E-banking in U.A.E. and Oman: Exploring consumer perception of Satisfaction/ Dissatisfaction factors of e-Banking Service Quality

By

Amr Kamal Eldin Ahmed

A thesis submitted in partial fulfillment for the requirements for the degree of

Master of Project Management

Faculty of Business

July 2009

ABSTRACT

The purpose of this research is to investigate consumers' perception of satisfaction and/or dissatisfaction attributes of e-banking service quality in the U.A.E. and Oman. The study adopted an instrument proposed by the previous research for measuring e-banking service quality, customer service quality, and online system quality through a single scale that included17 dimensions. The instrument was used to develop an online survey that included 64 questions and resulted in 60 responses collected from bank customers in the U.A.E. and Oman. The collected data was analyzed using factor analysis and reliability test and resulted in extracting a derived scale that composed of 46 items and 9 factors, namely: efficiency, information quality, ease of Use, security, continues improvement, competence, reliability, Creditability, and product variety /diverse features. Further, sources of satisfaction perceived by consumers were identified as: reliability, continues improvement, and ease of use; while sources of dissatisfactions were identified as: security, creditability, and product variety/diverse features. This study has also indicated that the customers in the U.A.E. are more satisfied by the e-banking service than the customers in Oman and in particular the factors that had higher scores were identified as: efficiency, information quality, ease of use, security, continues improvement, and creditability.

Findings from the study provided insights for the financial sector in the U.A.E. and Oman by identifying the important e-banking drivers, understanding key attributes for customer dissatisfaction, and providing recommendations to improve the performance of e-banking. New strategies for developing robust e-banking environment were suggested in order to enhance the creditability of in internet banking in the U.A.E. and Oman.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENT

I would like to thank my advisor, Dr. Ashly Pinnington, for his guidance, support, and patience throughout all the stages of this dissertation. His willingness to share his knowledge made this work come to fruition and his great dedication to work and selfless devotion to students will always be remembered. I am also grateful to the British University in Dubai and University of Manchester for the opportunity to pursue this degree and much gratitude and appreciation to the Staff of the Faculty of Business in BUID who have assisted and encouraged me throughout my classes and dissertation research. A special word of gratitude and appreciation is presented to my colleague Lina Naser for her assistance and support in this dissertation.

And finally I offer my heartfelt gratitude to my wife, family, and friends who helped me to complete this education and research.

CHAPTER 1: INTRODCUTION

Introduction

The banking sector occupies a critical position in the global economy and banks have progressed significantly in offering banking services over the internet. Regardless of location and time Internet banking empowers customers with access outside banking working hours and greater control of their accounts, and moreover, provide banking organizations with options to lower the cost and, increase efficiency of operations with manageable risks (Jayawardhena and Foley 2000). E-banking can also increase the number of clients and number of banking transactions which will lead to improvement of banking efficiency (Humphrey et al. 2000).

Whereas internet banking can mean creating a website to provide information about the bank, transactional internet banking means providing customers with access to their accounts to undertake banking transactions involving buying financial products and services online and this is the focus of this study.

Transactional internet banking is growing rapidly while the needs of customers are continuously changing and it is obvious that banks need to provide customers with a high quality of service. Banks face challenges in identifying consumers' needs who are increasingly demanding more services and most importantly internet banking can increase customer satisfaction and retention. Improving the e-banking service quality will result in better retention of existing customers who can gain more value from the e-banking services.

In the light of recent technological development, most of the banks in the G.C.C. countries adopted the internet banking and offered their customers various value-added service on their websites including checking balances, printing e-statement, paying bills, viewing transactions, ordering cheque

books, transferring money within the bank accounts or to other banks, and applying for credit cards. Since more financial organizations are offering e-banking services the competition is increasing and banks in the region realized how important it is to enhance e-banking service quality to attract more clients instead of losing their existing clients to other banks.

Customer loyalty can be enhanced by satisfying customer demands and needs which are continuously increasing due to high competition in the internet banking sector (Minjoon Jun 2001). Therefore banks are required to understand and measure the attributes that affects the customer's perception of e-banking service quality.

