to use Internet trading because it is the best choice for me (50)	0.812; 0.876	4.27 4.33 4.27 4.23	.747 .730 .730 .773	0.71 0.68 0.76 0.58
Loyalty	My firm's Internet services meet my expectation (45) I am delighted with my firm's online services (46) I would recommend my brokerage firm to others (47) I will always consider this firm as my first choice (48) I expect to do more business with my firm in the future (49) My firm is expert in Internet Trading (28) My firm is a leading trading house with strong reputation (29) My firm delivers what it promises (30)	0.882; 0.896	3.82 3.87 3.86 3.73 3.84 3.92 3.78 3.82	1.120 .941 .978 1.018 .828 .807 .927 .818	0.82 0.78 0.82 0.79 0.70 0.57 0.67 0.57

Primary data was collected through survey on 51 items under 12 constructs based on qualitative research and browsing secondary sources. Data reduction technique principal

component analysis (PCA) was run to check the internal consistency within the construct items as well as among the measured constructs. The main objective of PCA is not to drop the items but to see the clustering of the items based on the respondents' perceptions. The table 5.2 shows the clustering of the items under twelve constructs and table 5.3 summarizes the constructs name and their respective indicators or items, mean value, KMO and alpha for each construct, and factor loadings. The cut-off value for KMO is 0.6 and above and for alpha is 0.7 and above (Nunnally, 1978). It reveals that KMO and alpha values of all the constructs comfortably passed the threshold level.

5.2.2 Exploratory Factor Analysis (EFA) & Confirmatory Factor Analysis (CFA)

After PCA, the study has run factor reduction technique both exploratory factor analysis (EFA) as well as confirmatory factor analysis (FCA) to refine and drop the items have poor loading and insignificant contribution in explaining the variance. Both the techniques do follow the repeated filtering for identifying and deleting indicator variables. In case of EFA, varimax rotation technique with minimum threshold (0.4) and for CFA, modification index (MI) were used.

Modification index (MI) is used to select indicator variables (Joreskog and Sorbom, 1986). Through repeated filtering, a number of indicator variables were deleted if its MI exceeds the maximum thresholds (5.84). Each construct in the measurement model is measured using at least three indicator variables as shown in Table 5.3. Seven common model-fit criteria were used to assess the model's overall goodness-of-fit: CMIN/df; goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI); comparative fit index (CFI); normed fit index (NFI); root mean square residual (RMR) and root mean square error of approximation (RMSEA). According to Anderson and Gerbing (1988) the recommended value for all the seven fit indices are CMIN/df < 5.00; GFI > .90; AGFI > .80; RMR < 0.08; CFI > 0.90; NFI > .90; and RMSEA < 0.08.

Convergent Validity: Convergent validity is achieved when different indicators are used to measure the same construct, and the scores from different indicators are strongly correlated. In SEM, convergent validity can be examined by the t-value for the factor loadings. All the factor loadings for indicators measuring the same construct are statistically significant (as shown in Table 5.6), and it shows that all indicators measure their corresponding construct effectively (Anderson and Gerbing, 1988) and fulfill convergent validity successfully of the current study.

Discriminant validity: Discriminant validity is achieved if the correlations between different constructs are relatively insignificant. Discriminant validity of the model was also achieved as the square root of the AVE for all constructs exceed their correlation coefficients (Table 5.6). The χ^2 different test can be used to assess the discriminant validity of every two constructs by calculating the difference of the χ^2 statistics for the constrained and unconstrained measurement models (Bagozzi and Philips, 1982; Hatcher, 1994).

Table 5.4: Exploratory Factor Analysis for Satisfaction Drivers with SSTs

	Component				
	1	2	3	4	5
SAT3	.852				
SAT2	.844				
SAT1	.792				
SIN2		.866			
SIN3		.823			
SIN1		.799			
BTA1			.776		
BTA3			.759		
BTA2			.758		
CTI2				.817	
CTI3				.790	
CTI1				.667	
FUN2					.860
FUN1					.648
FUN3					.628

[Source: Estimated]

Satisfaction Drivers with Technology Based Service Encounter

Table 5.5a: Loyalty Construct Model Fit Analysis

	Model Fit Indicators	Value / P
	CMIN /DF	2.10/ .122
	GFI	0.992
	AGFI	0.959
	RMR	0.017
	CFI	0.994
	NFI	0.988
	RMSEA	0.068

Table 5.5b: Satisfaction Construct Model Fit Analysis

	Model Fit Indicators	Value / P
	CMIN /DF	2.28/ .102
	GFI	0.991
	AGFI	0.954
	RMR	0.010
	CFI	0.994
	NFI	0.990
	RMSEA	0.073

Table 5.5c: 'Better than Alternative' Construct Model Fit Analysis

	Model Fit Indicators	Value / P
	CMIN /DF	1.153/ .330
	GFI	0.992
	AGFI	0.972
	RMR	0.018
	CFI	0.998
	NFI	0.985
	RMSEA	0.025

Table 5.5d: 'Solve Intensified Needs' Construct Model fit Analysis

	Model Fit Indicators	Value / P
	CMIN /DF	2.897/.000
	GFI	0.772
	AGFI	0.795
	RMR	0.078
	CFI	0.802
	NFI	0.765
	RMSEA	0.089

Table 5.5e: 'Efficiency' Construct Model fit Analysis

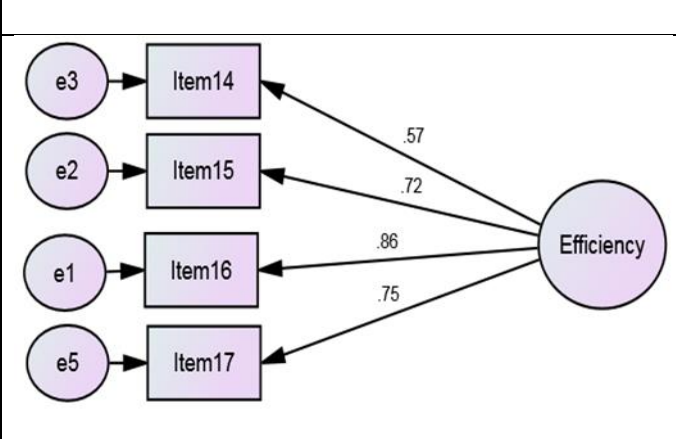
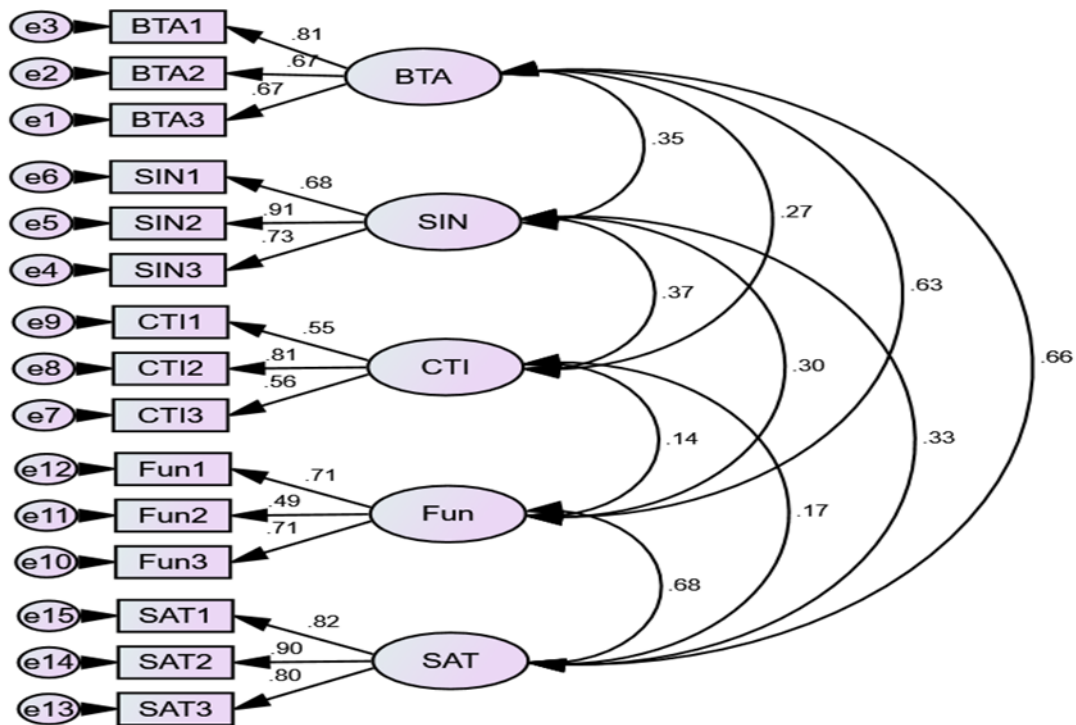
	Model Fit Indicators	Value / P
		CMIN /DF
	GFI	0.970
	AGFI	0.951
	RMR	0.020
	CFI	0.970
	NFI	0.965
	RMSEA	0.065

Fig 5.1: First-Order Confirmatory Factor Analysis for Satisfaction Constructs with SSTs



[BTA: Better than Alternative; SIN: Solve Intensified Needs; Fun: fun/ Hedonism; CTI: Customized Information; SAT: Satisfaction]

Measurement Model Results

The first order confirmatory factor analysis for satisfaction constructs with SSTs revealed that all factor loadings were greater than the recommended 0.40 cut-off value and were statistically significant (Nunnally & Bernstein, 1994). The measurement model yields the

following model fit results shown in the table 5.5. Overall results demonstrate the good-fit of the model. All the indicators such as CMIN, GFI, AGFI, RMR, CFI, NFI, and RMSEA were reached the height of high fit of the model. Based on the model fit criteria, these fit indices collectively indicate that the overall fit of the measurement model is highly satisfactory. Now, need to test the measurement model reliability and validity. Table 5.6 presents that all the constructs exceed the critical levels of 0.70 and 0.50 for composite reliability and AVE respectively (Bagozzi & Yi, 1988). This establishes the reliability and the convergent validity of the measurement model of satisfaction with SSTs. In addition, loadings of all the items were exceed the recommended cut-off value 0.70 that also support the convergent validity of the model. Discriminant validity of the model was also achieved as the square root of the AVE for all constructs exceed their correlation coefficients.

Table 5.6: Measurement Model Fit Index

Measures	Estimated Value	Recommended Value
CMIN/ DF	1.725	< 3.00
RMR	0.046	<0.050
GFI	0.932	>0.900
AGFI	0.897	>0.800
CFI	0.956	>0.900
NFI	0.903	>0.900
RMSEA	0.055	<0.080

Measurement Model Reliability and Validity:

The main purpose of the measurement model is to assess and verify the indicators or scale items used for each construct are both reliable and valid. The study used measurements composite reliability (CR) and Average Variance Extracted (AVE) for examining measurement model reliability and validity respectively. Values of composite reliability and AVE for each measurement are shown in Table 4. All constructs exceed the critical levels of 0.70 and 0.50 for composite reliability and AVE respectively. This establishes the reliability and convergent validity of the measurement scales of the study. In addition, all the items loadings (given in Table 2) were exceed the recommended cutoff value 0.7 that also support convergent validity of the model. Discriminant validity of the model was also achieved as the square root of the AVE for all constructs exceed their correlation coefficients. Values on the diagonal of the correlation matrix (Table 4) represent the square root of the AVE. As a

whole, the scale items and constructs were both reliable and valid for testing the structural model.

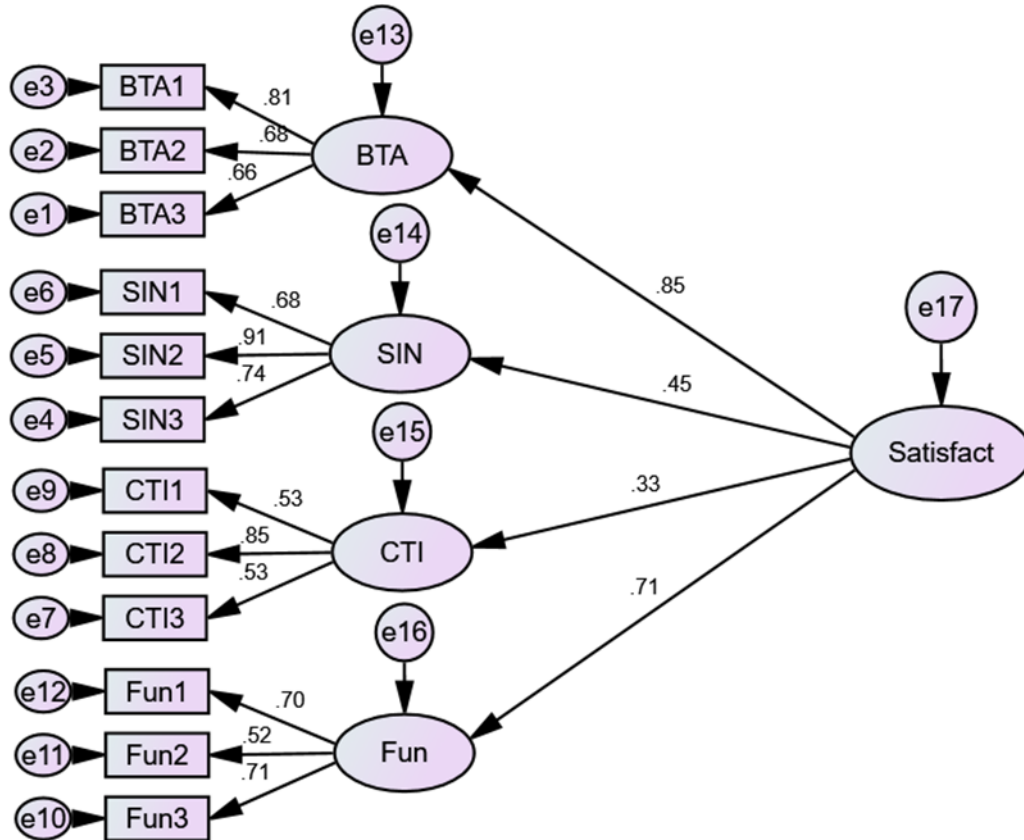
Table 5.7: Measurement Model: Construct Reliability, Average Variance Extracted, and Correlation Matrix

Construct	Construct Reliability (CR)	Average Variance Extracted (AVE)	Correlation Matrix				
			1	2	3	4	5
1. Better than Alternative	.98	.95	.97				
2. Solve Intensified Needs	.99	.97	.35	.98			
3. Access to Customized Information	.94	.84	.27	.37	.92		
4. Fun	.95	.87	.63	.30	.14	.91	
5. Satisfaction	.97	.97	.66	.33	.17	.68	.98

Table 5.8: Technology Encounter Satisfaction Drivers

Drivers	Indicators/ Items	Loadings
Better Than Alternative	IT saves my trading time	.81
	IT reduces my trading cost	.67
	IT allows me to complete trading quickly	.67
Solve Intensified Needs	IT provides me one-stop solution	.68
	IT Helps to check stock quotations instantly.	.97
	IT helps to check trade volume instantly	.73
Customized Information	IT gives access to my personal history of investing portfolio instantly	.55
	IT provides me the precise or customized information I need	.81
	IT provides me intelligence report regarding market behavior	.56
Fun	I enjoy trading via internet.	.71
	It is fun of trading by myself	.49
	I find internet trading more convenient than trading via traders	.71
Satisfaction	Overall I am satisfied with internet trading	.82
	I am happy about my decision to choose Internet trading.	.90
	I believe I did the right thing when I used Internet trading.	.82

Fig 5.2: Structural Model Fits



[[BTA: Better than Alternative; SIN: Solve Intensified Needs; Fun: fun/ Hedonism; CTI: Customized Information; Satisfact: Satisfaction; and Goodness of Fit Indices: CMIN/DF: 2.120; RMR: 0.054; GFI: 0.935; AGFI: 0.899; NFI: 0.878; CFI: 0.930; RMSEA: 0.068]

Estimated values indicated model fit refer that the identified constructs and their respective items/ indicators truly define customer satisfaction with technology-based service encounter. Path analysis revealed that all the four relationships i.e., Better than alternative, solve intensified needs, fun and customized information to satisfaction are statistically significant (at 1% level of significance). The structural coefficients linking the four dimensions with second order satisfaction are all significant and in the expected direction. All the four dimensions were found significant in defining satisfaction with SSTs in online retail stock trading. The extracted coefficients of each dimension to satisfaction are better $0.72 = (0.85)^2$, solve $0.21 = (0.45)^2$, fun $0.51 = (0.71)^2$, customized information $0.11 = (0.33)^2$, and empathy $0.29 = (0.54)^2$. Constructs better than alternative and fun are perceived more dominating by the respondents than solve intensified needs and giving access to customized information in defining satisfaction technology based encounter.

Dissatisfaction Drivers with Technology-Based Service Encounter

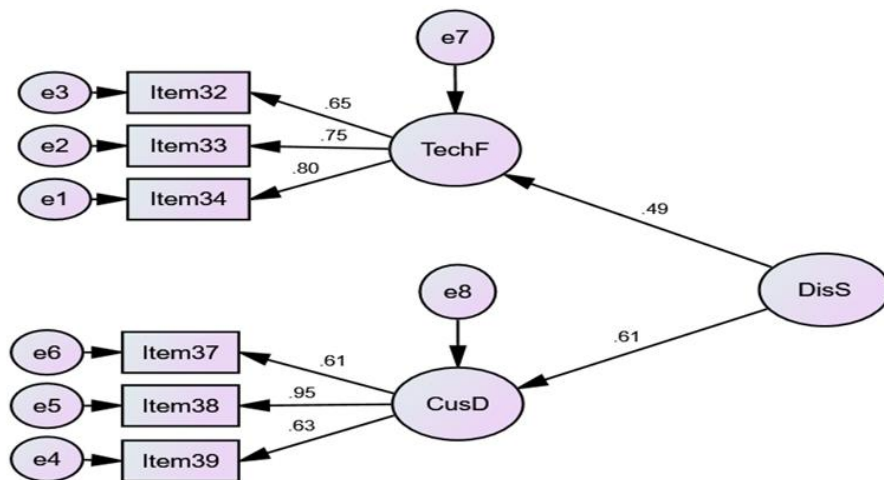
Table 5.5f: 'Technology Failure' Construct Model fit Analysis

	Model Fit Indicators	Value / P
	CMIN /DF	1.153/ .330
	GFI	0.992
	AGFI	0.972
	RMR	0.018
	CFI	0.998
	NFI	0.985
	RMSEA	0.025

Table 5.5g: 'Customer Driven Failure' Construct Model fit Analysis

	Model Fit Indicators	Value / P
	CMIN /DF	2.459/ .201
	GFI	0.942
	AGFI	0.912
	RMR	0.029
	CFI	0.959
	NFI	0.934
	RMSEA	0.079

Fig 5.3: Structural Model Fit



[TechF: Technology Failure; CusD: Customer Driven Failure]

Measurement Model Fit Index

Measures	Estimated Value	Recommended Value
CMIN/ DF	2.663	< 3.00
RMR	0.111	<0.050
GFI	0.951	>0.900
AGFI	0.899	>0.800
CFI	0.951	>0.900
NFI	0.924	>0.900
RMSEA	0.083	<0.080

Table 5.9: Exploratory Factor Analysis for Dissatisfaction Drivers

Rotated Component Matrix^a

	Component	
	1	2
Item34	.883	
Item33	.829	
Item32	.731	
Item38		.884
Item39		.837
Item37		.697

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 5.10: Technology Encounter Dissatisfaction Drivers

Drivers	Indicators/ Items	Loadings	CR	AVE
Technology Failures	Sometimes I cannot execute an order because the broker server is down.	0.62	0.94	0.84
	Sometimes I am unable to log on	0.72		
	Internet trading is not secure because of hacking	0.85		
Customer Driven Failures	A confirmation of an online trading order is very slow	0.59	0.92	0.81
	Brokerage firm's website is difficult to navigate.	0.98		
	Brokerage firm's internet information is not up-to-date.	0.61		
Satisfaction	Overall I am satisfied with internet trading	0.81	0.99	0.97
	I am happy about my decision to choose Internet trading.	0.91		
	I believe I did the right thing when I used Internet trading.	0.82		

The advantages of using technology in receiving services are numerous and some of them are universal such as perceived usefulness, ease of use, and e-service quality, but not all of them are causes of satisfaction and equally contribute irrespective of situations and cultures. The study has found some drivers of satisfaction in technology-based service encounter, namely, better than alternative, solved intensified needs, customized information, and fun. First three are extrinsic categories in nature and the last one from intrinsic category. What makes customer satisfied in technology encounter are mainly functional such as, reduced trading time, cost, quick accomplishment, one-stop solution, instant access to stock quotation and trade volume, access to personal history of investment instantly, easy access to customized information and intelligence report regarding market behavior. In addition of that some pleasure seeking behavior might contribute in enhancing customer satisfaction during technology encounter, such as doing trade by myself is a fun, I love to see myself independent, or enjoyment like playing games. Though investment is a serious issue for economically marginal people, but today's young love to experience with everything, they don't like to take everything seriously. So, existence of both functional as well as affective stimulus in technology encounter might contribute a lot to enhance customer satisfaction in Bangladesh perspective.