The Purpose of the Study

The purpose of this dissertation is to investigate the customer's perception of satisfaction and/or dissatisfaction determinants of e-banking service quality for banks in two G.C.C. countries, U.A.E and Oman, and in particular, it endeavors to explore the differences in service quality offered by banking organization in both countries.

There have been numerous studies identifying the key factors for measuring traditional banking service quality; however relatively few studies have investigated service quality attributes and adoption of e-banking in different areas in the world and fewer studies still have explored the e-banking in the G.C.C. countries. Most of these studies have focused on investigating the adoption of e-banking and measuring service quality in a single G.C.C. country; however this dissertation explores the service quality of internet banking provided by national banks rather than international banks operating in the U.A.E. and Oman.

Research Questions

The objectives of this research are to:

1. Examine customer perception of e-banking service quality in major national banks in the U.A.E. and Oman.
2. Identify satisfaction/dissatisfaction factors of e-banking service quality which are perceived by consumers.
3. Identify substantial discrepancies between perceived e-banking service quality in the U.A.E. and Oman.
4. Identify a reliable and valid measurement instrument of perceived e-banking service quality in the U.A.E. and Oman.

In particular, this research seeks to answer the following questions:

1. What are the key dimensions of e-banking service quality perceived by customers in U.A.E. and Oman?
2. Which service quality dimensions are most satisfying and/or dissatisfying for customers?
3. What are the recommendations should be made to improve the e-banking service quality and satisfy the customers?

Research Contribution

This research contributes practically through exploring e-banking service quality in the U.A.E and Oman and by comprehensively examining the determinants of satisfaction and dissatisfaction factors perceived by the customer. It also develops a practical measurement instrument based on the literature review of previous research that can be applied by banking organizations to assess the quality of their services and focus on improving services causing dissatisfaction of customers.

The findings from the study provide valuable insights in understanding the important factors perceived by customers of national banks in the U.A.E. and Oman. Some of these factors may in fact be different from those perceived by customers in other countries due to cultural or economic reasons. The measurement instrument addresses the influencing factors across three crucial dimensions of internet banking, namely: Banking service quality, Customer service quality, and Online service quality. This dissertation study

therefore provides a comprehensive framework to measure online services, online customer service interaction and web site usability using a single instrument. Additionally, it evaluates the performance of banking websites and compared the performance of different banks in the two selected countries.

Outline of the Study

This study was structured as follows: it commences by reviewing the previous research in service quality which is considered an important foundation for this study. Then, the research problem was reduced down to reviewing literature investigating service quality of online system (e-service) quality, and then again refined to reviewing the previous research in e-banking service quality where various measuring instrument were investigated. The instrument proposed by Minjoon (2001) was identified and selected for replication and extension in this dissertation. This scale was chosen since it provides a generic scale for measuring e-banking service quality with a comprehensive set of dimensions classified into three broad categories: banking service categories, customer service quality, and online system quality. As the research study developed, the dimensions of the instrument were reduced and a derived version of the instrument was used as a base for conducting the survey. The instrument was modified to suit the purpose of study and focus on e-service more than customer service quality and online system quality. The questionnaire was developed using questions identified in previous research and web based software was developed providing the survey on the internet where data were collected and stored instantly in a database. Then, the data was analyzed by employing factor analysis and the scale reliability was tested resulting in a reduction of the number of dimensions and items to derive the final instrument. Finally, the resultant data was analyzed and satisfaction and dissatisfaction factors were identified.

This dissertation contains five chapters. Chapter 2 reviews the relevant literature in service quality, e-banking service quality and presents the

theoretical framework that forms the basis of this study. Chapter 3 describes the research methodology, data collection using custom developed online survey, questionnaire development based on literature review, and description of data analysis methods. Chapter 4 provides the results of the factor analysis, reduction of instrument dimensions after performing reliability testing, and discusses the findings of the data analysis. Chapter 5 presents the conclusions of the study and states its implications for researchers and practitioners, identifies limitations and makes suggestions for the directions of future research.

Summary of Chapter

In this chapter, section 1 provided an outline of the research purpose which aims to assess the customer's perception of e-banking service quality in U.A.E, and Oman. Section 2 proposed the research objectives and questions and focused on identifying the key attributes connected with satisfaction and/or dissatisfaction of customers. Section 3 discusses the contribution of the study to the evolution of e-banking services and Section 4 presents a summary outline of the study.

In the next chapter, the previous research in service quality, e-service quality and e-banking service quality will be discussed.

CHAPTER 2: LITERATURE REVIEW

Introduction of Chapter

Today business on the internet is growing rapidly, doubling in size every ten months (Hoffman and Novak, 1996). It gives anyone who has access limitless opportunities to interact with different systems and with other people in a fast and uncomplicated way (Gronroos et al. 2000).

This review of the literature drew from the extensive amount of work of service quality through numerous research studies investigating the attributes of service quality in different industries, however after firms had moved towards selling products and services on the internet, researchers proposed new measures for e-service quality that considered such factors as assessment of information systems, web site usability, and online customer service through electronic channels without direct interaction with customers. In this way the previous research assessing and evaluating online service quality was reviewed and the literature investigating e-banking service quality was explored as a basis for this study.

Service Quality

Service quality has become a key variable in achieving efficiency of business operations (Anderson and Zeithaml 1984). It has been described as the difference between expectation and performance and contributes in achieving customer satisfaction but is not equivalent to it (Bolton and Drew 1991). It has also been defined as an abstract and elusive contract because it has three unique features: intangibility, heterogeneity, and inseparability of production and consumption (Parasuraman et al. 1985). Therefore, it is the overall evaluation of a specific service firm that results from comparing that firm's performance with the customer's general expectations of how firms in that industry should perform (Parasuraman et al. 1988). Service quality can thus be considered as the consumer’s judgment about an entity’s overall

excellence or superiority (Zeithaml and Gilly 1987). And in order to deliver quality service firms must conform to customer expectation on a consistent basis (Lewis and Booms 1983). Additionally, to understand individual consumer behavior, recent studies suggest that quality has important effects on the consumer's purchase intentions through the mediating role of value perceptions attached to products (Bolton and Drew 1991;Parasuraman et al. 1988).

As services are intangible (Bateson 1977;Berry 1980;Lovelock 1980;Shostack 1977), many firms find it difficult to understand how customers perceive their services and evaluate service quality (Zeithaml 1981). It is more difficult to measure service quality than product quality as it results from the difference between consumer expectations and the actual service performance. Evaluating service quality must involve not only the service quality, but the process of the service delivery as well (Gronroos and Christian 1982;Sasser *et al.* 1978).

Evaluation of service quality has been investigated by Parasuraman *et al.* (1985) who defined ten service quality dimensions used as evaluation criteria for assessing service quality by consumers. The proposed dimensions were: tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding/knowing the customer, and access. Then the SERVQUAL instrument was proposed by Parasuraman *et al.* (1988) as a multiple-item scale for measuring consumer perceptions of service quality. The instrument was introduced in 1988 and revised in 1991. Their approach developed quantitative yardstick for gauging the consumer's perception of service quality in the absence of objectives measures. The conceptual foundation of SERVQUAL was derived from the works of previous researchers who examined service quality and in particular Gronroos and Christian (1982) and Sasser *et al.* (1978), and from qualitative research that defined service quality dimensions by Parasuraman *et al.* (1985). The final SERVQUAL instrument included 22 items that were spread among 5 dimensions which are tangibles, reliability, responsiveness, assurance, and

empathy. One half of these items are intended to measure consumers' expected levels of service for a particular service industry (expectations). The other 22 matching items are intended to measure the perceived level of service provided by a particular organization (perceptions). The items are presented on a 7-point Likert scale response format, with the anchors "strongly agree" and "strongly disagree." Service quality is measured by calculating the difference scores between corresponding items (Babakus and Boller 1992).

SERVQUAL was designed to measure the "gap" between expected service and perceived service. Each of the 22 items was therefore recast into two statements: one requiring respondents to identify what firms in the industry "should provide"; the other, what the consumer perceived that the firm under investigation did provide (Smith 1995). The revised version of SERVQUAL by Berry and Parasuraman (1991) introduced a number of changes and described SERVQUAL as a multiple-item scale with good reliability and validity and offering a number of potential applications across a broad spectrum of services.