In spite of having a good numbers of reason of users' satisfaction with technology encounter, the wide acceptability of technology in receiving services might be in question due to some barriers that lead dissatisfaction? Technology failure such as, broker server is down, difficult to log in sometimes, and possibility of hacking, and lack of customer orientation, for example, slow and delayed confirmation of transactions might enhance customer anxiety, not user friendly website can demotivate or frustrate the traders, and website with back dated database and information cause traders' dissatisfaction. Therefore, marketers need to be very careful in introducing technology encounter and take necessary actions to avoid or minimize the reasons of dissatisfactions.

5.3 Dis/satisfaction Drivers of Interpersonal Service Encounter

Drivers of dis/satisfaction of technology-based service encounter may not be the drivers of interpersonal service encounters or may not be exactly opposite to each other. It means that the satisfiers of SST may not be the causes of dis-satisfiers to interpersonal encounter, and dis-satisfiers of SSTs may not be the drivers of satisfaction with interpersonal

encounter. In searching the answers of what drives dis/satisfaction in interpersonal service encounter, the study browsed secondary sources and based on that findings conducted in-depth interviews and generated potential 20 satisfier items and 9 dis-satisfier items (Table 5.17 & Table 5.24) with interpersonal service encounters. Then, the study has gone through three-stage process of factor analysis: (i) Principal Component Analysis (PCA), (ii) Exploratory Factor Analysis (EFA), and finally (iii) Confirmatory Factor Analysis (CFA) applying structural equation modeling (SEM) of AMOS in order to refine the items and constructs that not only reliable but also valid statistically. PCA (Table 5.17) revealed four major constructs namely, response to customer needs and request, response to service failure, spontaneous delight, and floor environment as satisfiers and the constructs' measures such as KMO, cronbach's alpha and factor loadings along with items mean and SD values (presented in the table 5.18), were found satisfactory. The items were further refined to identify and discard the poor loadings and validated the model using CFA. Table 5.23 reported the CFA outcomes along with the factor loadings and table 5.21 stated AVE, CR, and discriminant validity (square roots of AVE values placed at the diagonal column of correlation matrix) values. It revealed that three instead of four constructs were found as strong satisfaction drivers in interpersonal service encounter which were consistent with the findings of in-depth interview.

CFA (Table 5.28) presents the 6 items under two constructs, namely lack of response to customer needs & requests and no response to service failure were found as root causes of customer dissatisfaction in interpersonal service encounter. It exposes that drivers of dis/satisfiers are same except spontaneous delight. Positive response to customer's needs and requests and service failure enhance customer satisfaction and failure to respond causes dissatisfaction. On the other hand, presence of spontaneous delight attributes make customer very satisfied but absence of them do not dissatisfy customers.

5.3.1 Factor Analysis: Principal Component Analysis (PCA)

Table 5.11: Satisfaction Drivers with Interpersonal Encounter

Component	Total Variance Explained					
	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.538	42.688	42.688	3.965	19.825	19.825
2	1.579	7.894	50.583	3.554	17.768	37.593
3	1.491	7.453	58.036	3.043	15.214	52.807
4	1.042	5.211	63.247	2.088	10.441	63.247
5	.960	4.799	68.047			
6	.769	3.845	71.892			
7	.703	3.516	75.408			
8	.700	3.502	78.909			
9	.575	2.876	81.786			
10	.526	2.628	84.414			
11	.498	2.489	86.903			
12	.439	2.195	89.097			
13	.382	1.910	91.007			
14	.371	1.855	92.862			
15	.299	1.493	94.356			
16	.280	1.400	95.755			
17	.252	1.259	97.014			
18	.221	1.106	98.120			
19	.204	1.020	99.140			
20	.172	.860	100.000			

Extraction Method: Principal Component Analysis.

Table 5.12: Construct Items Mean, Standard Deviation, and Loadings

Constructs	Items	KMO; α	Mean	SD	Loadings
Response to Customer Needs & Request	(1) Trader provides me reasonable comments for making right trading decisions.	0.871; 0.872	3.27	1.215	0.54
	(2) Trader informs me instantly and continuously of relevant and useful information		3.28	1.328	0.48
	(10) Trader checks and informs me inside information or market intelligence report instantly.		2.95	1.327	0.61
	(12) My Trader often gives me surprise gift		2.32	1.284	0.72
	(13) My Trader is able to perform well under adverse circumstances		3.08	1.233	0.73
	(14) My trader is very smart and knowledgeable		3.65	0.996	0.52
	(17) Trader who serves me regularly provides me an extra service as a client		3.31	1.229	0.71
	(18) Trader gives me interesting alternative suggestions even though it means more work for them		3.18	1.268	0.68

Response to Service Failure	(5) Trader informs me about available service (6) Trader informs me about unavailable service (7 Trader informs me when and why brokerage service is very slow) (8) Trader reports me the brokerage firm's mistake instantly (9) Trader responds to other core service failures quickly	0.812; 0.856	3.51 3.01 3.07 3.06 3.30	1.138 1.181 1.284 1.333 1.256	0.53 0.78 0.70 0.82 0.64
Spontaneous Delight	(3) Trader receives and executes my orders accurately and rapidly (4) Trader always serves me according to my preferences (11) Trader provides me services with professional and friendly personality and voice (19) Trader Shows genuine concern toward my situation (20) My Trader acts energetically and enthusiastically	0.785; 0.800	4.14 4.00 3.91 3.52 3.59	0.921 1.017 1.041 1.107 1.011	0.80 0.76 0.64 0.59 0.55
Floor Environment	(15) My Trading firm's floor is well organized and equipped (16) My Trading firm is a leading house in stock market	0.737	3.71 3.63	1.058 1.062	0.79 0.83

5.3.2 Confirmatory Factor Analysis (CFA)

Table 5.13a: Response to Customers' Requests and Needs

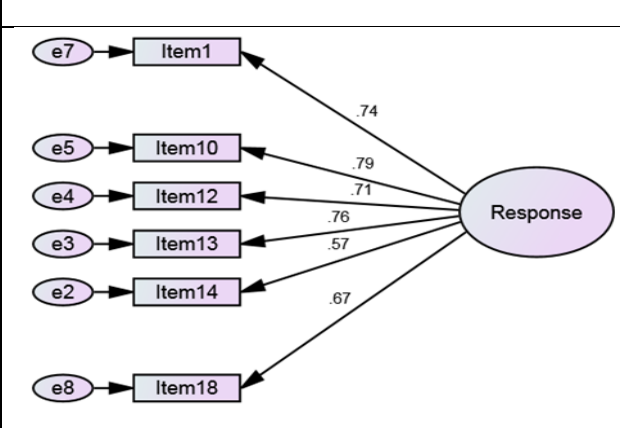
	Model Fit Indicators	Value / P
	CMIN /DF	1.99/0.036
	GFI	0.976
	AGFI	0.943
	RMR	0.043
	CFI	0.983
	NFI	0.967
	RMSEA	0.066

Table 5.13b: Response to Service Failure

	Model Fit Indicators	Value / P
	CMIN /DF	2.717/0.066
	GFI	0.988
	AGFI	0.939
	RMR	0.036
	CFI	0.990

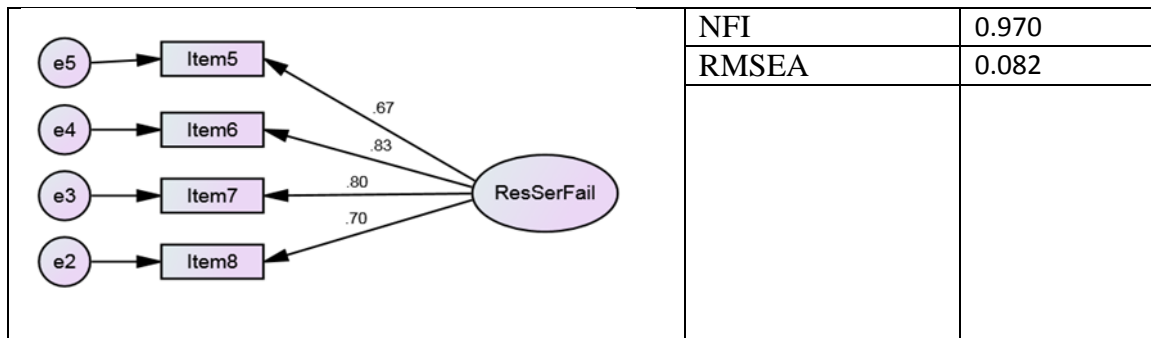


Table 5.13c: Customers' Spontaneous Delight

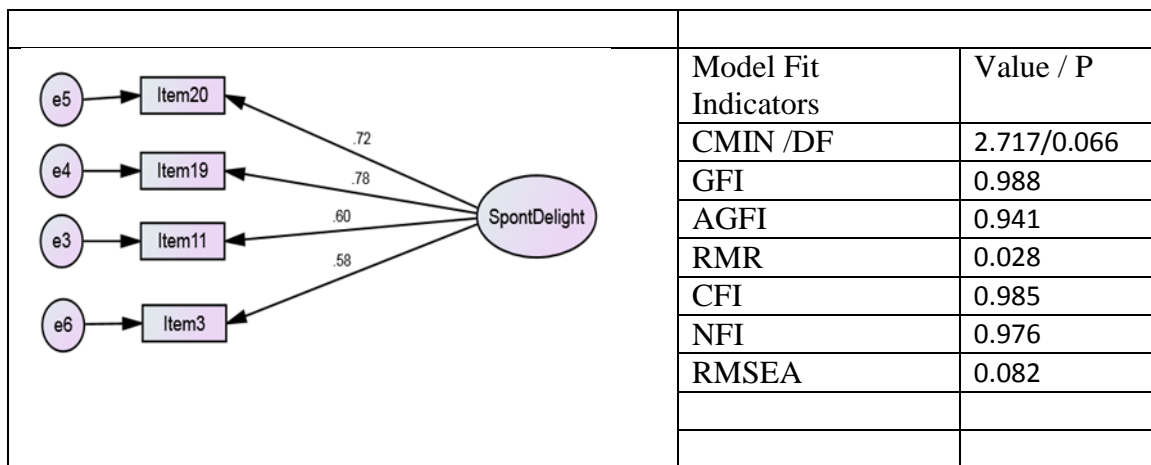


Figure 5.4: Satisfaction Drivers with Interpersonal Service Encounter

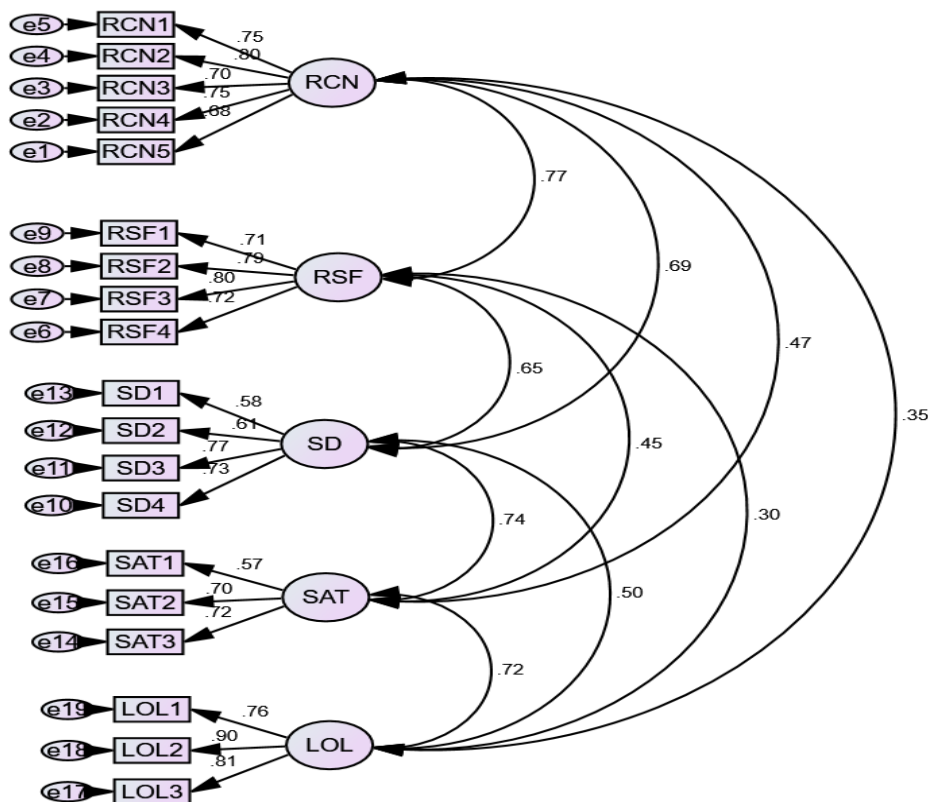


Table 5.14: Estimated Model Fit for Satisfaction Drivers

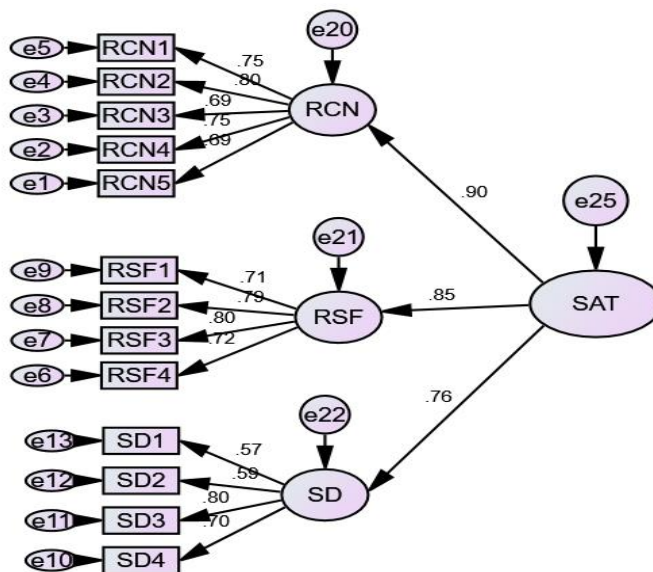
	Measurement	Calculated	Recommended
RCN = Response to Customer Needs	CMIM/P value	2.643/0.001	< 3.00
RSF = Response to Service Failure	GFI	0.901	<0.050
SD = Spontaneously Delight	AGFI	0.872	>0.900
SAT = Satisfaction	RMR	0.073	>0.800
LOL = Loyalty	CFI	0.910	>0.900
	NFI	0.965	>0.900
	RMSEA	0.081	<0.080

Table 5.15: Measurement Model: Construct Reliability, Average Variance Extracted, and Correlation Matrix

Construct	Construct Reliability (CR)	Average Variance Extracted (AVE)	Correlation Matrix					
			1	2	3	4	5	
1. Response to Customer Needs (RCN)	.97	.87	.93					
2. Response to Service Failure (RSF)	.96	.86	.77	.92				
3. Spontaneously Delight (SD)	.96	.87	.60	.65	.93			
4. Satisfaction (SAT)	.95	.88	.47	.45	.74	.94		
5. Loyalty (LOL)	.98	.93	.35	.35	.50	.72	.96	

[Diagonal column values of correlation matrix refers the discriminant validity of the measurement model]

Fig 5.5: Measurement Model



[CMIM/P Value: 2.252/0.001; GFI= 0.917; AGFI= 0.879; RMR= 0.063; CFI= 0.910; NFI= 0.957; RMSEA= 0.074]

Table 5.16: Exploratory Factor Analysis (EFA)

Rotated Component Matrix ^a			
	Component		
	1	2	3
RCN3	.809		
RCN4	.761		
RCN2	.722		
RCN1	.641		
RCN5	.623		
RSF2		.857	
RSF3		.752	
RSF4		.700	
RSF1		.634	
SD1			.737
SD2			.735
SD3			.704
SD4			.678

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 5.17: Interpersonal Service Encounter Satisfaction Drivers

Constructs	Items	Loadings
Response to Customer Needs & Request	Trader provides me reasonable comments for making right trading decisions.	0.75
	Trader checks and informs me inside information or market intelligence report instantly.	0.80
	My Trader often gives me surprise gift	0.69
	My Trader is able to perform well under adverse circumstances	0.75
	Trader gives me interesting alternative suggestions even though it means more work for them	0.69
Response to Service Failure	Trader informs me about available service	0.71
	Trader informs me about unavailable service	0.79
	Trader informs me when and why brokerage service is very slow	0.80
	Trader reports me the brokerage firm's mistake instantly	0.72
Spontaneous Delight	Trader receives and executes my orders accurately and rapidly	0.57
	Trader provides me services with professional and friendly personality and voice	0.69
	Trader Shows genuine concern toward my situation	0.80
	My Trader acts energetically and enthusiastically	0.70

Dissatisfaction Drivers: 9 items

Table 5.18: Principal Component Analysis (PCA) for Dissatisfaction Drivers

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.934	43.714	43.714	3.934	43.714	43.714
2	1.207	13.411	57.125	1.207	13.411	57.125
3	.941	10.452	67.577			
4	.722	8.018	75.595			
5	.584	6.484	82.079			
6	.522	5.798	87.878			
7	.395	4.390	92.268			
8	.370	4.107	96.375			
9	.326	3.625	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Approx. Chi-Square		686.477
Bartlett's Test of Sphericity	Df	36
	Sig.	.000

Table 5.19: Construct Items Measurements of Dissatisfaction Drivers with Interpersonal Service Encounter

Constructs	Items	KMO; α	Mean	SD	Loadings
Lack of Response to Customer Needs	(21) Telephone lines of my Trader are always busy	0.783; 0.779			
	(23) Trader recommends me to trade frequently in order to gain commissions		2.77	1.201	0.52
	(24) My Trader is unable to solve the problems of service failures		2.69	1.175	0.72
	(25) My Trader does not take any actions		2.69	1.175	0.69
	(26) My Trader does not take any actions when back offices provide slow services		2.55	1.163	0.74
			2.72	1.273	0.80
No Response to Service Failure	(22) Trader does not respond to my calls immediately and usually keeps me waiting	0.754; 0.734	2.40	1.141	0.54
	(27) My Trader provides service with unwillingness voice when I order a small volume		2.55	1.171	0.48
	(28) My Trader cannot control his or her emotions in keeping information confidential		2.52	1.172	0.77
	(29) My Trader does not keep details of my investing portfolios confidential		2.30	1.200	0.87

Table 5.20: Exploratory Factor Analysis (EFA)

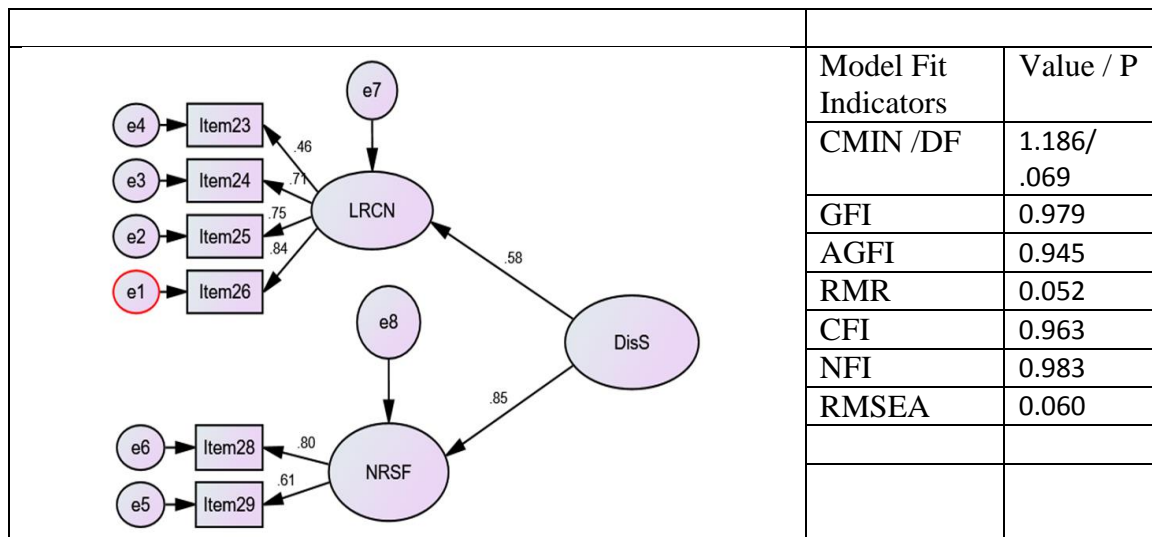
Rotated Component Matrix ^a		
	Component	
	1	2
Item26	.824	
Item25	.761	
Item24	.744	
Item23	.709	
Item29		.886
Item28		.780

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 5.21: Confirmatory Factor Analysis (CFA)



[LRCN: Lack of Response to Customer Needs; NRSF: No Response to Service Failure;

DisS: Dissatisfaction]

Table 5.22: Dissatisfaction Drivers with Interpersonal Service Encounters (ISE)

Constructs	Items	Loadings	CR	AVE
Lack of Response to Customer Needs and requests	Trader recommends me to trade frequently in order to gain commissions	0.46	96	85
	My Trader is unable to solve the problems of service failures	0.71		
	My Trader does not take any actions	0.75		
	My Trader does not take any actions when back offices provide slow services	0.84		
No Response to Service Failure	My Trader cannot control his or her emotions in keeping information confidential	0.61	86	76
	My Trader does not keep details of my investing portfolios confidential	0.68		

Measuring Customer Technology Readiness

5.4 Validation and Use of TRI for Measuring Technology Readiness with SST

In order to measure the technology readiness of Bangladeshi consumers/users, the study adopted four dimensional TRI model developed by Parasuraman in 2000. Initially, the model included 36 items scale for measuring TRI. Later on, the researcher himself modified the scale into 16 items under four dimensions in 2005. As the 16-items scale has been adopted in different cultural context and found reliable for measuring consumers/users technology readiness, the present study has adopted the same and followed the following measures to ensure the reliability as well as validity of the scale.