Babakus and Boller (1992) criticized SERVQUAL by concluding an imperial assessment of the instrument and argued that the measurement of perceived service quality may still remain a challenge. They raised questions about the dimensionality of service quality, the appropriateness of operationalising service quality as a difference or gap score, and the specific measurement properties associated with SERVQUAL. By conducting a study on an electric and gas utility company, they failed to replicate the 5 distinct dimensions of SERVQUAL due to the wording of the items and defining a construct on the basis of difference scores. Additionally, Carmen (1990) included the measurement of service quality across multiple service functions; problems with the measurement of consumer expectations; and dimensionality as a function of the type of service industry.

The definition and measurement of service quality as a 5-dimensional construct, as in SERVQUAL, appears to suffer from a number of methodological shortcomings. The findings suggest that the dimensionality of service quality may depend on the type of services under study (Babakus and Boller 1992).Cronin and Taylor (1992) also criticized SERVQUAL as well and argued that the current conceptualization and operationalization of service quality (SERVQUAL) is inadequate. They presented empirical and literature support suggesting that service quality should be measured as an attitude and the performance-based scale. They developed SERVPERF scale and claimed that it is efficient in comparison with the SERVQUAL scale as it reduces the number of items that must be measured by 50% (44 items to 22 items). The results of their research suggested that service quality is an antecedent of consumer satisfaction and that exerts a stronger influence on purchase intentions than service quality. Thus, managers may need to emphasize total customer satisfaction programs over strategies centering solely on service quality.

In response to some criticism from researchers who had tested the instrument, Parasuraman *et al*. claimed that the 22-item questionnaire is a measure relevant to a broad spectrum of services and based on five generic quality dimensions (Smith 1995). However, SERVQUAL instrument was considered a foundation for the subsequent research in the field of e-service quality that will be discussed in the following section.

E-service Qualify

Today's fast-paced world is becoming increasingly characterized by technology-facilitated transactions. Growing numbers of customers interact with technology to create service outcomes instead of interacting with a service firm employee. Additionally, by investigating the sources of satisfaction and/or dissatisfaction with Self-Service Technologies (SST), the major dissatisfaction factors were due to technology failure which prevents consumers from using the service. Poor design is also a problem for both the technology interface and other aspects of the service process. In addition

customer-driven failure is important especially when customers are willing to take some of the blame in dissatisfying encounters with SSTs (Meuter et al. 2000). These unsatisfying service encounters have been estimated to cause annual web sales losses of several billion dollars per year (Rust and Lemon 2001).Therefore; measuring e-service quality becomes a crucial issue for organizations.

E-service quality has been defined as “providing a superior experience to consumers with respect to the interactive flow of information” (Rust and Lemon 2001).Comparison of the way consumers evaluate Service Quality (SQ) and e-Service Quality (e-SQ) reveals differences in the role of expectations, number and nature of dimensions, and cognitive-emotional content. Further, there seems to be a greater degree of consumer trade-offs along e-SQ dimensions than is the case for SQ” (Zeithaml *et al*. 2002).

Researchers have investigated the evaluation of e-services and proposed different models. Gronroos *et al.* (2000) proposed a Net Offer model and defined two dimensions for the e-services: a functional dimension which is quality of the service process and technical dimension which is the outcome of the service process. Van Riel et al. (2001) also investigated the e-service quality of the internet portal to understand how consumers evaluate e-services and develop e-loyalty and proposed a framework for the e-services that the overall customer satisfaction and loyalty is influenced by the satisfaction with three service components: core service, supplementary services and the user interface. Hence the evaluation of e-services must consider not only the quality of e-service functions, but the quality of the supporting processes and web site features. This direction was also adopted by other researches and most of developed instruments included the dimension of the web site quality and process quality as will be discussed in the reset of this section.

Liu and Arnett (2000) investigated the critical success factors for ecommerce websites and identified 4 factors: information and service quality, system use, playfulness, and system design. There researchers recommended that the

way to provide high quality service is that organizations should use the service-oriented concepts at all sales stages, focus on how customers use the website, and consider the cultivating hedonic features in the website to attract customers.

Szymanski and Hise (2000) proposed the first model to measure consumers' satisfaction with their e-retailing experiences. They suggested that there are four factors for assessing e-satisfaction, online convenience, merchandising (product offerings and product information), site design and financial security, and found that convenience, site design, and financial security are the dominant factors in consumer assessments of e-satisfaction. The items of the survey measured the customer perception of online stores relative to traditional stores and compared customer expectations of online shopping to the actual offline shopping experience. Their research findings stated that the convenience and financial security have more prominent roles in consumer e-satisfaction than other factors.

Barnes and Vidgen (2001) developed the WEBQUAL2 instrument to evaluate e-commerce websites by enhancing WEBQUAL1.0 which proved to be effective for assessing information-intensive web sites but not for transaction-intensive web sites. They merged the WEBQUAL 1.0 and SERVQUAL instruments and extracted 24 items from five dimensions each of which encompasses two sub-dimensions: tangibles (aesthetics, navigation), reliability (reliability, competence), responsiveness (responsiveness, access), assurance (credibility, security) and empathy (communication, understanding the individual).

Further, Novak et al. (2000) investigated factors that make using the Web a compelling experience for its users and developed their model based on the conceptual model proposed by Hoffman and Novak (1996). According to Novak et al., the flow on the web is an experience determined by: high levels of skill and control; high levels of challenge and arousal; focused attention; and enhanced by interactivity. The model's attributes are: ease of contact, ordering, payment returns, and ease of cancellation, customer support,

cutting edge, variety, quality information, reliability, security and low prices. Their study discussed how the compelling consumer online experience is highly influenced by the fun and recreational website design and recommended that the website design should be challenging to arouse the consumer without frustrating users through difficulties navigation.

Another scale was proposed by Wolfinbarger and Gilly (2003) who established the dimensions of service quality in internet retailing by developing the eTailQ instrument. The scale is composed of 14 items across four quality dimensions: fulfillment/reliability, web site design, customer service and security/privacy. According to the researcher, eTailQ can be compared to SERVQUAL with the major distinction that consumer perception of employees is an important aspect in SERVQUAL, while eTailQ emphasizes the whole company. eTailQ added the “website design” as a new dimension affecting the consumer perception of the eTailQ experience. Reliability in eTailQ focuses on accuracy of product description, order, and on-time delivery rather than consistency of performance as in SERVQUAL. The developed instrument is considered a general model for eTailQ quality without considering the characteristics of product or service variances.

Parasuraman et al. (2005) has also investigated the service quality delivered by online shopping web sites and proposed 2 scales: E-S-QUAL contains a 22-item scale of four dimensions: efficiency, fulfillment, system availability, and privacy, and, E-RecS-QUAL focuses on handling service problems and inquiries, suitable with customers who had non-routine encounters with the sites and contains 11 items in three dimensions: responsiveness, compensation, and contact. Both E-S-QUAL and E-RecS-QUAL measure the service quality of web sites without considering hedonic aspects such as fun and pleasure. Additionally, efficiency and fulfillment, and system availability are critical factors in contributing to customers’ perceptions of overall quality, value, and loyalty intentions, and that privacy and recovery services such as

responsiveness, compensation, and contact are less critical factors for service quality.

Moreover, Bauer et al. courtesy (2006) developed a comprehensive conceptual framework integrating utilitarian and hedonic e-service quality elements in a single transaction process-based scale (eTransQual) which contains 25 items and five discriminate quality dimensions: functionality/design, enjoyment, process, reliability and responsiveness. By comparing eTransQual to eTailQ and E-S-Qual, eTransQual integrates hedonic quality aspects which have not been considered by the other scales. The study showed that the hedonic and emotional motives are important in enhancing the perceived quality value by the shoppers and that user's link the efficiency of a web site with the visual appeal of the web site design. The analyzed data suggested that a combination of quality factors derived from service quality and data quality are needed to evaluate both desired and minimum quality factors expected of a B2C Web site.

It is obvious that most of the proposed scales for measuring the e-service quality were developed based on conceptual framework of SERVQUAL and addressed three main dimensions which are: (1) service quality in terms of reliability and competence of functionality; (2) process quality in terms of responsiveness, access, and communication; and (3) web site quality in terms of aesthetics, navigation, and security. These three dimensions were initially proposed by SERVQUAL as: (1) reliability; (2) responsiveness and empathy; and (3) tangibles and empathy.