5.4.1 Principal Component Analysis (PCA)

Both the data reduction techniques PCA and EFA were run for the 21 items under 5 constructs including four for TRI and the other one is for satisfaction with SSTs. KMO value (0.835) above the recommended cut-off value and the statistically significant χ^2 value of Bartlett's test revealed that the internal consistency of items under five measurement constructs was suitable for factor analysis. Table 5.8 presents that initial Eigenvalue above 1.00 identified five constructs that explained more than 67% variance. On the other hand, exploratory factor analysis with varimax-rotation helped the study drop insignificant items with poor loadings less than 0.40. Varimax-rotation rearranged the items under different construct. It might be because of the differences in users' perceptions in different cultural contexts. In the original model, each of the four dimensions- two are favorable and two are unfavorable- consists of four measured items but in present study, one item of innovativeness was found very close to optimism. It means to some extent the measured item 'I prefer to use most advanced technology available' was considered similar with the other items of optimism whereas it was for measuring innovativeness in the original model. Otherwise, all the other items were found consistent with the original model that refers the acceptability of the scale to measure technology readiness in the cultural context of Bangladesh.

Table 5.23: Total Variance Explained

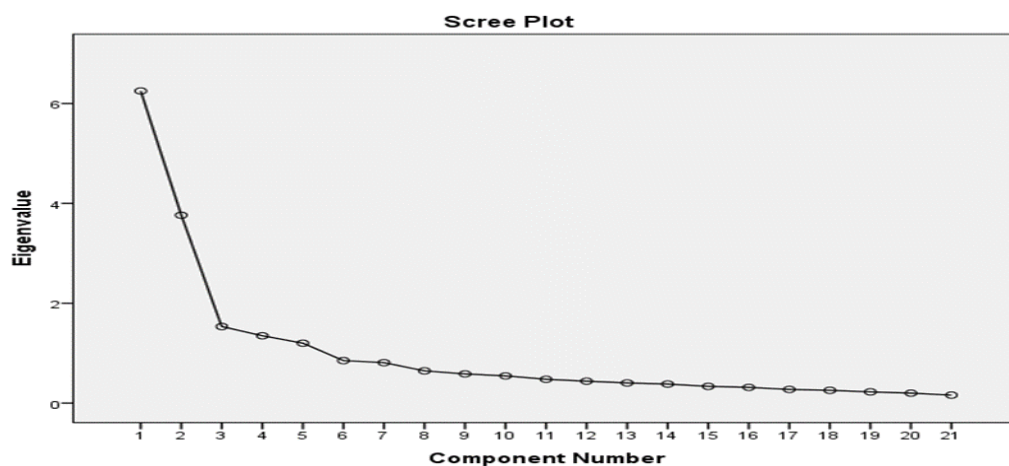
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.250	29.764	29.764	6.250	29.764	29.764
2	3.763	17.920	47.684	3.763	17.920	47.684
3	1.534	7.305	54.989	1.534	7.305	54.989
4	1.349	6.422	61.411	1.349	6.422	61.411
5	1.201	5.717	67.128	1.201	5.717	67.128
6	.852	4.057	71.185			
7	.811	3.860	75.045			
8	.646	3.078	78.123			
9	.584	2.783	80.906			
10	.545	2.594	83.500			
11	.477	2.272	85.772			
12	.439	2.092	87.864			
13	.404	1.922	89.786			
14	.381	1.814	91.600			
15	.335	1.596	93.196			
16	.315	1.502	94.698			
17	.273	1.302	95.999			
18	.256	1.219	97.218			
19	.225	1.072	98.290			
20	.199	.948	99.238			
21	.160	.762	100.000			

Extraction Method: Principal Component Analysis.

Table 5.24: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.835
Approx. Chi-Square		2580.580
Bartlett's Test of Sphericity	Df	210
	Sig.	.000

Graph 1: Scree Plot for Factor Analysis



5.4.2 Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis revealed that the measurement scale is highly reliable in terms of Cronbach's alpha, convergent reliability, and average variance extracted (AVE) as shown in table 5.10. It is noted that rotated varimax modified the measurement constructs with new cluster of items. For example, the construct 'optimism' re-clustered with six items whereas both innovation and satisfaction were re-clustered with three items each instead of four items (Table: 5.13). Finally, CFA validated the 14 items TRI model in Bangladesh context, and table: 5.16 reports the high loadings, average variance extracted (AVE) and construct reliability (CR) values for four items under optimism, three for innovation, four for discomfort, and three for insecurity constructs.

Table 5.25: Rotated Component Matrix^a

	Component				
	1	2	3	4	5
OPT2	.850				
OPT4	.800				
OPT3	.762				
OPT1	.711				
OPT5	.555				
Item50 (SAT)	.537				
Item43 (SAT)		.847			
Item42 (SAT)		.813			
Item44 (SAT)		.802			
ANX2			.835		
ANX1			.819		
ANX3			.764		
ANX4			.742		
INS2				.871	
INS1				.820	
INS3				.723	
INS4				.502	
INV1					.854
INV2					.833
INV3					.576

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 6 iterations.

Table 5.26: Constructs' Items, Mean, Cronbach's Alpha, Loadings and validity scores

Construct	Items	A	Mean	SD	Loading s
Optimism	New technologies contribute to a better quality of life. (52)	.864	4.28	.792	.85
	Technology gives me more freedom of mobility (53)		4.27	.857	.80
	Technology gives people more control over their daily lives (54)		4.23	.870	.76
	Technology makes me more productive in my personal life (55)		4.21	.863	.71
	I prefer to use the most advanced technology available (57)		4.16	.884	.56
Innovation	Other people think I have better knowledge on new technologies (56)	.747	3.67	.918	.85
	I can usually figure out new high-tech products and services without help from others (58)		3.74	1.01	.83
	I keep up with the latest technological development in my area of interest (59)		3.79	.938	.58
Discomfort	Technical support lines are not helpful because they don't explain things in terms I understand (60)	.831	3.07	.996	.84
	Sometimes, I think that technology systems are not designed for use by ordinary people (61)		3.10	1.10	.82
	Use manuals for a high-tech product or service are not written in plain language (62)		3.11	1.03	.76
	Technology always seems to fail at the worst possible time (63)		3.04	1.01	.74
Insecure	People are too dependent on technology to do things for them (64)	.760	3.01	.992	.87
	Too much technology distracts people to a point that is harmful. (65)		3.09	.966	.82
	Technology lowers the quality of relationships by reducing personal interaction (66)		2.78	1.08	.72
	I do not feel confident doing business with a place that can only be reached online (67)		3.55	.984	.50
Satisfaction	Overall I am satisfied with Internet trading (42)	.843	4.27	.747	.81
	I am happy about my decision to choose Internet trading (43)		4.33	.730	.85
	I believe I did the right thing when I used Internet trading (44)		4.27	.730	.80
	I always like to use Internet trading because it is the best choice for me (50)		4.23	.773	.53

Fig 5.6: TRI Model Fit with Technology Encounter

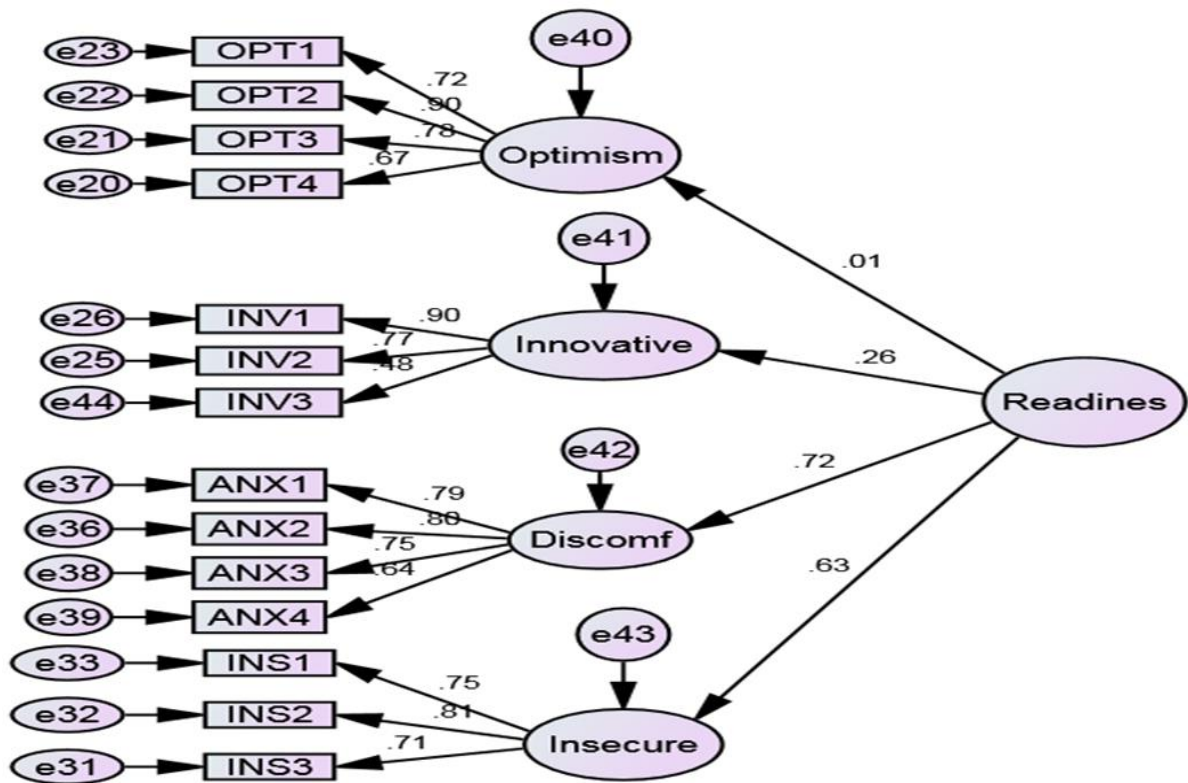


Table 5.27: Measurement Model Fit for TRI Components

Indicators of Model Fit	Estimated Value	Recommended Value
CMIN / P Value	2.620 / 0.000	< 3.00
GFI	0.908	<0.050
AGFI	0.867	>0.900
RMR	0.090	>0.800
CFI	0.913	>0.900
NFI	0.868	>0.900
RMSEA	0.080	<0.080

Table 5.28: TRI Constructs Loadings, Reliability and Validity

Construct	Items	Loadings	CR	AVE
Optimism	New technologies contribute to a better quality of life.	.72	.99	.95
	Technology gives me more freedom of mobility	.90		
	Technology gives people more control over their daily lives	.78		
	Technology makes me more productive in my personal life	.67		
Innovation	Other people think I have better knowledge on new technologies	.90	.97	.92
	I can usually figure out new high-tech products and services without help from others	.77		

	I keep up with the latest technological development in my area of interest	.58		
Discomfort	Technical support lines are not helpful because they don't explain things in terms I understand	.79	.98	.91
	Sometimes, I think that technology systems are not designed for use by ordinary people	.80		
	Use manuals for a high-tech product or service are not written in plain language	.75		
	Technology always seems to fail at the worst possible time	.64		
Insecure	People are too dependent on technology to do things for them	.75	.97	.90
	Too much technology distracts people to a point that is harmful.	.81		
	Technology lowers the quality of relationships by reducing personal interaction	.71		
Satisfaction	Overall I am satisfied with Internet trading	.81	.99	.97
	I am happy about my decision to choose Internet trading	.85		
	I believe I did the right thing when I used Internet trading	.80		

CR = Construct Reliability; AVE = Average Variance Extracted

5.5 Validation of TRI drivers with Interpersonal Service Encounter

The 16 items TRI model developed and refined by Parasuraman in 2005 was again tested for its reliability and validity among the non-users of technology based services in Bangladesh context. It also validated the model in multiple-cross sectional data analysis point of view as both the respondent groups were from different sections. Confirmatory factor analysis (CFA) results of TRI with interpersonal service encounters are reported in Table 5.35, which were found consistent with the values with technology encounter. CFA was conducted first to make ensure that the measures of TRI and its components were valid. Overall, good fit was attained for the measurement model (CMIM/DF = 2.32; GFI=0.911; AGFI =0.872; RMR = 0.076; CFI = 0.93; NFI =0.880; RMSEA = 0.076). In particular, the factor weights, composite reliability (CR), Cronbach's Alpha, Average Variance Extracted (AVE) reported in Table 5.33 & 5.31 & 5.35 indicated that all measures of TRI components with interpersonal service encounter had satisfactory reliability and validity and found consistent with previous studies.

Table 5.29: Principal Factor Analysis

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.893	30.579	30.579	4.893	30.579	30.579
2	3.052	19.077	49.656	3.052	19.077	49.656
3	1.449	9.059	58.714	1.449	9.059	58.714
4	1.030	6.435	65.150	1.030	6.435	65.150
5	.832	5.198	70.348			
6	.731	4.567	74.915			
7	.705	4.408	79.323			
8	.509	3.183	82.506			
9	.483	3.020	85.525			
10	.471	2.947	88.472			
11	.405	2.534	91.006			
12	.367	2.294	93.300			
13	.303	1.894	95.194			
14	.288	1.802	96.996			
15	.262	1.635	98.631			
16	.219	1.369	100.000			

Extraction Method: Principal Component Analysis.

Table 5.30: Exploratory Factor Analysis (EFA)

	Rotated Component Matrix ^a			
	Component			
	1	2	3	4
Item37	.845			
Item36	.811			
Item38	.802			
Item39	.774			
Item41	.632		.531	
Item46		.854		
Item45		.790		
Item47		.637		
Item50		.615		
Item51		.515		.510
Item42			.827	
Item40			.768	
Item43			.729	
Item49				.822
Item48	.416			.671
Item44				.543

Table 5.31: Alpha, Mean, Standard Deviation, and Loadings of TRI construct with ISE

Factor	Item	Loadings	Mean	SD	KMO	Alpha
OPT	New technologies contribute to a better quality of life.	0.81	4.28	0.943	0.860 / 68% vari	0.879
	Technology gives me more freedom of mobility	0.85	4.22	0.835		
	Technology gives people more control over their daily lives	0.80	4.10	0.868		
	Technology makes me more productive in my personal life	0.77	4.24	0.838		
	I prefer to use the most advanced technology available	0.63	4.04	1.102		
INN	Other people think I have better knowledge on new technologies	0.77	3.66	0.998	0.697 /70%	0.777
	I can usually figure out new high-tech products and services without help from others	0.83	3.51	1.146		
	I keep up with the latest technological development in my area of interest	0.73	3.71	1.012		
DISC	Technical support lines are not helpful because they don't explain things in terms I understand	0.79	3.09	1.117	0.780 /55%	0.791
	Sometimes, I think that technology systems are not designed for use by ordinary people	0.86	3.22	1.168		
	Use manuals for a high-tech product or service are not written in plain language	0.63	2.94	1.099		
	Technology always seems to fail at the worst possible time	0.62	3.43	1.214		
		0.52	3.21	1.220		
INS	People are too dependent on technology to do things for them	0.54	2.95	1.113	0.583 /57%	0.616
	Too much technology distracts people to a point that is harmful.	0.67	3.57	1.076		
	Technology lowers the quality of relationships by reducing personal interaction	0.82	3.42	1.158		
	I do not feel confident doing business with a place that can only be reached online					

Figure 5.7: Confirmatory Factor Analysis (CFA)

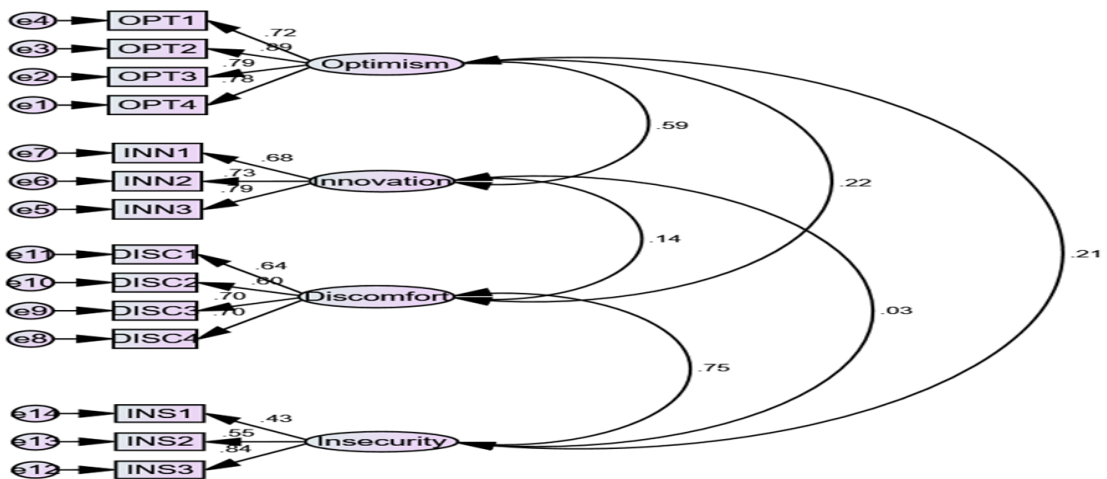


Table 5.32: Estimated Model Fit Values

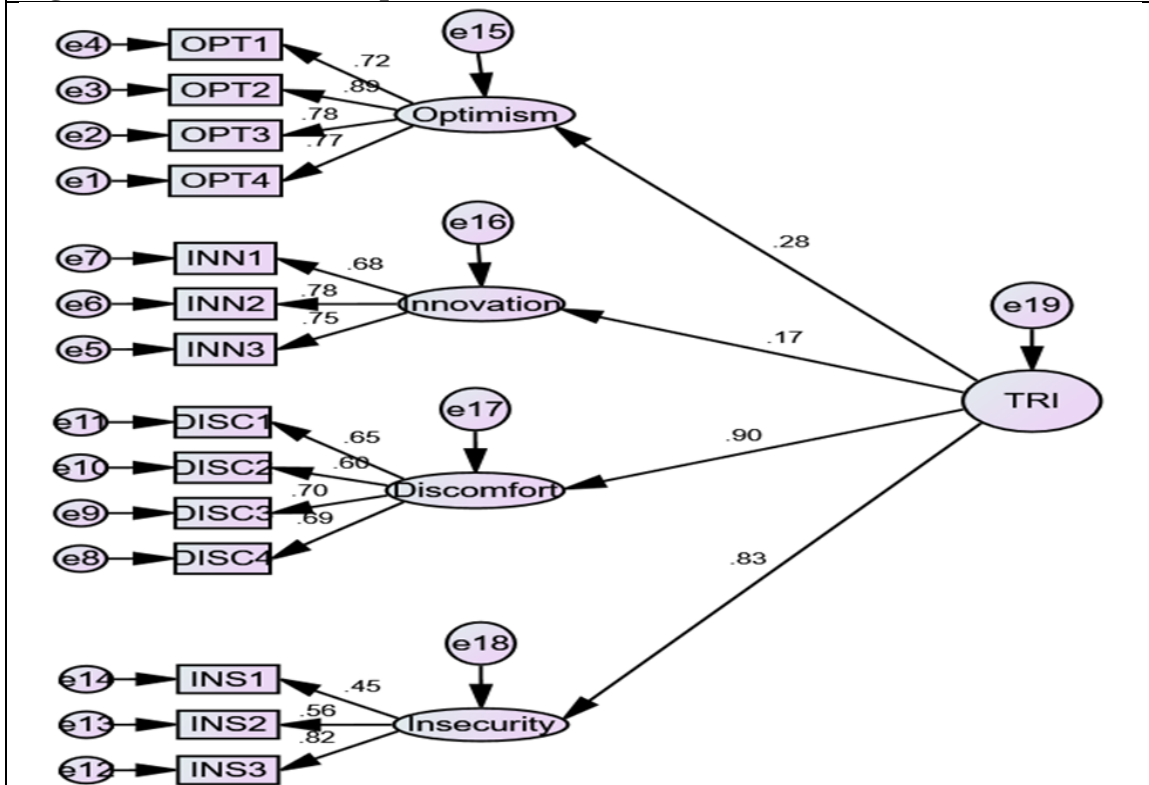
Measurement	Calculated	Recommended	
CMIM/P value	2.326/0.001	< 3.00	
GFI	0.911	<0.050	
AGFI	0.872	>0.900	
RMR	0.076	>0.800	
CFI	0.930	>0.900	
NFI	0.880	>0.900	
RMSEA	0.076	<0.080	

Table 5.33: Measurement Model: Construct Reliability, Average Variance Extracted, and Correlation Matrix

Construct	Construct Reliability (CR)	Average Variance Extracted (AVE)	Correlation Matrix				
			1	2	3	4	5
Optimism	.99	.95	<i>.97</i>				
Innovative	.96	.88	.69	<i>.94</i>			
Discomfort	.95	.83	.22	.14	<i>.91</i>		
Insecurity	.93	.82	.21	.03	.76	<i>.90</i>	

[Diagonal with italicized values shows the discriminant validity of the four constructs]

Figure 5.8: TRI with Interpersonal Encounter Model Fit



[CMIM/P Value: 2.326/0.001; GFI= 0.911; AGFI= 0.872; RMR= 0.076; CFI= 0.930; NFI= 0.880; RMSEA= 0.076]

Table 5.34: Estimated Path Analysis

			Estimate	S.E.	C.R.	P	Label
Optimism	<---	TRI	.194	.056	3.444	***	D
Innovative	<---	TRI	.126	.066	1.898	.058	C
Discomfort	<---	TRI	.758	.127	5.981	***	B
Insecurity	<---	TRI	.791	.126	6.259	***	A

Table 5.35: TRI items with Interpersonal Service Encounter

Factor	Item	Loadings
Optimism	New technologies contribute to a better quality of life.	0.77
	Technology gives me more freedom of mobility	0.78
	Technology gives people more control over their daily lives	0.89
	Technology makes me more productive in my personal life	0.72
Innovativeness	Other people think I have better knowledge on new technologies	0.75
	I can usually figure out new high-tech products and services without help from others	0.78
	I keep up with the latest technological development in my area of interest	0.68
Discomfort	Technical support lines are not helpful because they don't explain things in terms I understand	0.89
	Sometimes, I think that technology systems are not designed for use by ordinary people	0.70
	Use manuals for a high-tech product or service are not written in plain language	0.60
	Technology always seems to fail at the worst possible time	0.65
Insecurity	People are too dependent on technology to do things for them	0.54
	Too much technology distracts people to a point that is harmful.	0.82
	Technology lowers the quality of relationships by reducing personal interaction	0.56

Rapid expansion of the use of information technology in day to day life and its perceived functional and emotional benefits have been improving individuals' attitude toward technology encounter. The present study was an initiative to measure the respondents' attitude toward adopting technology in solving their day to day activities provided that Bangladeshi consumers are relatively new in information technology encounters. The present study revealed some important insights those are consistent with the findings of previous studies. People in developing countries like Bangladesh hold positive attitude toward technology uses irrespective of technology users as well as non-users. For instance, the mean value of attitude (Optimism) toward technology of online traders (4.25 at 5.0 scale) and offline traders (4.21) present that they are very positive regarding benefits of

using technology and the insignificant paired t-test value ($t = .634$; $p = .527$) of their mean difference posits that both the groups are equally positive toward technology encounter. The moderate mean value of technology users (3.74) and non-users (3.62) on innovation dimension demonstrate that sample respondents are not early movers or adopters of new technology even not thought leaders but both are equally positive and late adopter to new technology. On the other hand, both the respondent groups exhibited moderate level of attitudes to discomfort and insecurity to use technology. It found that technology users have relatively low level of discomfort ($M=3.08$) and insecurity (3.11) compare to non-technology users' level of discomfort ($M = 3.18$) and insecurity (3.31). Significant paired t test value for insecurity ($P = .000$) posits that though non- technology users have favorable attitude toward the benefits of using technology, but due to high level of insecurity feelings they mistrust technology and remain reluctant to go for technology encounter in receiving service. These findings are supported by the previous findings in different cultural settings. For example, in a study in Thailand and a cross cultural study in between USA and Chile revealed high level of optimism i.e., 4.21, 4.59, and 4.25 respectively and moderate level of innovativeness i.e., 3.59, 3.85, and 3.89 respectively. High insecurity feelings of Bangladeshi consumers in technology encounter might be the causes of relatively new in use, culturally reluctant to use etc., but rapid and pervasive use of technology, development of systems, ICT policies, promptness of monitoring agencies, govt. policy of digitalization will help to reduce the fear of insecurity of technological encounter. Users' learning curve will contribute much provided that service providers will not make deceptive practices with technology.

As technology readiness construct refers to people's propensity to embrace and use technologies for accomplishing goals in home and at work, as there are many types of adopter categories to innovation, five types of technology customers – explorers, pioneers, skeptics, paranoids, and laggards- can be identified according to the TRI score (Lee et al., 2009). Explorers are high optimism and innovativeness and low in discomfort and insecurity. Pioneers are high in optimism, innovativeness, discomfort and insecurity. Skeptics are low in optimism, innovativeness, discomfort and insecurity. Paranoids are high in optimism, discomfort and insecurity, but low in innovativeness. Finally, laggards score low in optimism and insecurity, but high in discomfort and insecurity.

Table 35.a: Comparison between Online and Offline Users Behavior

Differences in Attitudes and Behavior between Online & Offline Users

Constructs	Mean	Differences	Paired t-test	P value
Optimism				
Online	4.31			
Offline	4.21	.04	.634	.527
Innovative				
Online	3.74			
Offline	3.62	.12	1.537	.126
Discomfort				
Online	3.08			
Offline	3.20	-.12	9.41	.000
Insecurity				
Online	2.94			
Offline	3.31	-.37	4.638	.000
Satisfaction				
Online	4.31			
Offline	3.28	1.03	15.67	.000
Loyalty				
Online	3.84			
Offline	3.39	.65	6.59	.000

Measuring the Impact of TR on Customer Satisfaction

5.6: Impact of Technology Readiness on Service Satisfaction with SSTs

As the study already found that customer satisfaction with technology encounter is significantly higher than the satisfaction level with interpersonal service encounter (see in the table: 5.35a) and the technology readiness of customers is relatively positive irrespective of technology users as well as non-users, it is imperative to see the effect or influence of technology readiness of customers on their satisfaction level irrespective of technology encounter and interpersonal encounter. In this section, the study measured the first dimension of conceptual model that assumed consumers' technology readiness have influence on service encounter satisfaction with technology encounter. Figure (5.8) reported the measurement model and its values of service encounter with SSTs. CFA was conducted first to make sure that the measures of TRI and its components were valid based on prior studies (Ghosh, 2015). Overall, good fit was attained for the measurement model (CMIM/DF = 2.51, $p = .000$; GFI = 0.902; AGFI = 0.867; RMR = .090; CFI = 0.924; NFI = 0.884; RMSEA = .072), with the only exception of the significant χ^2 ($p < .01$). However, large samples tend to produce significant χ^2 because the connection of the difference between observed and expected correlations and the significance of χ^2 is sensitive to sample size (Cole, 1987). In particular, the factor weights (loadings) and associated R² in the table indicated that all measures of TRI model and its associated components, and the impact of those components on satisfaction with SSTs has satisfactory reliability and validity.

Path Analysis Results:

Path analysis results of TRI dimensions on satisfaction with SSTs are reported in table 5.34. Although overall TRI on satisfaction was found insignificant but its dimensions – optimism and innovation were found positively influence satisfaction with SSTs, registering at a five percent significance level estimated impacts of 0.57 and 0.23 respectively. This findings support the hypothesis H1a and H1b. Other two dimensions of TR –discomfort and insecurity- were found to influence satisfaction with SSTs negatively as expected but statistically insignificant with estimated impact of -.10 and -.08 respectively at a five percent significance level, failing to support H1c and H1d. Therefore, it can be inferred that technology users are very positive about the benefits of using technology and their satisfaction level can be enhanced with the careful handling of the issues such as technology failure, insecurity etc.

Fig 5.8a: Measurement model of TRI impact on SSTs

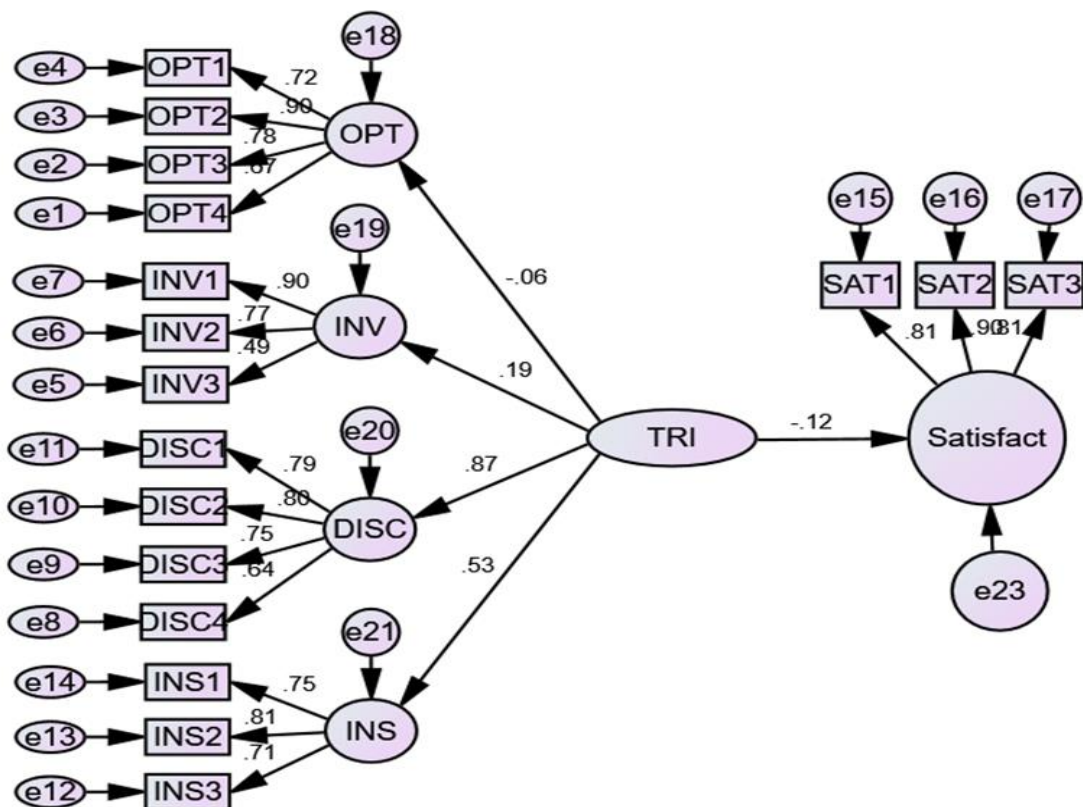
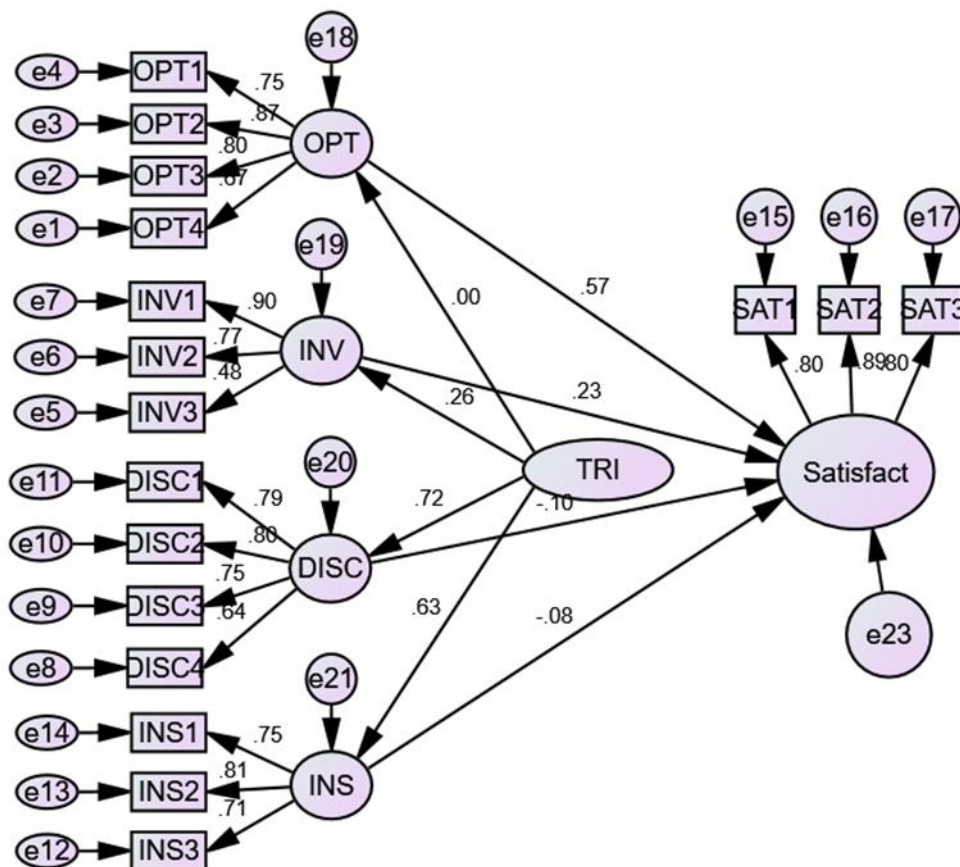


Fig 5.8b: Measurement model of TRI impact on SSTs



[CMIM/P Value: 2.251/0.001; GFI= 0.902; AGFI= 0.867; RMR= 0.090; CFI= 0.928; NFI= 0.884; RMSEA= 0.072]

Table 5.36: Estimated Path Analysis of TRI Dimensions on Satisfaction with SSTs

			Estimate	S.E.	C.R.	P	Label
Optimism	<---	Readines	.001	.053	.026	.979	D
Innovative	<---	Readines	.199	.075	2.657	.008	C
Discomf	<---	Readines	.632	.170	3.711	***	B
Insecure	<---	Readines	.480	.135	3.565	***	A
Satisfact	<---	Optimism	.568	.080	7.098	***	E
Satisfact	<---	Innovative	.169	.050	3.396	***	F
Satisfact	<---	Discomf	-.066	.049	-1.331	.183	G
Satisfact	<---	Insecure	-.059	.057	-1.020	.308	H
Satisfact	<---	Overall TR	.120			.150	

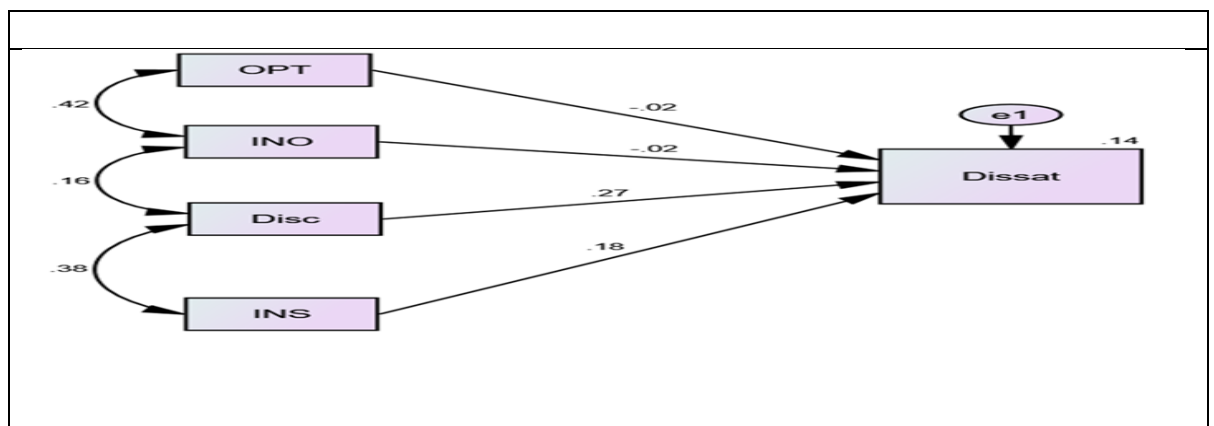
Table 5.37: Hypothesis Testing of TRI impact on Satisfaction with SSTs

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
1.TRI of customers do not influence satisfaction with SSTs	0.120	Insignificant	NO
1.a. There is no positive relationship between optimism and satisfaction with SSTs	0.485	Significant	YES
1.b. There is no positive relationship between innovativeness and satisfaction with SSTs	0.170	Significant	YES
1.c. There is positive relationship between discomfort and satisfaction with SSTs	-0.076	Insignificant	NO
1.d. There is positive relationship between discomfort and satisfaction with SSTs	-0.051	Insignificant	NO

5.7 Effect of TRI Dimensions on Service Encounter Dissatisfaction

Further, the study conducted path analysis of TRI dimensions on dissatisfaction with SSTs. Path analysis results reported (in the table: 5.38) that the influence of optimism and innovation on dissatisfaction with SST were negative as expected but statistically insignificant with estimated impacts of -.02 and -.02 respectively at a five percent significance level that failed to support H2a and H2b. Whereas, the other two dimensions –discomfort and insecurity – reported positively significant influence on dissatisfaction with estimated impact .27 and .18 that supported H2c and H2d. Overall, the findings supported the H2 of TRI model influence on dissatisfaction.

Figure 5.9: TRI to Service Dissatisfaction with Technology Encounter



[CMIM/P Value: 1.528 /0.021; GFI= 0.992; AGFI= 0.962; RMR= 0.029; CFI= 0.987; NFI= 0.966; RMSEA= 0.047]

Table 5.38: Estimated Path Analysis of TRI Dimensions on Dissatisfaction with SSTs

	Estimate	Standardized	S.E.	C.R.	P	Label
Dissat <--- OPT	-.059	-.022	.182	-.326	.745	
Dissat <--- INO	-.058	-.018	.222	-.260	.795	
Dissat <--- Disc	.617	.268	.152	4.058	***	
Dissat <--- INS	.528	.175	.196	2.697	.007	

Table 5.38.a: Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.374 ^a	.140	.125	.93520994	.140	9.566	4	235	.000

a. Predictors: (Constant), ZINS, ZOPT, ZDisc, ZINO

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.016E-013	.060		.000	1.000
1 ZOPT	-.022	.067	-.022	-.321	.748
ZINO	-.017	.068	-.017	-.256	.798
ZDisc	.269	.067	.269	4.021	.000
ZINS	.175	.066	.175	2.656	.008

a. Dependent Variable: ZDissat

Table 5.39: Hypothesis Testing of TRI impact on Dissatisfaction with SSTs

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
2. TRI of customers do not influence dissatisfaction with SSTs			Partially YES
2.a. There is positive relationship between optimism and dissatisfaction with SSTs	-0.022	Insignificant	No
2.b. There is positive relationship between innovativeness and dissatisfaction with SSTs	-.017	Insignificant	No
2.c. There is no positive relationship between discomfort and dissatisfaction with SSTs	.269	Significant	YES
2.d. There is no positive relationship between discomfort and dissatisfaction with SSTs	.175	Significant	YES

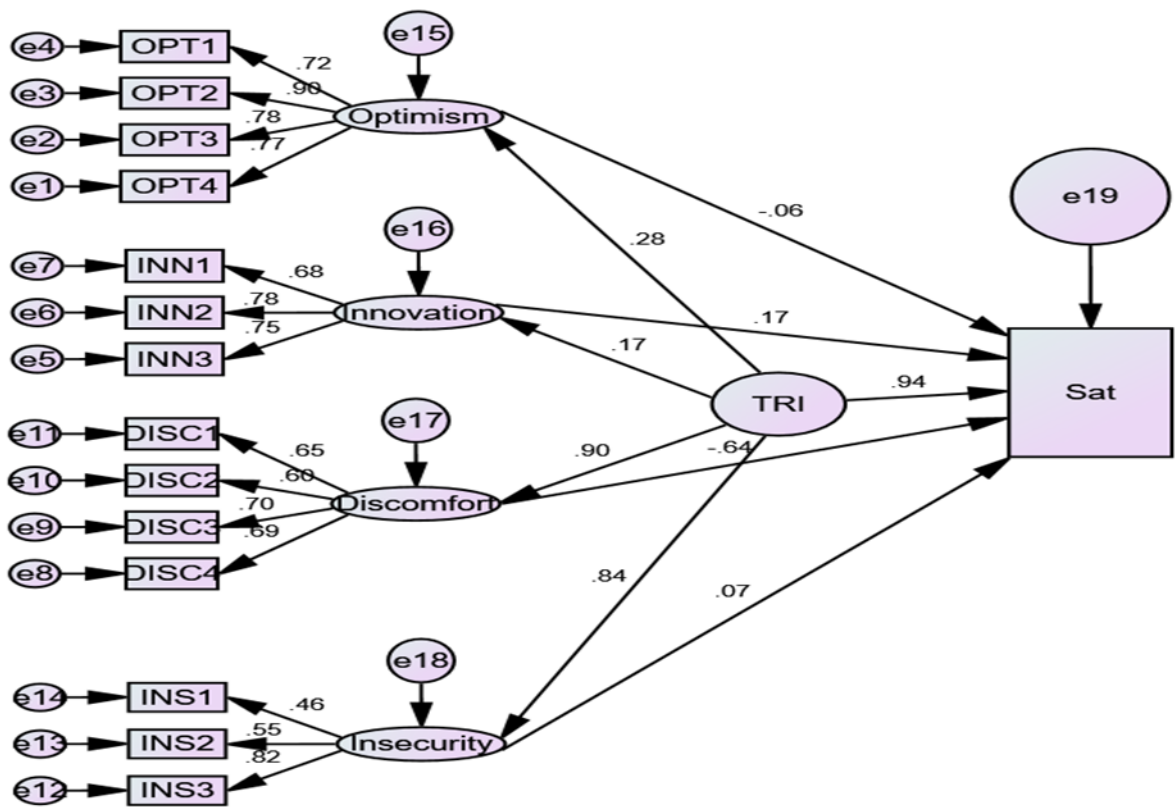
5.8 Impact of TR on Service Satisfaction with Interpersonal Encounter

The measured mean value of customer satisfaction with traditional service encounter refers that they are moderately satisfied but their technology readiness is moderately high. The study assumed that those who are technology prone will remain less satisfied with the interpersonal encounter. Here, the study measured whether consumers' technology readiness have influence on service encounter satisfaction with interpersonal service encounter. Figure (5.10) reported the measurement model and its values of service encounter with ISE. CFA was conducted first to make sure that the measures of TRI and its components were valid based on prior studies (Ghosh, 2015). Overall, good fit was attained for the measurement model (CMIM/DF = 2.82, $p = .000$; GFI = 0.912; AGFI = 0.867; RMR = .070; CFI = 0.923; NFI = 0.885; RMSEA = .076), with the only exception of the significant χ^2 ($p < .01$). However, large samples tend to produce significant χ^2 because the connection of the difference between observed and expected correlations and the significance of χ^2 is sensitive to sample size (Cole, 1987). In particular, the factor weights (loadings) and associated R² in the table indicated that all measures of TRI model and its associated components, and the impact of those components on satisfaction with SSTs has satisfactory reliability and validity.