Johnston (1997) investigated the determinants of service quality in UK retail banking through empirical research in the UK banking industry which analyzed over 200 customer anecdotes of incidents in the UK banking industry and in addition was based on 100 interviews. The results of the study identified 17 factors : Commitment, Attentive/help, Friendliness, Care, Courtesy, Responsiveness, Flexibility, Competence, Comfort, Communication, Availability, Access, Cleanliness/tidy Security, Reliability, Functionality, Integrity, and Aesthetics.The research objective was to identify

what factors tend to delight customers and what factors tend to dissatisfy them. The findings were interpreted as showing that factors like commitment, speed of processing, care, friendliness, flexibility, responsiveness and courtesy are the ones that likely delight customers.

Bahia and Nantel (2000) have also investigated retail banking service quality and proposed (BSQ) as a reliable and valid scale for the measurement of the perceived service quality of bank services based on the SERVQUAL model and comprises 31 items which span six dimensions: effectiveness and assurance; access; price; tangibles; services portfolio and reliability. Although the scale aims to measure the customer's perception of e-banking service quality, it has not been constructed based on a qualitative research with bank customers, and instead it considered "expert" opinions and published literature only.

Due to the importance of web site quality dimension as a container for the e-services, other researchers have proposed instruments to measure web site quality addressing more details of web site usability such as Loiacono et al. (2002) who proposed a WebQual™ scale for measuring website quality that identified 12 dimensions of website quality: informational fit-to-task, interactivity, trust, response time, ease of understanding, intuitive operations, visual appeal, innovativeness, flow/emotional appeal, consistent image, online completeness and better than alternative channels. And also Chen and Wells (1999) proposed a scale for measuring web site success what included five attributes: website relationship, building, intentions to revisit, satisfaction with service, comfort in surfing, and the judgment that surfing the website is a good way to spend time.

Doll and Torkzadeh (1988) has also developed a 12-item instrument that measures five components of end-user satisfaction - content, accuracy, format, ease of use, and timeliness. Evidence of the instrument's discriminate validity was presented and reliability was assessed by nature and type of application. Their article presents significant progress towards the

development of a standard measure of end- user satisfaction with a specific application. Reliability and validity is assessed by nature and type of application. The five resultant components are relatively independent of each other.

E-banking Service Quality

Internet banking enables consumers to access their bank account using the internet to carry out banking transactions at any time without interaction with bank employees. Although it is a useful channel for individuals and companies, but internet banking has been growing slowly over the last few years because of security concern of banks and customers and lack of knowledge about the offered services (Sathye 1999).

Few studies have investigated the internet banking in the recent years from different perspectives including measuring the quality of e-banking web sites, adoption of e-banking by consumers, and measuring the consumers' perception of e-banking service quality which is the main focus of this study. The transformation from traditional banking to internet banking was basically the change of the delivery channel from interaction with human to interaction with technology (Loonam and O'Loughlin 2008). So the previous studies that investigated e-banking quality have added internet technology and web site efficiency dimensions to e-service quality scales.

Jayawardhena and Foley (2000) explored the external forces and internal changes in the e-banking sector and highlighted the advantages of providing e-services by banks. The study provided detailed comparison of available e-banking services within the banks in UK and assessed their websites through a scale composed of five identified dimensions: Speed, Content Design, Navigation, Interactivity, and Security. They argued that it is difficult for the banks to satisfy customers' needs and to face up the increased competition from other banks and financial services concluding that banks need to continually work on inventing and developing new e-banking services.

Miranda et al. (2006) has also investigated the web site quality of Spanish private and saving banks. Two different strategies for internet banking were identified: an existing bank with physical offices delivering additional service through e-banking services on the web site, and a virtual bank without physical offices and delivering online services only. The suggested e-banking quality scale was developed on the foundation of the web assessment Index by Mateos *et al.* (2001).The scale included 25 items across 4 categories: site content, speed, accessibility and navigability. The study findings recommended that the site content is significantly related to accessibility and navigability and suggested that best designed sites are richer in content, more easily accessible and navigable. It also concludes that there is a negative relationship between speed and content where complex sites, with more informational, communicational and transactional elements, are usually slower.

The scales proposed by Jayawardhena and Foley (2000) and Miranda et al. (2006) aimed to measure the e-banking web site quality and focused on efficiency and usability attributes such as spees, nafigation, eas of use, and content design. These factors can not be sufficient for a valid e-banking measurement as they have not proposed factors for measuring the e-services functionalities or their supporting processes.