Path Analysis Results:

Path analysis results of TRI dimensions on satisfaction with ISE are reported in table 5.38. The estimated impact of optimism (.24) and innovation (.10) didn't support H3a and H3b that means optimism has significant positive influence on satisfaction with ISE and innovation's positive influence on satisfaction with ISE was found statistically insignificant. On the other hand, reported negative but insignificant impact of discomfort (-.21) on satisfaction with ISE also failed to support the hypothesis H3c but estimated impact of security (.37) on satisfaction with ISE supported H3d at the significance level of 5 percent.

Figure 5.10: TRI to Service satisfaction with Interpersonal Encounter



[CMIM/P Value: 2.282 /0.000; GFI= 0.912; AGFI= 0.867; RMR= 0.070; CFI= 0.923; NFI= 0.885; RMSEA= 0.076]

Table 5.40: Estimated Path Analysis of TRI impact on Satisfaction with ISE

			Estimate	S.E.	C.R.	P	Label
Optimism	<---	TRI	.194	.056	3.466	***	d
Innovative	<---	TRI	.126	.066	1.911	.056	c
Discomfort	<---	TRI	.753	.126	5.998	***	b
Insecurity	<---	TRI	.791	.126	6.296	***	a
SAT	<---	TRI				***	
SAT	<---	Optimism	.307	.092	3.321	***	e
SAT	<---	Innovative	.112	.084	1.330	.184	f
SAT	<---	Discomfort	-.216	.161	-1.340	.180	g
SAT	<---	Insecurity	.347	.150	2.313	.021	h

Table 5.41: Hypothesis Testing of TRI impact on Satisfaction with ISE

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
3. TRI of customers do not influence satisfaction with Interpersonal Encounter		Significant	Partially YES
3.a. There is positive relationship between optimism and satisfaction with ISE	0.307	Significant	NO
3.b. There is positive relationship between innovativeness and satisfaction with ISE	0.112	Insignificant	Partially YES
3.c. There is negative relationship between discomfort and satisfaction with ISE	-0.216	Insignificant	Partially NO
3.d. There is negative relationship between Insecurity and satisfaction with ISE	0.347	Significant	YES

5.9 Effect of TRI Dimensions on Dissatisfaction with Interpersonal Encounter

Further, the study conducted path analysis of TRI dimensions on dissatisfaction with SSTs. Path analysis results reported (in the table: 5.42) that the influence of optimism and innovation on dissatisfaction with SST were negative as expected but statistically insignificant with estimated impacts of -.02 and -.02 respectively at a five percent significance level that failed to support H2a and H2b. Whereas, the other two dimensions –discomfort and insecurity – reported positively significant influence on dissatisfaction with estimated impact .27 and .18 that supported H2c and H2d. Overall, the findings supported the H2 of TRI model influence on dissatisfaction.

Figure 5.11: Effect of TRI Dimensions on Dissatisfaction with Interpersonal Encounter

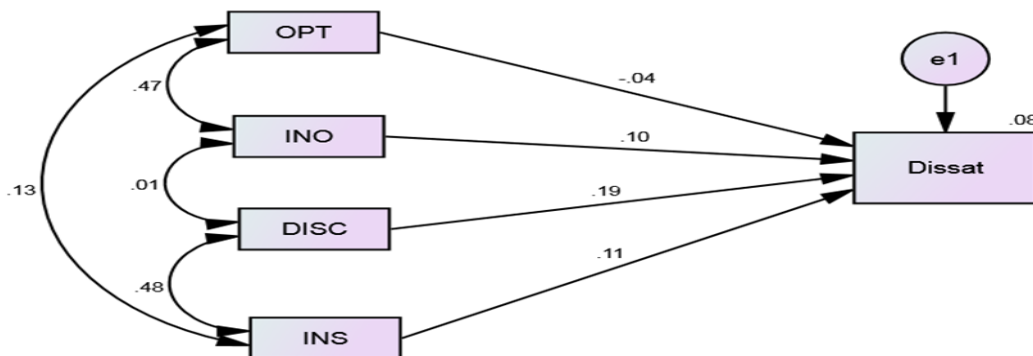


Table 5.42: Estimated Path Analysis of TRI Dimensions on Dissatisfaction with ISE

	Estimate	Standardized	S.E.	C.R.	P	Label
Dissat <--- OPT	-.100	-.043	.171	-.585	.558	
Dissat <--- INO	.261	.098	.192	1.357	.175	
Dissat <--- DISC	.497	.195	.185	2.681	.007	
Dissat <--- INS	.302	.108	.206	1.464	.143	

Table 5.43: Hypothesis Testing of TRI impact on Dissatisfaction with ISE

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
4. TRI of customers do not influence Dissatisfaction with Interpersonal Encounter		Significant	Partially YES
4.a. There is negative relationship between optimism and Dissatisfaction with ISE	-0.100	Insignificant	Partially NO
4.b. There is negative relationship between innovativeness and Dissatisfaction with ISE	0.261	Insignificant	Partially YES
4.c. There is positive relationship between discomfort and Dissatisfaction with ISE	0.497	Significant	YES
4.d. There is positive relationship between Insecurity and dissatisfaction with ISE	0.302	Insignificant	NO

5.10 Service Encounter Satisfaction – Service Loyalty Relationships

Satisfaction loyalty relationships have been measured from diverse perspectives and industries and their positive relationships are already well established. In this study, that relationship was measured from the perspective of service encounter or channeling point of view. It satisfies the query of whether different delivery channels driven satisfaction influence customer loyalty and which channel is more effective in doing so. It compared between technology-driven service encounter versus interpersonal service encounter satisfaction's impact on loyalty and found both encounters have positive influence of loyalty but technology encounter was found more influencing than interpersonal service encounter. The findings of comparative analysis are discussed below:

5.10.1 Impact of Technology Based Service Encounter

When measuring customer satisfaction and loyalty, it can be measured either assuming the concepts as uni-dimensional or multi-dimensional concept. Satisfaction is a post

purchase/consumption evaluative judgment (Sanchaz et al., 2006), one can consider it as single measure – overall satisfaction when investigating the satisfaction –loyalty link with service encounters (Iacobucci, Ostrom, Braig, and Bezzian- Avery 1996) or go for using multi-dimensional –composite measures, when exploring and understanding customer satisfaction with service encounter. This study has used both the methods for investigating the impact of encounter driven satisfaction on loyalty. Although there is a debate whether composite measures can represent the whole of overall dis/satisfaction or not, the findings of both the methods revealed the same results. First, it investigated the satisfaction impact on loyalty by considering the mean value of customers overall satisfaction item “Overall I am satisfied with the service encounter”. Second, satisfaction level was measured computing the mean value of service encounter satisfaction drivers, then investigated its impact on loyalty. In both the cases, beta values or coefficients were very close.

The study also measured customer loyalty as multi-dimensional concept. Many studies suggested that instead of measuring loyalty using single item “I am loyal to a particular service, it is better to measure loyalty from various dimensions to understand the attitudinal conviction of customer to a particular brand or service. This study measured loyalty combining various perspectives such as, repetitive purchase behavior, attitudinal view point, word-of-mouth perspective, as well as affective attachment view point.

The structural equation model as shown in the Figure 5.12, revealed that the composite variable of satisfaction with technology based service encounter defined satisfaction and all the variables have significant contribution. The path analysis also (shown in the Table: 5.44) revealed that the coefficients of all the exogenous variable were positive and significant ($p = 0.000$). The path analysis also revealed that technology-driven service encounter satisfaction explains more than 80% of customer loyalty to a particular service provider in case of brokerage services. It also demonstrates that satisfaction is the key determinant or antecedent of customer loyalty in rendering service. So the calculated coefficient of satisfaction on loyalty ($\beta = 0.81$ with P value = 0.000) satisfy the hypothesis H5 that there is positive a relationship between technology based service encounter and customer brand loyalty.

Fig 5.12: Impact of Technology-based Service Encounter Satisfaction on Service Loyalty

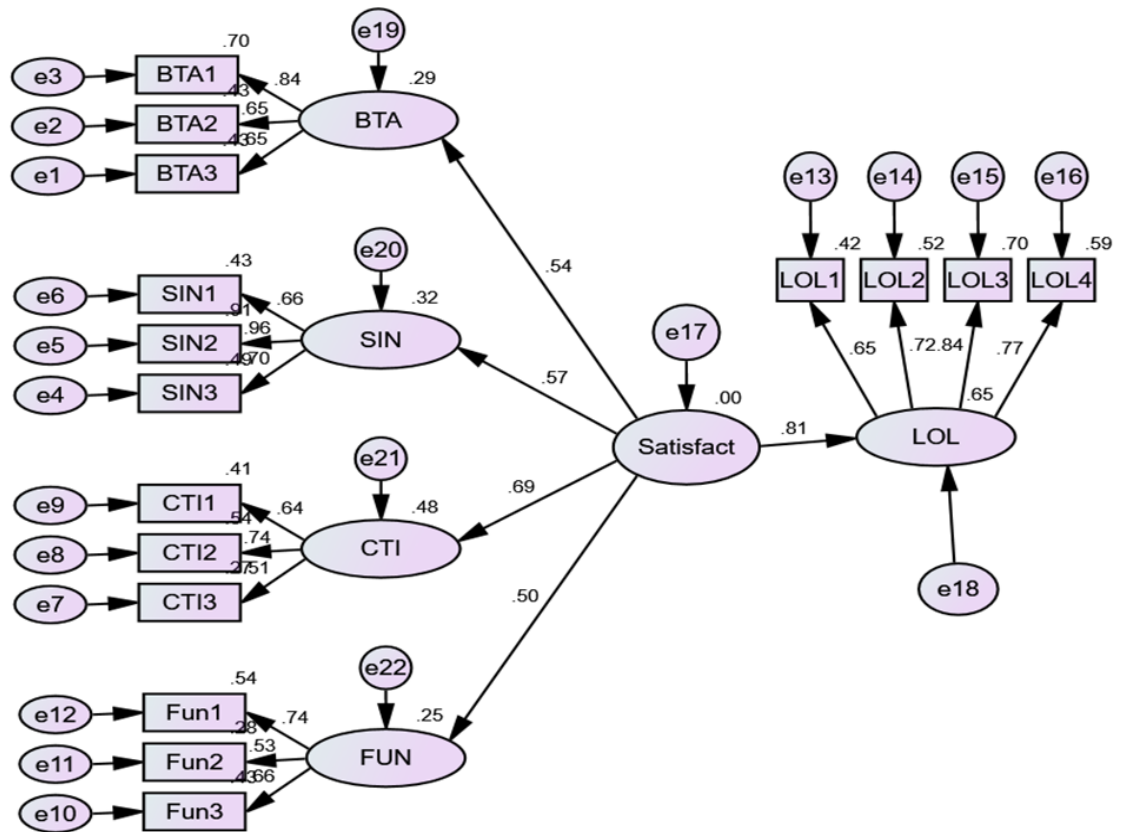


Table 5.44: Estimated Path Analysis of Satisfaction with SST on Loyalty

Dimensions of Satisfaction	Second-Order Loadings Estimates	T-values	P-values
Better than Alternative	0.54	4.32	0.000
Solve Intensified Needs	0.57	4.44	0.000
Fun	0.50	3.92	0.000
Customized Information	0.69	4.75	0.000
Consequences of Satisfaction	Structural Coefficient Estimates		P-values
Satisfaction ----Loyalty	0.81	4.75	0.000

Table 5.45: Hypothesis Testing

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
5. There is no significant positive relationship between satisfaction with SSTs and loyalty	.81	Significant	YES

5.10.2 Impact of Interpersonal Service Encounter

The study also investigated the impact of interpersonal service encounter satisfaction on customer loyalty and found positive relationship between this two constructs (shown in the Figure 5.13). Here, the path analysis results (as shown in the Table: 5.46) revealed that the composite variable of satisfaction with interpersonal service encounters do help determine overall satisfaction significantly. The coefficient of overall as well as composite satisfaction on customer loyalty ($\beta = 0.43$ with P value = 0.000) is positive and statistically significant. It demonstrates that customer satisfaction in interpersonal service encounter is one of the strong determinants of customer loyalty and this finding satisfy the hypothesis H6 that there is a positive relationship in between interpersonal service encounter satisfaction and customer loyalty.

Fig 5.13: Impact of Interpersonal Service Encounter Satisfaction on Service Loyalty

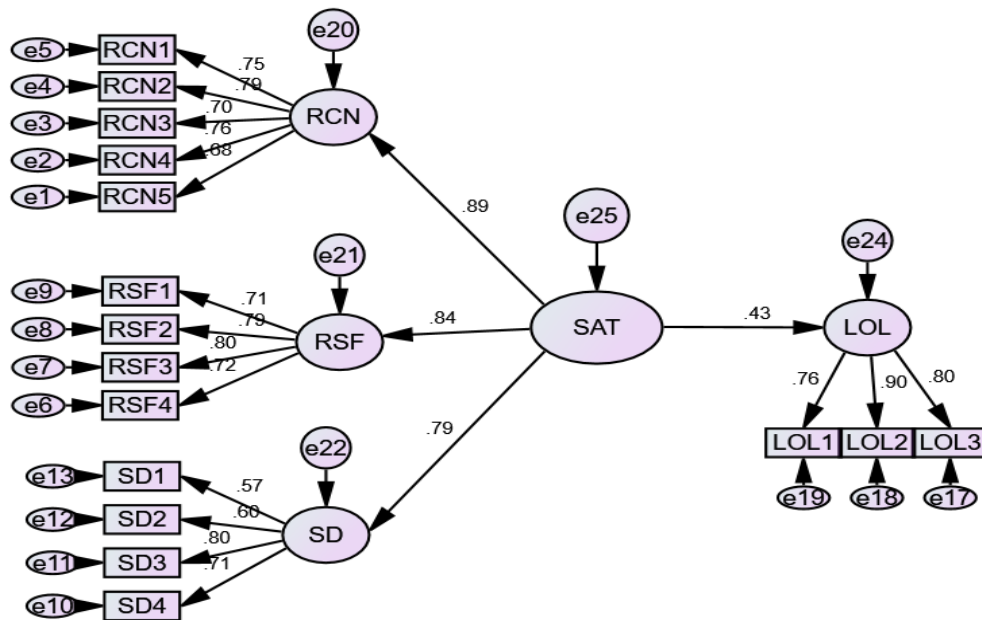


Table 5.46: Estimated Path Analysis

Dimensions of Satisfaction	Second-Order Loadings Estimates	T-values	P-values
Respond to Needs Requirement	0.89	2.32	0.020
Response to Service Failure	0.84	4.04	0.000
Spontaneously Delighted	0.79	4.92	0.000
Consequences of Satisfaction	Structural Coefficient Estimates	P-values	
Satisfaction ----Loyalty	0.43	6.36	0.000

Table 5.47: Hypothesis Testing

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
6. There is no significant positive relationship between satisfaction with ISE and loyalty	.397	Significant	YES

The comparative study as shown in Figure 5.13 and 5.14 demonstrate that the impact on customer loyalty of customer satisfaction with technology encounter services is stronger than that of satisfaction with human interface services (standardized coefficient of 0.81 versus 0.43 respectively). This implies that customers tend to have more loyalty to technology encounter if the firms implement good technology based services and take good and sincere care of technology failure and customer driven failure in technology encounters than to firms provide services with interpersonal encounters. Probably, this is because traders in stock trading are relatively young, highly educated, employees and engaged in other livelihood professions, and probably they are getting use to with technology specially information technology for solving their day to day livelihood problems. It might also be the ever changing personality of individuals, such as they are becoming self-centered, individualistic, prefer to be self-reliant, like to perceive the trading as fun or might be the perceptual gap between service providers and the service receivers. On the other hand, still a significant percentage of traders love trading via interpersonal or human encounters and find this medium more comfortable, reliable and hassle free. Another reason of their preference to human encounter is their long-term relationships with the service providers in the trading floors. Considering the customers preference of both the methods of trading, brokerage firms should devise strategy of delivering services through both the encounters in order to enhance market share and customer retention.

As individuals orientation to technology has significant role their preference to service encounter, the next section presents the results of customer orientation toward technology and its moderating impact on the relationships between service encounter satisfaction and customer loyalty.

5.11 The Moderating Effect of Technology Readiness of Customers

The third relationship examined in this study is the moderating effect of customer attitudes toward technology, the TR impact on the service encounter satisfaction – loyalty link. As it is already explained in the methodology section how individuals' technology orientation is measured in this study, here the study demonstrates the results of moderating effects of individuals' technology readiness using personality based technology orientation measurement scale TRI on customer satisfaction – loyalty link in stock trading from Bangladesh perspective.

As the study has already measured individuals' technology readiness, as discussed in the previous section, and found insignificant influence of individuals' TR on customer encounter satisfaction, it is imperative to know whether TR strengthen or weaken the link between satisfaction and loyalty.

This study follows Baron and Kenny (1986)'s method of analyzing moderating effects by calculating the product of an independent variable, service encounter satisfaction, and a factor, namely technology readiness of customers, that moderates the satisfaction-loyalty relationship. To analyze the moderating effects of technology readiness of customers, the study ran both regression and path analysis through AMOS graphics that tested the main effect of service encounter satisfaction and the interaction of the satisfaction and technology readiness of customer on customer loyalty. The direction of the interaction effect explains how customers with a given level of satisfaction become more or less loyal depending on their TR. A significant regression coefficient on the interaction would confirm the moderating effect of technology readiness of customers on the satisfaction – loyalty link. A good number of hypothesis have already been proposed based on existing theory and the tested results of those hypothesis are discussed below separately of either encounter:

5.11.1 Effect with Technology based Service Encounter

The regression analysis of moderating role of TR on satisfaction - loyalty link with technology encounter (shown in Table: 5.48) revealed that individual's TR influences his/her satisfaction – loyalty link at 5 % level of significance. Thus, it satisfies the hypothesis H7 that implies that TR moderates the relational link between encounter satisfaction and loyalty. However, the path analysis of the four dimensions of TR revealed different outcomes. Optimism weaken the relational link (as shown in Table: 5.49 and Figure: 5.18) between satisfaction and loyalty whereas it was assumed that those who have

positive attitude toward technology will be more satisfied with technology encounter and will be more loyal. Probably, it happens because the individual's positive attitude toward technology, especially, optimism of technology users is not strong enough to strengthen the service encounter satisfaction – loyalty link. Thus, it fails to satisfy the hypothesis H7a. It also failed to satisfy the hypothesis 7b that was made assuming technology users are very innovators. Instead of strengthening the relational link it rather weakens the link. It means those who are technology prone will become more loyal to technology based service providers but finding failed to satisfy the hypothesis. However, two other dimensions - discomfort and insecurity- supported the hypothesis 7c and 7d that refers these two dimensions significantly weaken the relational link between satisfaction and loyalty as expected.