A different precpective of exploring e-banking was conducted by Sathye (1999) who investigated the factors affecting the adoption of internet banking by Australian consumers using a 17 item and 6 dimensions scale included: no security concern, ease of use, awareness of service and its benefits, reasonable price, no resistance to change, and availability of infrastructure. The study's findings indicated that the main factors for non- adoption of internet banking are lack of awareness about the availability of internet banking service and its benefits, high pricing/cost aspects, and security concerns.

Measuring the adoptation of e-banking was a successful step in exploring the problems behind the slow growth of e-banking and whi cusomter resist to use

e-banking, however the proposed scale was not usefull for measuring e-banking web site or e-services quality.

The measurement of e-banking service quaulity was proposed by Joseph *et al.* (1999) who investigated the impact of technology in Australian banks on the delivery of the service quality. The proposed assessment of the service quality was based on 6 factors: convenience/accuracy; feedback/complaint management; efficiency; queue management; accessibility; and customization. Their research findings indicated that banking institutions need to improve their customer-perceived service quality. They also classified the factors based on importance and performance indicating that feedback/complaints and accessibility both have high importance and low performance. The scale dimensions focused on e-services without addressing tangible and assurance attributes which are more concerned about the web site quality and security issues.

Another research about e-banking service quality was conducted by Loonam and O'Loughlin (2008) who investigated customers' perceptions of internet banking self-service within the Irish financial services and identified ten dimensions as focal to e-banking service quality, namely: web usability, security, information quality, access, trust, reliability, flexibility, responsiveness, self-recovery, and personalization / customization. The study has discussed the similarities between the traditional service quality dimensions and e-service quality and identified the five emergent factors related to technology as: reliability, responsiveness, security, access and personalization /customization.

Other studies provided comprehensive scales for measuring e-banking quality included relevant key attributes for service, process and web site quality (Diniz *et al.* 2005;Minjoon Jun 2001). Diniz *et al.* (2005) has conducted a case study in three large banks in Brazil and proposed a model of three dimensions to evaluate consumer's respective of the virtual business environments: functionality, evaluates the offered services profile; reliability, investigates the security of a transactional site; and usability evaluates the

quality of user interaction with the site. Each dimension was divided into three other levels according to the level of difficulty involved in implementing the relevant resources. The proposed model satisfies the requirements of measuring e-banking quality as it considered the functionality and process of e-services, as well as, the web site quality.

Minjoon (2001) investigated the key dimensions of internet banking service quality and proposed a scale that included 17 dimensions which were classified into three categories: customer service quality, banking service product quality, and online systems quality. Identified dimensions were: reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, collaboration, and continuous improvement, content, accuracy, ease of use, timeliness, aesthetics, security, and product variety /diverse features. Although the scale was composed of high number of factors which is difficult to measure through customer surveys, however it involved most of the dimensions proposed by previous research and can be a base for measuring e-banking service quality.

It was obvious that few studies proposed scales for measuring all the involved attributes influencing the e-banking service quality. And even these studies have not addressed the problems behind the low usage and adoption of e-banking. Instead it focused on examining the existing services and features.

Summary of Chapter

The primary objectives of this chapter were to provide a conceptual overview of the e-banking service quality which is based on previous research in measuring the quality for services and more specifically, the quality of e-services. Various proposed instruments for measuring e-service quality have been reviewed in order to define the key constructs to be examined by this study. Three types of e-banking scales were identified: (1) scales that measures e-banking web site quality, (2) scales that measures the adoption of e-banking by consumers, and (3) scales which measure e-banking service quality and web site quality as well. This dissertation is focused on the third

type of scales. Research studies that investigate both problems of e-banking adoption and measure e-banking quality using a single scale have not been identified and can be recommended for future research.

The next chapter will provide details about the methodology of research and data analysis techniques used in this dissertation.