Table 5.48: Moderating effect of TR on Technology-based Service Encounter Satisfaction – Loyalty Link

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.389 ^a	.151	.137	.92905979	.151	10.473	4	235	.000

a. Predictors: (Constant), Sat_x_Ins, Sat_x_Opt, Sat_x_Dis, Sat_x_Ino

Figure 5.14: Satisfaction < Optimism > Loyalty

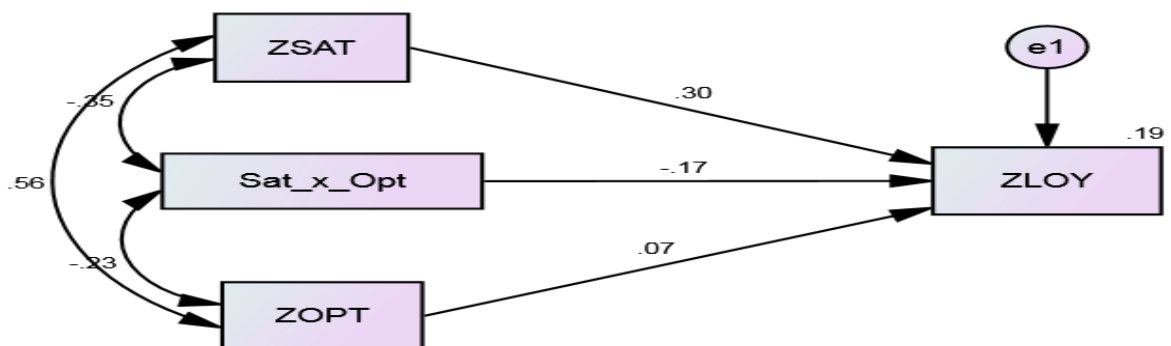


Table 5.49: Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.298	.298	.073	4.056	***	
ZLOY <--- Sat_x_Opt	-.163	-.172	.059	-2.754	.006	
ZLOY <--- ZOPT	.070	.070	.071	.993	.321	

Figure 5.15: Satisfaction < Innovation > Loyalty

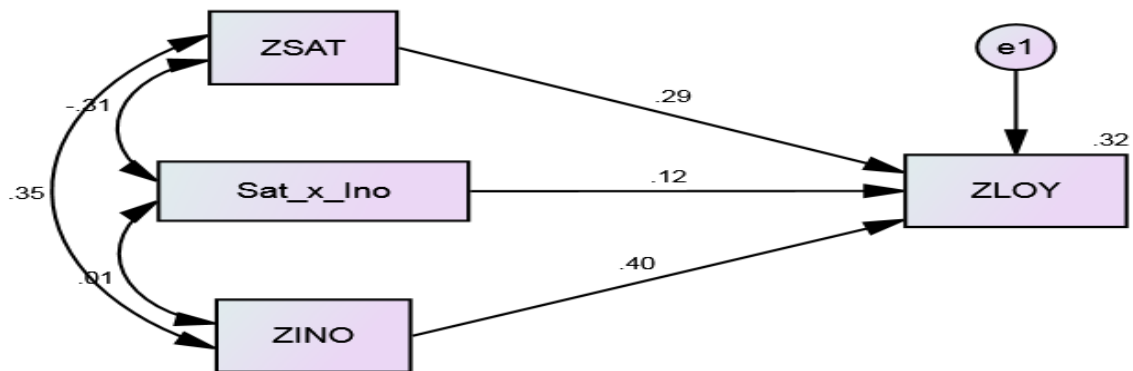


Table 5.50: Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.294	.294	.060	4.874	***	
ZLOY <--- Sat_x_Ino	.119	.122	.055	2.168	.030	
ZLOY <--- ZINO	.399	.399	.057	6.946	***	

Figure 5.16: Satisfaction < Discomfort > Loyalty

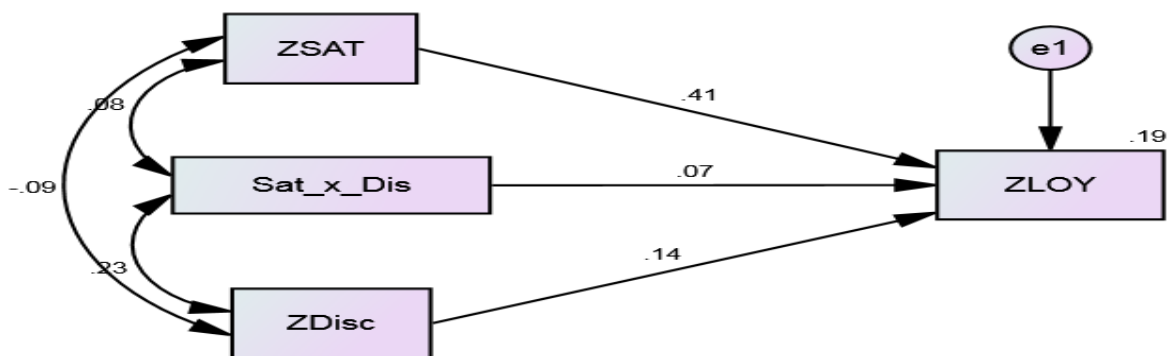


Table 5.51: Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.406	.406	.059	6.889	***	
ZLOY <--- Sat_x_Dis	.071	.067	.063	1.120	.263	
ZLOY <--- ZDisc	.143	.143	.060	2.378	.017	

Figure 5.17: Satisfaction < Insecurity > Loyalty

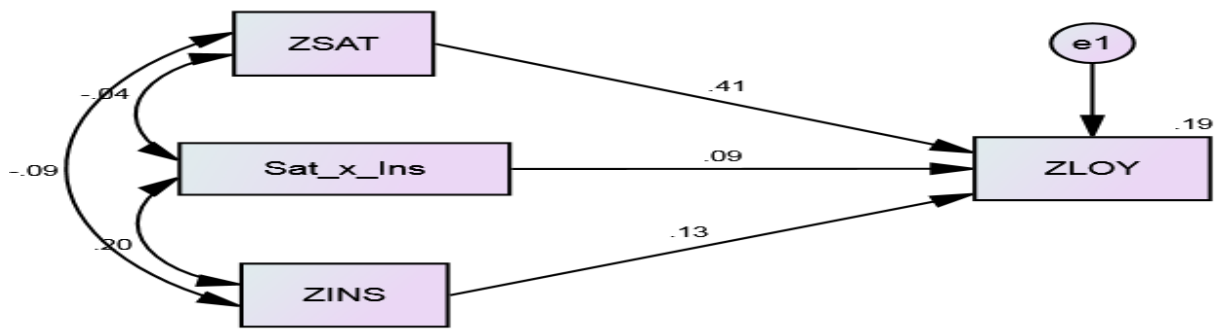


Table 5.52: Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.412	.412	.059	7.039	***	
ZLOY <--- Sat_x_Ins	.100	.093	.064	1.570	.116	
ZLOY <--- ZINS	.129	.129	.060	2.166	.030	

Table 5.53: Hypothesis Testing

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
7. There is no moderating effect of TRI of customers on the relational link between satisfaction with SSTs and loyalty		Significant	Partially YES
7.a. Optimism weaken the relational link between satisfaction and loyalty	-0.293	Insignificant	Partially NO
7.b. Innovativeness weaken the relational link between satisfaction and loyalty	0.294	Insignificant	NO
7.c. Discomfort strengthen the relational link between satisfaction and loyalty	0.131	Significant	YES
7.d. Insecurity strengthen the relational link between satisfaction and loyalty	0.104	Significant	YES

5.11.2 Effect with Interpersonal Service Encounter

Customer perceptions toward technology also have impact of customer evaluations of human services by firms. Individuals who have positive attitude toward technology and love to use technology frequently are likely to decrease the positive relationship of satisfaction with human service encounters and customer loyalty to service firm. On the other hand, individuals with higher level of discomfort and insecurity of using technology

tend to strengthen the positive relationship of satisfaction with interpersonal service encounters and customer loyalty to service firms. As shown in Figure 5.22, both favorable variables –optimism and innovativeness and inhibitor variable- insecurity positively influence loyalty, whereas discomfort has insignificant effect on loyalty. Overall regression analysis finding (shown in Table: 5.54a) revealed that individuals technology readiness moderate the interpersonal service encounter satisfaction and customer loyalty link. The results of path analysis for testing the hypothesis of moderating effect of each of the dimensions of TR model on interpersonal service encounter and loyalty demonstrated that both optimism and innovativeness of individual toward technology weaken the relational link as expected, thus it supports the hypothesis H8a and H8b. On the other hand, both inhibitor variables –discomfort and insecurity, moderate but do not strengthen the relational link, thus failed to satisfy the hypothesis H8c and H8d. This posits that technology prone people are more technology fan and prefer technology encounter in service delivery and exhibits less loyal to the firms provide services through human encounters.

In summary, the study concludes that all the hypothesis regarding the moderating effects of customers' technology readiness on customer service encounter satisfaction and loyalty relationships are not supported as assumed. Especially, the optimism of respondents who trade via either technology encounter or human encounter was very positive but weaken the relationship between service encounter satisfaction and loyalty. This result posits that both categories of respondents are young, highly educated, professional and have very positive attitudes towards the benefits of technology particularly, information technology but the use of technology isn't very pervasive yet in all kinds of business and consumption activities. Although, the result satisfies the hypothesis that higher level of optimism of respondents toward technology weaken human encounter satisfaction and loyalty link, it cannot be concluded that more the users will become technology prone will avoid human encounter or will become more loyal to the firms that offer services via technology encounters.

Respondents who love to be technology innovators are likely to decrease the degree of positive relationship of satisfaction with human service encounters and customer loyalty to the service firms. The results show that both the respondent groups are moderate technology innovators (mean value 3.79 (online users) and 3.43 (offline users) respectively) and their positive attitudes toward technology moderate i.e., weaken the

relationship of satisfaction and loyalty in both technology-based and interpersonal service encounters. It infers that it is not only the respondents technology orientation that drive them to use technology but also the factors such as, their culture, motivation, negative perception, long-term orientation of interpersonal encounter also influence the adoption of technology and the satisfaction loyalty link.

Further, negative attitudes of customers toward technology, especially insecurity, also significantly moderates the positive relationship of satisfaction and loyalty in both types of service encounter. It demonstrated that customers who have high levels of insecurity tend to decrease the degree of positive relationship of technology-based service satisfaction-loyalty but increase the degree of the impact of interpersonal service satisfaction on customer loyalty. Results supported the hypothesis that the impact on customer loyalty of satisfaction with technology-based service encounters is weaker for customers who have high levels of insecurity toward technology. Also in the interpersonal service encounter, the impact of overall satisfaction with human service on customer loyalty is weaker for customers who have high level of innovativeness optimism toward technology.

Overall, results partially supported the hypotheses that TR moderates the relationships of customer satisfaction with service encounters and customer loyalty, as presented in Table 5.53 and 5.58 respectively.

Figure 5.18: Impact of TRI dimensions on Loyalty

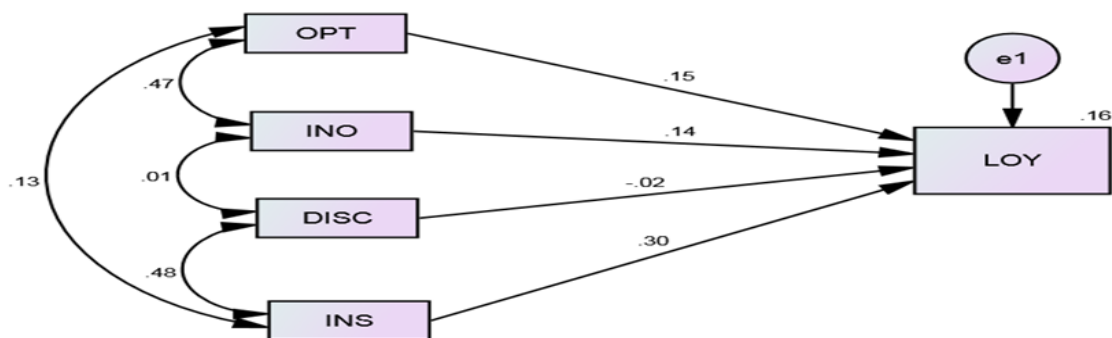


Table 5.54: Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
LOY <--- OPT	.139	.149	.065	2.132	.033	
LOY <--- INO	.152	.142	.073	2.062	.039	
LOY <--- DISC	-.022	-.021	.071	-.306	.759	
LOY <--- INS	.334	.297	.079	4.232	***	

Table 5.54a: Regression Analysis						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.425	4	3.106	3.228	.013 ^b
	Residual	215.575	224	.962		
	Total	228.000	228			
a. Dependent Variable: ZLOY						
b. Predictors: (Constant), Sat_x_Ins, Sat_x_Ino, Sat_x_Disc, Sat_x_Opt						

Figure 5.19: Satisfaction < Optimization > Loyalty

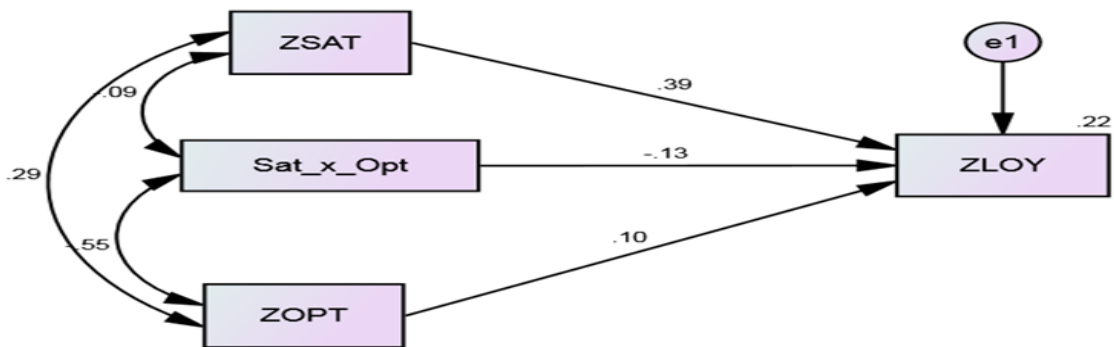


Table 5.55 Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.394	.394	.061	6.426	***	
ZLOY <--- Sat_x_Opt	-.094	-.125	.053	-1.788	.074	
ZLOY <--- ZOPT	.097	.097	.073	1.329	.184	

Figure 5.20: Satisfaction < Innovation > Loyalty

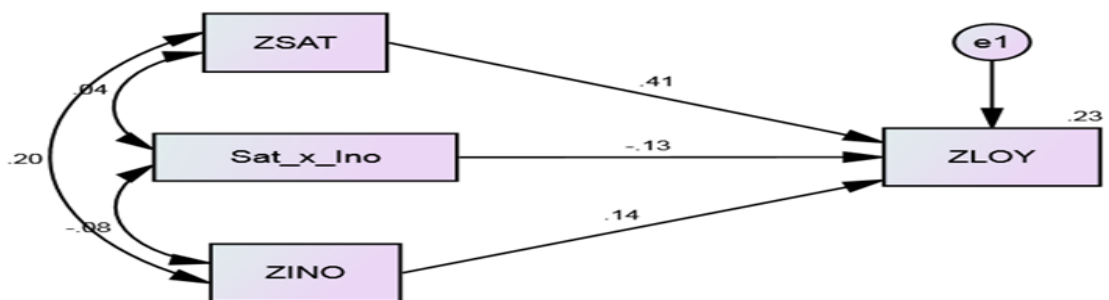


Table 5.56 Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.410	.410	.060	6.884	***	
ZLOY <--- Sat_x_Ino	-.115	-.128	.052	-2.187	.029	
ZLOY <--- ZINO	.144	.144	.060	2.415	.016	

Figure 5.21: Satisfaction < Discomfort > Loyalty

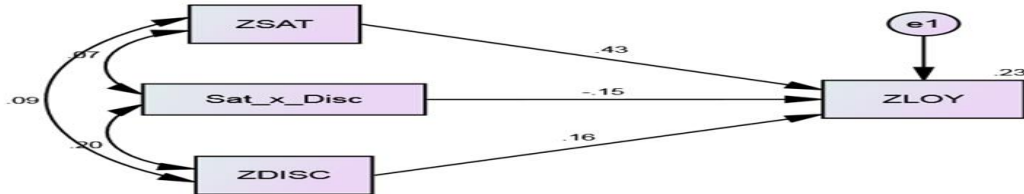


Table 5.57 Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.429	.429	.059	7.324	***	
ZLOY <--- Sat_x_Disc	-.124	-.147	.050	-2.469	.014	
ZLOY <--- ZDISC	.163	.163	.060	2.737	.006	

Figure 5.22: Satisfaction < Security > Loyalty

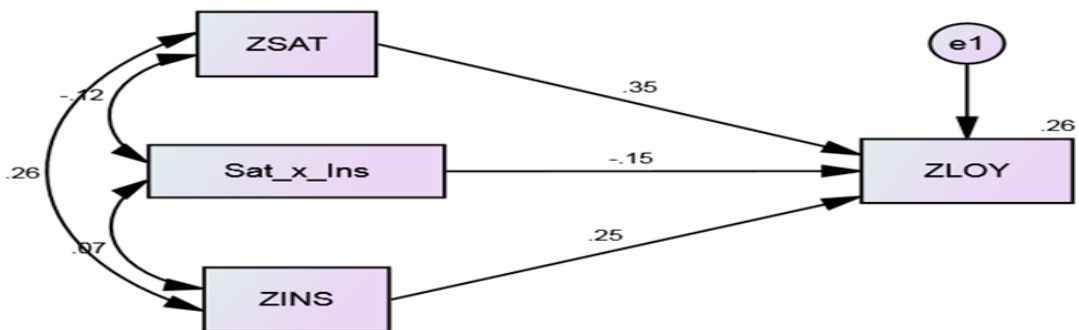


Table 5.58 Estimated Path Analysis

	Estimate	Standardized	S.E.	C.R.	P	Label
ZLOY <--- ZSAT	.350	.350	.060	5.882	***	
ZLOY <--- Sat_x_Ins	-.115	-.146	.045	-2.538	.011	
ZLOY <--- ZINS	.255	.255	.059	4.297	***	

Table 5.59: Hypothesis Testing of Moderating Effect

Null Hypothesis	Beta (β)	Sig. (P Value < 0.05)	Rejected
8. There is no moderating effect of TRI of customers on the relational link between satisfaction with SSTs and loyalty		Significant	Partially YES
8.a. Optimism strengthen the relational link between satisfaction and loyalty	-0.125	Insignificant	YES
8.b. Innovativeness strengthen the relational link between satisfaction and loyalty	-0.128	Significant	NO
8.c. Discomfort weaken the relational link between satisfaction and loyalty	-0.147	Significant	NO
8.d. Insecurity weaken the relational link between satisfaction and loyalty	-.146	Significant	NO

5.12 Summary of Hypothesis Testing of Conceptual Model

The proposed hypotheses of the whole study tested in different sections following necessary statistical tools and techniques are summarized below for giving a comparative look to impact of technology-based service encounter versus interpersonal service encounter satisfaction on customer brand loyalty at a glance:

Fig: Technology-based Service Encounter Satisfaction and Loyalty Link

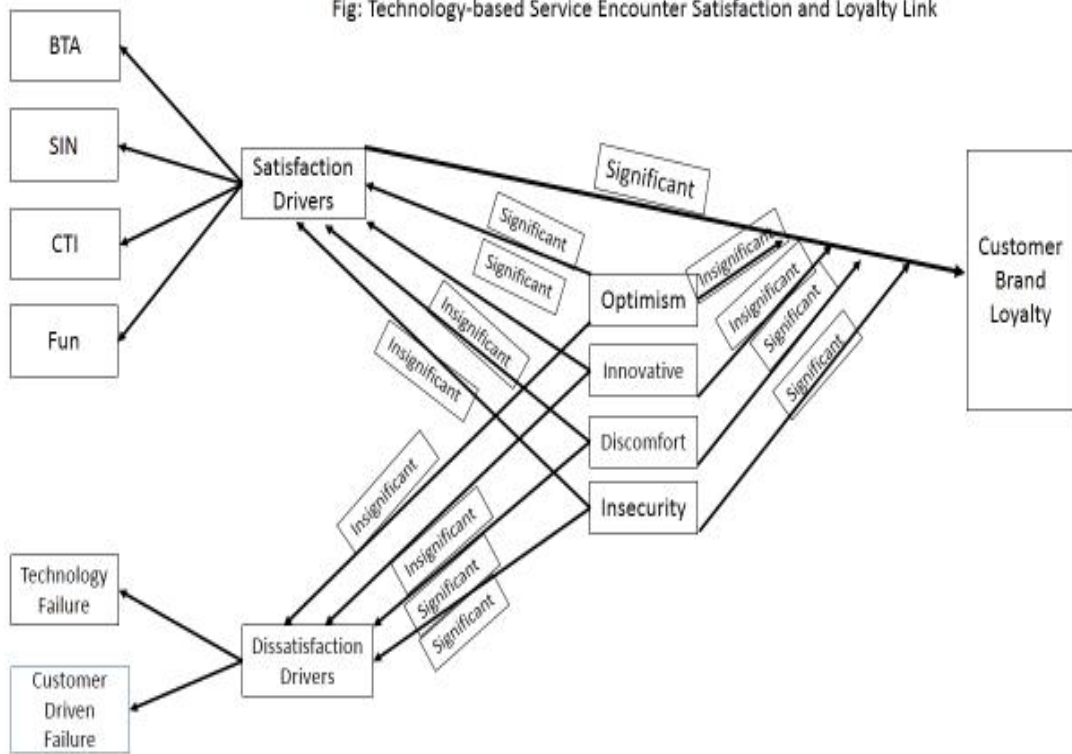
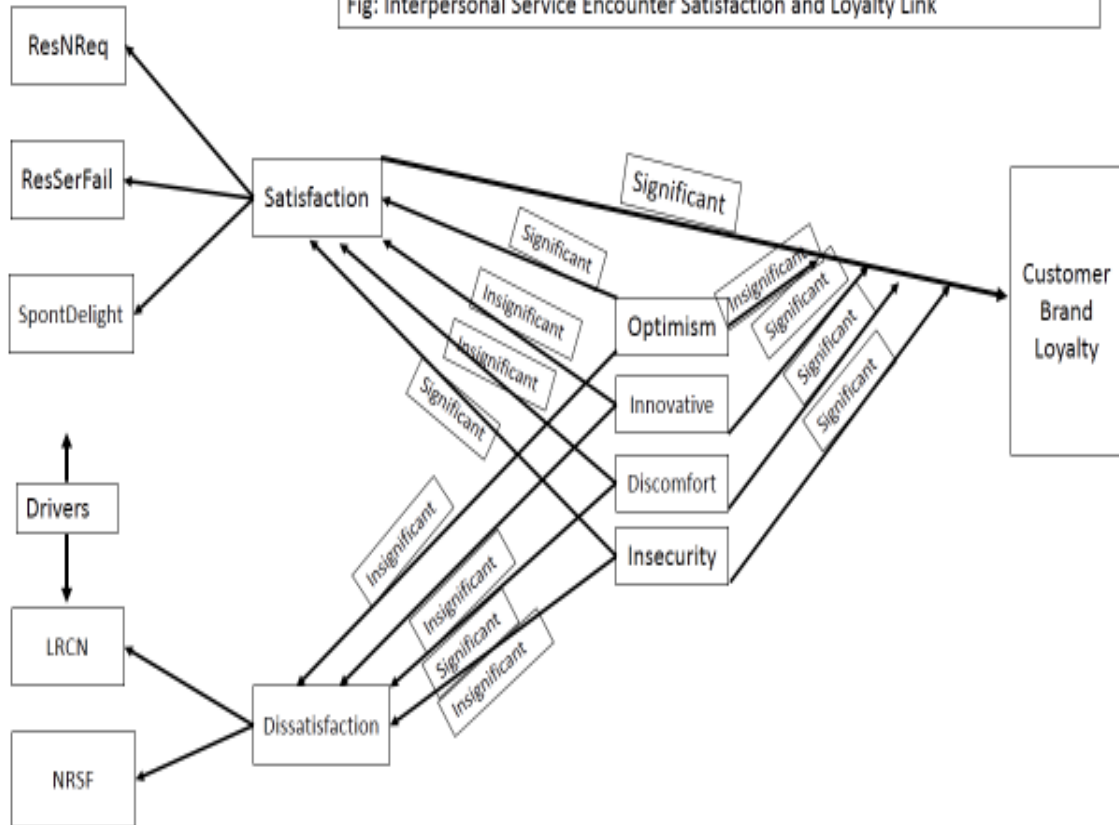


Fig: Interpersonal Service Encounter Satisfaction and Loyalty Link



CHAPTER 6

Conclusions and Recommendations

This chapter presents conclusions and recommendations of the study. However, this study also suffered from some limitations which are described in this chapter followed by suggestions regarding future research directions. Based on the results of this study, managerial, social as well as academic implications are shown, particularly some critical marketing recommendations for service firms. However, much of the situation is similar for any high level service which implements SSTs, so the recommendations have broader application.

6.1 Conclusions

This study explored customer satisfaction with service encounters, either technology-based or interpersonal, and their impact on customer loyalty. Initially, the results of in-depth interviews identified drivers of customer satisfaction and dissatisfaction with service encounters in Bangladesh Stock Brokerage firms. Important to note that, it is the only service sector in Bangladesh that offers complete services in alternative encounters either interpersonal or technology-based. Results show that customers and service providers determine sources of customer dis/satisfaction differently, depending on whether the service encounter is technology-based or interpersonal. Further, customer satisfaction with either type of encounter depends partly on individual's technology proneness versus preference for human interaction.

The results demonstrated that the functional/extrinsic attributes and affective/intrinsic attributes were both important drivers of whether the SST implementation will be successful from customers' perspective and help in achieving organizational goal. These drivers were also found important in prior consumer research such as, technology usage (e.g., Meuter et al., 2005), predictive power of consumers' acceptance behavior toward using SSTs (Kim and Qu, 2014) and satisfaction with SSTs use (e.g., Chathoth, 2007). In addition, the functional attributes played a greater role in driving consumers' evaluation of their satisfaction with using SSTs.

The drivers of customer satisfaction with interpersonal service encounters found in this study are mostly consistent with the results of previous studies. They include (1) response to customer needs and requests, (2) response to service delivery failures, and (3) employees spontaneously delight customers. The qualitative results also generally supported the

previous results that the reasons of customer dissatisfaction with interpersonal service encounters are largely the opposite side of those about satisfaction. Thus, sources of dissatisfaction with interpersonal services fall into three categories which are the failure of customer satisfaction drivers with human interaction services.

In the case of technology-based service encounter dis/satisfaction drivers/sources, with some exceptions, most of the findings of qualitative research are consistent with previous results. Lack of human interaction is a significant driver of customer dissatisfaction with SSTs. The major sources of dissatisfaction with technology based service encounters are technology failure and customer driven failure. On the other hand, sources of customer satisfaction in this category found are better than alternative, solved intensified need, did its job, and fun.

As it is not in person interaction, company representatives should have the knowledge in designing Web site and backstage services to satisfy customer quarry. They should understand customer-specific needs, have the capacity to handle problems that arise, and address customer complaints in a friendly manner. It is also very vital for a firm to perform the service correctly by executing transactions accurately, maintaining customer records without error, and executing orders promptly. Moreover, companies are well advised to design a user-friendly Web site that provides needed menu options and functions. The service information and content should be well-organized and structured, and not difficult to follow. A firm should adopt measures to assure customers that their personal information will be kept confidential and online transactions are safe.

In addition, the exploratory results of qualitative research revealed that customer attitude toward technology have some impact on customer satisfaction, particularly with technology-based service encounters. For instance, the respondents who generally like technology are much more likely to have positive attitudes toward online trading and are even more satisfied with technology interface services, but somewhat more dissatisfied with interpersonal services.

The quantitative work confirmed the pilot work that the consumer attitude toward technology has a positive impact on customer satisfaction with technology-based service encounters. The greater the readiness of customers to use technology, the more satisfaction they have with technology-based service encounter. According to Parasuraman's (2000) terminology of technology readiness of customers, customers who have more technology readiness, for instance, optimism, tend to have higher satisfaction with technology-based encounters. Further, technology proneness can affect satisfaction with interpersonal

service encounters. Respondents who are technology innovators or customers who have more innovativeness tend to be more dissatisfied with interpersonal service encounters. For the negative side of TRI, respondents who distrust the ability of technology (Insecurity) not only tend to have higher dissatisfaction with technology-based service encounters, but also tend to increase satisfaction with interpersonal service interface. The study also confirmed that customer satisfaction with service encounters, both technology-based and interpersonal, has significant positive impact on customer loyalty. In general, the results of both qualitative and quantitative work of this study confirmed that customer psychographics have significant impact on this customer satisfaction-loyalty link. Particularly, the willingness of customers toward using technology, or the technology readiness of customers, moderates the relationship between customer satisfaction with service encounters and customer loyalty. The positive relationship of satisfaction with technology-based service encounters and customer loyalty is significantly decreased if customers are not ready to embrace technology, especially when customers who distrust technology interact with technology-based service encounter. On the other hand, insecurity concerning the concept of using technology tends to increase the degree of the impact of interpersonal service encounter satisfaction on customer loyalty. In contrast, the degree of positive relationship between customer satisfaction with interpersonal service encounters and customer loyalty is decreased for customers who are more ready to adopt technology, technology innovators. However, for the customers who have positive attitude toward technology in terms of optimism, the positive link of interpersonal service encounter satisfaction and customer loyalty is not weakened, rather is strengthened. Finally, it can be summarized that solving intensified needs of customers and responding quickly to service failure are found have most significant influence on customer satisfaction with interpersonal service encounter, and failure to respond to service failure cause dissatisfaction. On the other hand, Did its job, spontaneous response are strong satisfiers in service encounter with SSTs, and technology failure and customer driven failure lead customer dissatisfaction. It refers that the more useful, time-saving, accurate, and reliable the SSTs is, the more satisfactory it is. Consumers are likely to be more satisfied with SSTs if they believe that using the system will increase their performance and productivity (Wang et al., 2008). Moreover, continuous use of online services may indeed necessarily have a connection with customer satisfaction in certain application contexts. Having control over the system of trading, that is whenever one wants to trade

with whatever quantity without the dependency on service provider, and avoiding scope of service personal can enhance users' satisfaction with SSTs. Besides, pleasure seeking tendency of individual might contribute positively customer satisfaction with SSTs. For example, trading via internet might be a fun to some segments of customers who are technology friendly and savvy. Customized information service facility also works as a satisfier with SSTs. With the continuous improvement in technology, it has become easier to deliver individual level customized service and information through SSTs. The present study findings support the propositions in retail investment trading services in Bangladesh. However, this satisfaction level might be affected negatively if the system doesn't work properly. It means that individual uses SSTs for benefits of saving time, reduce hassles of interaction with service personnel, and having fun, but technological and process failure of delivering services not only reduce satisfaction but can instigate dissatisfaction level of users and they can avoid using SSTs. It might indicate that the major consideration of system design is to promote a customer's satisfaction towards SSTs service continuance by focusing on profitability to have a friendly usage experience and increase customer's efficiency and performance. In other words, an important necessary for the success of SSTs should ensure that customer' experience-via the interface- satisfy both sensory and functional needs.

6.2 Limitations

In general, this study presents a number of significant results, still, the study is subject to several caveats that need to be mentioned. The impact of technology-based service encounters on customer loyalty in this study is mainly focused on the role played by customer satisfaction with the service encounters. However, other issues also have an impact on customer loyalty when service firms have implemented technology-based service. For instance, switching costs- both economic and psychological, may occur when customers would like to switch from the current service firm to another service firm that provides technology-based service. These switching costs could affect customer loyalty. Further, the image of service firms which start implementing technology-based services might change customer mindsets and this might impact customer loyalty. However, the initial and critical impact of customer satisfaction with technology based service encounters on customer loyalty is the main topic investigated in this research, and it didn't include switching costs. Moreover, customer loyalty can be perceived from its different

types point of views and measured using different constructs (Dick & Basu, 1994; M.A.. Jones, Mothersbaugh, & Beatty, 2000; Oliver, 1999; Sweeney & Soutar, 2001). Although, the study adopted multiple dimensional measures for measuring loyalty from repeated purchase behavior point of view, other measurement versions –attitudinal loyalty- may yield different results.

Second, this study was conducted in the context where the level of technology adoption is not concentrated. Particularly, customer in Bangladesh have long experiences with human services rather than technology interface services, so the results may not be generalizable to respondents in other contexts that have longer experience with technology based services. Especially, on issues of consumer attitude toward technology or technology readiness of customers, results are quite likely to differ across countries that have different levels of technology adoption by respondents.

Further, the borrowed measures of technology readiness from Parasuraman's (2005), TRI were modified through the pilot work with experts. They were tested on a small sample with achieved acceptable reliability. Nevertheless, the adopted measures resulted in somewhat less reliability than might be hoped for on TRI dimensions among typical respondents in the surveys. However, this study provides moderately significant findings anyway representing the impact of technology-based service encounters on customer loyalty, particularly the influence of technology readiness of customers at the early stage of providing technology services in the emergent market contexts.

Third, only one high involvement service is investigated. Other high or low contact services are likely to generate different results, especially regarding the effect of customer attitudes toward technology on customer satisfaction with service encounters. For instance, interpersonal service encounters are not critical for many low involvement services. Although the investigation of one specific context among the high involvement services might limit the generalizability of the findings, the results of the study revealed that the technology-based service encounter satisfaction has significant positive impact on customer loyalty, but less than the impact of satisfaction with interpersonal services. In addition, the positive impact is moderated by customer attitudes toward technology.

Besides, this study investigated specific to the business-to-consumer context. The impact of technology-based service encountered on customer loyalty might differ on some details if one investigated business-to-business contexts, since the nature of customers are somewhat different.

According to the cross-section investigation of this study, the results might be limited to the time of research operations, for example, at an early stage of technology-based service adoptions might show different impacts on customer loyalty.

6.3 Implications / Recommendations

No doubt the comprehensive and timely study findings will have major significant strategic as well as academic implications. The implications will be seen from several viewpoints followed by necessary recommendations for managers, specifically for the service firms which have been providing or intent to provide technology-based service encounters. It is important to note that though the penetration rate of technology specially information technology is very high, but the applications of IS in business transactions, especially in B2C, and its acceptability is still in its rudimentary stage with some exceptions, such as online banking, e-banking, e-ticketing, e-trading etc. Besides, historically, Bangladeshi are strongly associated with human encounter rather than technology, and still, they consciously and unconsciously like to avoid technology interfaces. However, a positive attitude is observed among new generation to technological interfaces in any form of transactions, and it is growing very rapidly.

Any good piece of research starts with a question or a problem in a researcher mind and the research is conducted to propose possible alternative solutions. In doing so, the research makes diverse contribution in different areas of interest. The present study is also conducted with the intensions of making numerous contribution. The implications of this research outcome can be analyzed from the following perspectives:

6.3.1 Theoretical Implications

The research was started with a practical research gap. The influence of SSTs has dramatically changed the way how services are developed (Kim and Qu, 2014). To answer a call for research to explore how the subfields of information technology, service operations, and service marketing jointly affect the overall service system (Ostrom et al.,2010), this study makes an important connection between technology literature and service experience research by adopting theories and models from consumer research to explain consumers' subjective evaluation of experience of using SSTs in replace of human encounter and its impacts in different cultural perspective. Previous studies have focused mainly on the evaluation of alternatives, purchase decision, post-purchase behavior, and

technology adoption (Law et al., 2014; YeeSum, 2016) in western cultural settings. This study developed scales of measuring dis/satisfaction of using SST in service marketing, a model of assessing influence of customers' technology readiness on satisfaction and the moderating role of individual's technology readiness on satisfaction loyalty relationship in Bangladeshi cultural perspective. With a great number of firms adopting SSTs, the question on SSTs today is not so much whether companies will adopt them, but more specifically how these technologies are adopted and what impact they will have on the customer experience. The framework and results make a significant contribution to the scholarly understanding of the drivers that influence consumers' satisfaction with SSTs. This model adds the explanatory power of the intrinsic benefits of SSTs and proposes a bi-dimensional conceptualization of SSTs experience as perceived by customers.

The bi-dimensional conceptualization of SST usage experience establishes a more complete theoretical framework governing consumers' satisfaction with SSTs. Prior literature appears to predominantly focus on impacts of functional attributes, such as reducing waiting time, saving cost (e.g., Weijters et al., 2007) and improving satisfaction and commitment (e.g., Beatson et al., 2006). The impacts of intrinsic attributes of SSTs were argued but have not been systematically examined (Kim et al., 2012). Therefore, this study examined both the extrinsic and intrinsic attributes of SSTs to understand their respective impact on satisfaction. It refers that consumers' satisfaction with SSTs was influenced by attributes beyond the functional level, but the role of functional attributes were found more dominating than intrinsic attributes as dis/satisfaction drivers in consumers' evaluation of SSTs. However, it can be inferred that the intrinsic attribute of SSTs such as fun, has the power to significantly enhance consumers' satisfaction with SSTs.

6.3.2 Social Implications

Interaction is the essence of human lives. It gives the meaning and rhythm of living. In human civilization there is always the stuff of life, meaning the food, the water, the shelter, and the clothing. But interactions are even more essential to human life because we are social animals (Fisk, 2016). Human interactions are the essence of human civilizations. Without interactions with other human beings, life would not be worth living. Sociologists describe five essential institutions of human society: The family, education, government, economy, and religion (Fisk, 2016). The family is the most essential service organization

in human history. The service economy was started by the family long before money was invented. The word service comes from the Latin “Servus” which means slave, servant, or serf. But still today, service work is not as well respected as it should be. It is time for a change. Service based economy has been growing rapidly. It is now imperative to look at the improvement of culture where interactions during service creation is highly respected. This interaction can be in human encounter or through the adoption of technology. The present study has focused on identifying the customers’ preference of mode of interactions and found that both the interaction modes are welcomed by the customers. But it depends on how the interaction is made, how comfortable and accessible the mode is and how the encounter relationship is maintained. This finding directs that in order to maintain loyal customer base a positive relationship has to be developed between the parties and positive and respectful interaction can enhance that environment.

6.3.3 Managerial Implications

From a practical perspective, the findings are helpful for stock brokerage firms and stock traders to gain an insight of how various characteristics of SSTs contribute to formulate effective strategies to better match consumers’ needs, to deliver more customized self-service, and enhance customers’ satisfaction. In many cases, the key question for business is not whether or not to adopt SSTs; rather how to best leverage SSTs to enhance customer satisfaction and loyalty. Managers should look beyond the features, functionalities, costs, and ROI calculations. Several managerial implications can be obtained from this research. **First**, gradual pressures on erosion of the customer base due to ferocious competition are very high, and so service providers are using innovative and newer channels of contact using technological interfaces to expand its customer base and serve them better (Sur, 2012). This study finds that consumers’ satisfaction significantly and positively influences continuous intentions or customer loyalty in either service encounters while the personality of users’ innovativeness simultaneously influence satisfaction. This study provides additional support for Schijin’s finding that customer satisfaction is a necessary and must condition for customer loyalty and Bhattacharjee’s (2001b) contention that investment in customer satisfaction with the IS determines continuous intentions. In addition, though both types of encounters satisfaction have positive impact on loyalty, technology-driven satisfaction (.81) over interpersonal encounter satisfaction (.43) has strong impact on loyalty and t-test also justified that the higher level of impact of technology driven

satisfaction on loyalty is statistically significant. As the nature of interaction in stock trading is different from any other kinds of e-transaction, such as online shopping, ticket purchasing, order processing, the perceived switching cost might be high in online trading. That might be a reason of high level of customer loyalty to SSTs and customer satisfaction plays critical and significant role in determining loyalty. This result implies that investment in customer satisfaction benefits SST suppliers in the form of increased long-term usage intention.

Second, as customers determine sources of dis/satisfaction differently depending on whether the encounter is interpersonal or technology-based, therefore, to succeed in implementing technology-based services, a firm cannot simply transfer or slightly adapt dis/satisfaction drivers from an interpersonal to a technology-based context, even if technology-based services become more widely accepted among customers. Often, what is a source of customer satisfaction for some causes dissatisfaction among other customers, especially in the technology based mode.

Customers perceive satisfaction and dissatisfaction with service encounters simultaneously, as seen from results of this study. The results express higher customer satisfaction with technology-based service encounters than with interpersonal ones. At the same times the findings reveal much higher dissatisfaction with technology-based services than the human interface services. People may not like the positive elements of interpersonal services quite as much, but they do not dislike negative elements much compared to when they interact with the technology. Thus, managers should be more careful to lessen dissatisfaction drivers of technology-based service encounters, not just only strengthen the satisfaction drivers of the technology interface services.

Third, although the finding partially explains the advantage of click-and-click service providers over their click-and-brick peers, the later already built a well-established platform to provide quality traditional services to their customers. Thus, Web-based service providers need to be very careful in devising strategy for enhancing customer satisfaction related to service encounter. Obviously, without user friendly Web sites, the distinct advantages of e-commerce such as convenience and information availability won't materialize. Meanwhile, most factors leading to dissatisfaction are tied to information and systems quality. The results indicate that, while excellent performance on information- and systems-related service encounter dimensions may not lead to customer delight, failure to

do so will have adverse impacts on customer satisfaction. The results further demonstrate that even at the sub-dimensional level, the sources of satisfaction and dissatisfaction may be different in some factors, which suggest that it is constructive for firms to understand the cause of satisfaction and dissatisfaction at both dimensional levels.

Fourth, dynamic market environment, rapid change ever in consumer behavior, speed of technological changes, growth of individualism sense among young, emergence of prosumer etc. have created major challenges for service firms in devising competitive strategies to satisfy target customers. Complex market with the co-exist of modern as well as post-modern consumers, poor economic status, low literacy rate, marginal disposable income, lack of awareness regarding consumer rights, service quality etc of Bangladeshi majority consumers' profile have made the job for marketer more tough. The main challenge is to know the determinants of their satisfiers as well as dis-satisfiers. As discussed in the literature review that only a few study (Bitner, 2000; Meuter, 2003; Zhilin, 2004) put light on identifying satisfiers as well as dis-satisfiers in both service encounters and most of the exploratory study revealed different outcomes in different cultural and socio-economic context. This empirical study, so far known to researcher, is the first initiative in Bangladesh perspective and revealed the major satisfiers and dis-satisfiers with receiving services via technology encounter where technological intervention in delivering services has been appreciated and accepted widely for improving customer value and enhancing satisfaction. The findings are supported by the empirical studies of Meuter (2000; 2003), Lin and Shin (2007). Thus, marketers need to be updated with the changing environment and its impact on customers' satisfaction through research as satisfaction is a subjective evaluation and change over time.

Fifth, technology has permeated our life and work, gradually satisfying both our extrinsic and intrinsic needs and desires. SSTs implemented in any service settings need to follow the same trend and logic to improve customer experience. This study demonstrated that certain intrinsic features of SSTs have the capacity to provide entertainment, satisfy curiosity of customers during encounters and ultimately engage customers. In this regard, marketers need to deploy forms of technologies with experiential features that can create a sense of surprise, novelty and fun in addition of functional benefits.

Further, lack of detailed knowledge about customer perceptions toward technology could translate into poor implementation decisions. The results indicate that this could become

an important problem since the marketing officers in the in-depth interviews were not always very good at recognizing all important sources of customer dis/satisfaction, sometimes with interpersonal interactions but especially with technology-based interactions.

The results suggest that companies, particularly in countries where technology readiness is relatively well but technology adoption for e-commerce perspective is fairly low, should better understand customer attitudes toward technology if they want to provide technology-based service for their customers. Different customer profiles, especially psychological evaluations toward technology, give rise to different segmentation in response to the use of technology-based services.

Sixth, respondents who generally like technology or show more readiness to embrace technology are much more likely to have positive attitude toward specific technology interface services, and tend to have more satisfaction with technology-based service encounters. Those who do not like to embrace technology are always like to trade through a marketing office if they prefer human services. Thus, technology prone customers show more satisfaction with technology-based service, but somewhat more dissatisfaction with interpersonal services. On the other hand, customers who are technology averse not only are more likely to show dissatisfaction with the technology-based service but also express satisfaction with interpersonal services more frequently. As a result, market segmentation of technology-based service encounters is suggested based on the results of this study.

Seventh, the study findings -optimism (4.25 and 4.21), innovativeness (3.74 and 3.62), discomfort (3.08 and 3.20) and insecurity (2.94 and 3.31) - narrate that the level of technology readiness of studied population both online and offline users is relatively high, and the level of acceptability & popularity of traditional human encounter is also high. Therefore, the progressive preference of technology-based service encounter among a major segment and the strong presence of technology reluctant users suggest the integration of both the encounters might bring more positive outcomes for the service providers. In that case, a company using both interpersonal and technology based service modes can gain competitive advantage here, but only using technology-based service might distract this technology reluctant customers to avoid service providers. However, the relative weights of technology prone and technology averse will change as new generations grow up more accustomed to using technology in their daily lives, but few

companies in different sectors can afford to wait generations to come for their strategies to pay off. The bottom line here is that companies aiming at mass markets must become strong in managing both interpersonal and technology-based service encounters. And, they must learn to integrate them, rather than simply offer them both separately to different segments. Some segments will use both, and will increasingly demand the ability to shift between the two modes effortlessly. Focusing one or the other service mode cannot appeal to more than a small part of the market. For instance, in order to provide responsive and reliable services, well-trained and technically competent representatives are desirable. It is also critical to maintaining high levels of system reliability and system responsiveness, including execution and Web page download speed, service availability, accurate execution, accurate account records, and real-time trade confirmations. To increase efficiency, the transaction process, from logging onto the Web site, getting a quote, and taking every step to make a trade, to getting order confirmation, should go through smoothly and quickly. With vulnerable trading systems and technical failures so common, a human being has to standby to monitor and support virtual transactions closely as required. When clients encounter problems and find mistakes in their accounts, they want a live agent and human voice: "I want a live human being at the end of the phone line". Problems have to be resolved promptly and effectively. The fastest way to reach a representative is by phone. Thus, the availability and promptness of phone services cannot be neglected.

Eighth, One principal advantage of Internet-enabled businesses over traditional businesses is its power in furnishing customers sufficient, accurate, and timely information. This is particularly prominent in the online brokerage industry as valuable, current information is essential for investors. Nevertheless, providing quality information requires an effective, sound management system of content development and information selection. It demands managers' involvement with quality control of content and linkages of online resources. Furthermore, we observe that some investors complained about the lack of adequate information on a Web site while others pointed out their difficulty in handling "too much" information. Therefore, management needs to establish a balance between information completeness and depth. Simply uploading all documents and data to the Web site will only create a "headache" for customers. In contrast, careful editing and outlining key points of information can dramatically reduce customers' burden in searching out useful information. Online firms should also set up safety standards and systems equipped with a

variety of online safety measures, including secure browsers, to ensure account and transaction security. At the same time, firms should seek to minimize the negative side-effects of these security measures such as excessive logons and logoffs within a relatively short timeframe.

Ninth, despite of high level of technology readiness of users and awareness of incremental benefits of using technology, the technology adoption rate in e-transaction is relatively low. It might be insecurity or discomfort make a segment reluctant to use technology. firms can actively manage customer expectations of certain service attributes and determine the appropriate levels to maintain. The most effective way is to educate customers on how the market and the company works, and then explain reasons that cause delays in such services as trade reporting and real-time quotes. Firms may also advise customers of ways to minimize delay in transaction execution.

Tenth, the study findings on customer technology readiness revealed that technology orientation versus human orientation are two separate dimensions not the opposite of each other. This is assumed as TRI of two different respondent groups didn't work as expected. The study hypothesized that the impact of all the dimensions of TR on satisfaction will be opposite in two modes of service encounters. But, actual findings presented mixed pictures. It suggests that service providers must look more carefully at different perceptions of customers toward both technology and human interactions. They will have a difficult time competing without knowing more about the issues of customer orientation and its impact on customer satisfaction and customer loyalty.

Therefore, technology-based service adoption strategies should aim for the integration of both types of service encounter, not stand-alone for each option for these two segments. In general, customers simultaneously can have both technology and human orientation when they evaluate service encounters. In long run, mass markets will be best served by integration strategies which can combine both technology-based and interpersonal services. The new generation of customers will grow up using more technology and so will develop more propensity toward technology, tending to move the market from negative attitudes toward technology to positive ones. But at the same time, most consumers in Bangladesh are unlikely to abandon their positive attitudes toward human services.

Eleventh, based on some market observations and cultural implications, the study strongly suggests the integration approach of technology and human encounter in delivering services for gaining the most of competitive advantages in the competitive and ever changing market environment. Until today, among the service firms in Bangladesh those adopted technology encounter and received enormous response from a particular segment of market, Fast Track service of Dutch Bangla Bank, e-ticketing of Bangladesh Railway, e-ticketing of airlines, retail stock e-trading of brokerage houses are mentionable ones. They all have implemented technological encounter with the integration of human interface/intervention. On the other hand, only technology encounter based services, for example, e-marketing company Bickroy.com, shadi.com, etc. didn't receive good response from target market yet. Moreover, Bangladeshi culture is dominated with the values of cooperation, relationships, modesty, and quality of life rather than mechanical behavior which is termed as 'human oriented'. They love to live closely in a particular place, feel comfort of caring and sharing through non-verbal cues, trust in touch, get assurance in eye contact, and prefer getting console in pain and sorrow. Based on Hofstede dimensions, Bangladeshi people are highly collective, high in uncertainty avoidance, long-term relation oriented and in the transition of shifting from low to high indulgence. Under such circumstance, as they want technology encounter for quick as well as anytime/anywhere service, they also expect suggestions or support from someone i.e., human interface in technology failure. A smiling face of service provider can win the heart of service receiver as well as gain the trust of customers that lead long term relationships between them. Therefore, service providers need to integrate both types of services to strengthen the relationship with customers in developing Asian countries. Most Asian customers are unlikely to entirely give up their fundamental Asian-ness to use technology; rather, it seems that companies which learn to integrate technology better into the very human oriented Asian cultures will do better.

Thus, it can be summarized that given potential customers the widest choices for communications and transaction channels, such as by adding technology-based services, is essential for service firms to stay competitive in most developed markets. However, in many developing countries where technology development is still going on, it is arguable whether heavy investment in expensive high technology-based service will have a payoff any time soon if companies are not careful choosing the technologies and service marketing strategies.

6.4 Further Research

Although the research is a very comprehensive one, it is difficult to generalize the outcome in different kinds of service settings and cultures. Several issues associated with the limitations inherent in this study need further research. The proposed scales of satisfaction and dissatisfaction drivers with technology encounter as well as interpersonal encounter should receive more rigorous test in different service settings as well as cross cultural settings. The present study made an attempt to develop a model of SST driven satisfaction in the retail stock trading service settings, potential moderators are suggested to be added in the model for offering a more holistic understanding of the phenomenon of interest. The scales need to be tested in different demographic settings, for example, most of the respondents of this study are male, highly educated and live in city. Therefore, how do female customers or technology users behave to technology is not measured here; to what extent illiterate and moderately educated people hold attitude toward technology is not clear here; those who live in rural or remote area, how do they feel when to interact with technology encounter is absent in this study.

Further, it need to be tested in the context of high involved and low involved service consumption. Customer experience and satisfaction level in technological encounter will not be similar with ATM experience and online stock trading.

This study also suffers from some methodological limitations to generalize the outcomes. For example, simple random sampling techniques are generally suggested to follow for data collection in developing a measurement scale, whereas the study had followed convenience and snowball sampling techniques. Moreover, study can be done following simple random sampling. Further, prior research implied that the intrinsic aspects of consumers' experience with technology could change over time. Longitudinal studies are thus recommended to be conducted to explore how the tested relationships may change over time.

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Appendix A

Questionnaire

Use Internet/Mobile for Stock Trading

Dear Respondent,

Thank you for your interest to respond this questionnaire. It will not take much of your valuable time. The survey is intended to generate information for the purpose of academic research only. Findings will have direct and indirect implications for practitioners, policy makers as well as academicians.

1. Your Age: 20 – 30 31-40 41- 50 50 & above
2. Education level: Below HSC Graduate Post-graduate Others
3. Occupation: Student Self-employed Employee Professional Others
4. How long have you been trading in stock market?
 Less than 3 year 4 – 6 years 7 -9 years 10 & more years
5. How do you trade in stock market?
 Only off-line Only online Both Earlier off-line, now online
6. Are you a (i) regular trader or (ii) occasional trader?
7. Name of your most preferred brokerage house:
8. Does your brokerage house provide facilities of trading through:
 Only off-line Only online Both

Following is a series of statement that one uses to express his experiences with stock trading. On a 5-point scale, choose any number from 1 to 5 that best describes how much you agree or disagree with the statement.

[1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4= agree; 5= strongly agree]

1	IT helps me to trade anytime during operating hour.	1	2	3	4	5
2	IT helps me to trade from anywhere.	1	2	3	4	5
3	IT saves my time of trading.	1	2	3	4	5
4	IT reduces my cost of trading.	1	2	3	4	5
5	IT allows me to complete trading quickly.	1	2	3	4	5
6	IT provides me real-time quotations of trading.	1	2	3	4	5
7	IT offers me wider and organized information compare to stock traders.	1	2	3	4	5
8	IT gives access to my personal history of investing portfolio instantly.	1	2	3	4	5
9	IT provides me the precise or customized information I need.	1	2	3	4	5
10	IT sends me the transaction reports automatically.	1	2	3	4	5

11	IT doesn't disclose my stock trading behavior related information to others.	1	2	3	4	5
12	IT provides me intelligence report regarding market behavior.	1	2	3	4	5
13	IT reduces my dependency on traders for trading decision.	1	2	3	4	5
14	IT allows me to execute purchase / selling orders independently.	1	2	3	4	5
15	IT provides me one-stop solution.	1	2	3	4	5
16	IT Helps to check stock quotations instantly.	1	2	3	4	5
17	IT helps to check trade volume instantly.	1	2	3	4	5
18	IT solves the problem of getting connected via phone with traders during pick hour.	1	2	3	4	5
19	IT feels me good as I can avoid interaction with traders.	1	2	3	4	5
20	IT gives me control.	1	2	3	4	5
21	IT allows me to execute buying and selling orders accurately.	1	2	3	4	5
22	IT is reliable.	1	2	3	4	5
23	IT also allows me to reach to a trader/ customer service via telephone for help.	1	2	3	4	5
24	IT allows me to resolve transaction disputes via telephone.	1	2	3	4	5
25	I enjoy trading via internet.	1	2	3	4	5
26	It is fun of trading by myself.	1	2	3	4	5
27	I find internet trading more convenient than trading via traders.	1	2	3	4	5
28	My firm is expert in Internet Trading.	1	2	3	4	5
29	My firm is a leading trading house with strong reputation.	1	2	3	4	5
30	My firm delivers what it promises.	1	2	3	4	5
32	Sometimes I cannot execute an order because the broker server is down.	1	2	3	4	5
33	Sometimes I am unable to log on	1	2	3	4	5
34	Internet trading is not secure because of hacking.	1	2	3	4	5
35	Internet trading order is sometimes lost.	1	2	3	4	5
36	IT is very time consuming when loading stock quotations.	1	2	3	4	5
37	A confirmation of an online trading order is very slow.	1	2	3	4	5
38	Brokerage firm's website is difficult to navigate.	1	2	3	4	5
39	Brokerage firm's internet information is not up-to-date.	1	2	3	4	5
40	I don't receive any e-mail alert of any significant change in trading policy.	1	2	3	4	5
41	Sometime I make mistake of entering wrong number of buying and selling order.	1	2	3	4	5
42	I cannot transfer responsibility of my mistake to traders.	1	2	3	4	5
43	Overall I am satisfied with internet trading.	1	2	3	4	5
44	I am happy about my decision to choose Internet trading.	1	2	3	4	5
45	I believe I did the right thing when I used Internet trading.	1	2	3	4	5
46	My firm's Internet services meet my expectations.	1	2	3	4	5
47	I am delighted with my firm's online services.	1	2	3	4	5
48	I would recommend my brokerage firm to others.	1	2	3	4	5
49	I will always consider this firm as my first choice.	1	2	3	4	5
50	I expect to do more business with my firm in the future.	1	2	3	4	5
51	I always like to use Internet trading because it is the best choice for me.	1	2	3	4	5
52	I consider myself to be a loyal patron of Internet trading.	1	2	3	4	5
53	New technologies contribute to a better quality of life.	1	2	3	4	5
54	Technology gives me more freedom of mobility.	1	2	3	4	5

55	Technology gives people more control over their daily lives.	1	2	3	4	5
56	Technology makes me more productive in my personal life.	1	2	3	4	5
57	Other people come to me for advice on new technologies	1	2	3	4	5
58	I prefer to use the most advanced technology available.	1	2	3	4	5
59	I can usually figure out new high-tech products and services without help from others.	1	2	3	4	5
60	I keep up with the latest technological development in my area of interest.	1	2	3	4	5
61	Technical support lines are not helpful because they don't explain things in terms I understand.	1	2	3	4	5
62	Sometimes, I think that technology systems are not designed for use by ordinary people.	1	2	3	4	5
63	Use manuals for a high-tech product or service are not written in plain language.	1	2	3	4	5
64	Technology always seems to fail at the worst possible time.	1	2	3	4	5
65	People are too dependent on technology to do things for them.	1	2	3	4	5
66	Too much technology distracts people to a point that is harmful.	1	2	3	4	5
67	Technology lowers the quality of relationships by reducing personal interaction.	1	2	3	4	5
68	I do not feel confident doing business with a place that can only be reached online.	1	2	3	4	5

Appendix B

Questionnaire for

Offline Stock Trading via Broker at House

Dear Respondent,

Thank you for your interest to respond this questionnaire. It will not take much of your valuable time. The survey is intended to generate information for the purpose of academic research only. Findings will have direct and indirect implications for practitioners, policy makers as well as academicians.

1. Your Age: 20 – 30 31-40 41- 50 50 & above
2. Education level: Below HSC Graduate Post-graduate Others
3. Occupation: Student Self-employed Employee Professional Others
4. How long have you been trading in stock market?
 Less than 3 year 4 – 6 years 7 -9 years 10 & more years
5. How do you trade in stock market?
 Only off-line Only online Both Earlier off-line, now online
6. Are you a (i) regular trader or (ii) occasional trader?
7. Name of your most preferred brokerage house:
8. Does your brokerage house provide facilities of trading through:
 Only off-line Only online Both

Following is a series of statement that one uses to express his experiences with stock trading. On a 5-point scale, choose any number from 1 to 5 that best describes how much you agree or disagree with the statement.

[1= strongly disagree; 2= disagree; 3= neither disagree nor agree; 4= agree; 5= strongly agree]

1	Trader provides me reasonable comments for making right trading decisions.	1	2	3	4	5
2	Trader informs me instantly and continuously of relevant and useful information.	1	2	3	4	5
3	Trader receives and executes my orders accurately and rapidly.	1	2	3	4	5
4	Trader always serves me according to my preferences.	1	2	3	4	5
5	Trader informs me about available service.	1	2	3	4	5
6	Trader informs me about unavailable service.	1	2	3	4	5
7	Trader informs me when and why brokerage service is very slow.	1	2	3	4	5
8	Trader reports me the brokerage firm's mistake instantly.	1	2	3	4	5
9	Trader responds to other core service failures quickly.	1	2	3	4	5
10	Trader checks and informs me inside information or market intelligence report instantly.	1	2	3	4	5

11	Trader provides me services with professional and friendly personality and voice.	1	2	3	4	5
12	My Trader often gives me surprise gift.	1	2	3	4	5
13	My Trader is able to perform well under adverse circumstances.	1	2	3	4	5
14	My trader is very smart and knowledgeable.	1	2	3	4	5
15	My Trading firm's floor is well organized and equipped.	1	2	3	4	5
16	My Trading firm is a leading house in stock market.	1	2	3	4	5
17	Trader who serves me regularly provides me an extra service as a client.	1	2	3	4	5
18	Trader gives me interesting alternative suggestions even though it means more work for them.	1	2	3	4	5
19	Trader Shows genuine concern toward my situation	1	2	3	4	5
20	My Trader acts energetically and enthusiastically.	1	2	3	4	5
21	Telephone lines of my Trader are always busy.	1	2	3	4	5
22	Trader does not respond to my calls immediately and usually keeps me waiting.	1	2	3	4	5
23	Trader recommends me to trade frequently in order to gain commissions.	1	2	3	4	5
24	My Trader is unable to solve the problems of service failures.	1	2	3	4	5
25	My Trader does not take any actions.	1	2	3	4	5
26	My Trader does not take any actions when back offices provide slow services.	1	2	3	4	5
27	My Trader provides service with unwillingness voice when I order a small volume	1	2	3	4	5
28	My Trader cannot control his or her emotions in keeping information confidential	1	2	3	4	5
29	My Trader does not keep details of my investing portfolios confidential.	1	2	3	4	5
30	I am happy about doing trade face –to-face or via mobile phone.	1	2	3	4	5
31	I believe I did the right thing when I trade via trader.	1	2	3	4	5
32	Overall I am satisfied with the performance of my traders.	1	2	3	4	5
33	If I had to do it over again, I would choose trading via trader.	1	2	3	4	5
34	I do trade via traders because it is the best choice for me.	1	2	3	4	5
35	I consider myself to be a loyal patron trading via traders.	1	2	3	4	5
36	New technologies contribute to a better quality of life.	1	2	3	4	5
37	Technology gives me more freedom of mobility.	1	2	3	4	5
38	Technology gives people more control over their daily lives.	1	2	3	4	5
39	Technology makes me more productive in my personal life.	1	2	3	4	5
40	Other people think I have better knowledge on new technologies	1	2	3	4	5
41	I prefer to use the most advanced technology available.	1	2	3	4	5
42	I can usually figure out new high-tech products and services without help from others.	1	2	3	4	5
43	I keep up with the latest technological development in my area of interest.	1	2	3	4	5
44	Technical support lines are not helpful because they don't explain things in terms I understand.	1	2	3	4	5
45	Sometimes, I think that technology systems are not designed for use by ordinary people.	1	2	3	4	5
46	Use manuals for a high-tech product or service are not written in plain language.	1	2	3	4	5

47	Technology always seems to fail at the worst possible time.	1	2	3	4	5
48	People are too dependent on technology to do things for them.	1	2	3	4	5
49	Too much technology distracts people to a point that is harmful.	1	2	3	4	5
50	Technology lowers the quality of relationships by reducing personal interaction.	1	2	3	4	5
51	I do not feel confident doing business with a place that can only be reached online.	1	2	3	4	5