CHAPTER 3: METHODOLOGY

Introduction of Chapter

The purpose of this study is to examine the consumer's perception of the e-service quality and explore the satisfaction and dissatisfaction factors of banks in the U.A.E. and Oman. An instrument to measure the different dimensions of e-service quality and web site quality was needed and as the development of such instrument was outside of the scope of this study, it was decided to replicate an instrument developed by (Minjoon Jun 2001) for measuring the e-banking service quality. The instrument included 17 factors classified by three groups: banking service quality, customer service quality, and online system quality which covers the needs of this study. However, the adopted scale was used as a general guideline for developing the survey and it was later restructured by extracting relevant factors from the collected data.

The dimensions of the Minjoon's instrument were initially reduced to 15 dimensions by adding and removing some factors in order to emphasize the measurement scale on e-services rather than web site quality. So the study replicated a previous instrument for measuring the e-banking service quality, modified the dimensions and then derived the final instrument. The methodology used to assess the e-banking service is proposed in the following sections: the first section of this chapter discusses the data collection procedures. The second section discusses the questionnaire development. The third section provides definition of the variables and the fourth section describes the statistical analysis techniques used.

Data Collection

The data for the study has been collected through an online survey to enable the respondents to simultaneously answer the questionnaire while navigating the e-banking services (See Appendix A). Some of the questions investigated

the availability of the service and in some cases its quality was unknown to the respondents. Hence, we anticipated that many respondents would not have used these services and it would be more helpful for them to check and experiment with them while answering the questions.

Respondents received an email invitation include the survey URL and were requested to register themselves on the web site before answering the questionnaire. The purpose of this registration was to facilitate tracking responses and permit each respondent to submit only one questionnaire for each evaluated bank. Respondents were also able to submit multiple responses if they evaluated different banks. The respondent's basic details such as name email, country, and preferred language was captured during the registration and a list of predefined banks were displayed to choose from. The questions were displayed in both Arabic or English according to the user preference and answers were saved in a database. After the registration procedure was completed by respondents, the survey screen was split into 2 adjacent screens: the left screen displayed survey questions and the right screen displayed the bank's web site.

The data collection duration was limited to two months due to the time limitation for the dissertation research. The bank's customers from different sources were invited to complete the survey. An invitation letter was sent to e-banking department in all selected banks to assist with distributing the survey to their clients; however we got few responses and a rejection of direct participation from the banks due to confidentiality issues. Another survey distribution channel was utilized by placing an announcement on the student blackboard on the BUID web site inviting them to participate in the survey without directly sending emails to them due to confidentiality issues. However, unfortunately no responses were received as well. The third channel was inviting 110 personal and business contacts having online bank accounts from both the U.A.E. and Oman and replies were at a delivery rate of 59% (n=65) and usability rate of 54% (n=60). Out of the 65 received responses that were received, 5 were deemed unusable. The unusable 5 responses were rejected due to a high number of missing answers and the low number

of relieved responses in general was because: 1) the number of bank customers who are using e-banking services are very low in the region. 2) The questionnaire was long and respondents found some difficulties in understanding some of the questions. However the response rate was considered acceptable for the study.

Questionnaire Development

The proposed instrument to measure the e-banking service quality has replicated the instrument developed by (Minjoon Jun 2001) for measuring e-banking service quality and used as a base scale for developing the survey questionnaire. However, the final scale used for the data analysis was slightly different as a consequence of extracting factors from the collected data. On the basis of reviewing the replicated instrument and previous research in the e-banking service quality, it was obvious that the banking service quality group of items in the instrument needs to be enhanced, and so three new factors were added to this group: Information Quality, Efficiency of e-services, and Availability of e-services.

Sadiq (2007) investigated e-banking service quality in Saudi Arabia which in several respects has a similar culture to Oman and U.A.E. They recommended that efficiency and security are the most influencing factors for customers, consequently the efficiency factor was added to both the banking and system groups of items: Efficiency of e-services which measures transaction and interaction performance, and Efficiency of web site which measures the speed of access or downloading. According to Loonham and O'Loughlin (2008) respondents were less interested in general information when using e- banking and sought information specifics relating to personal account details, therefore the Information Quality factor which was newly added to the banking service quality group substituted for both the accuracy and timeliness factors in the online system quality group, because information was more relevant to the banking service/product. The study was focused on the e-service quality of banks rather than physical banking services, and so another four factors were removed from the customer service quality group.

The access and collaboration factors were substituted by the communication factor; courtesy and understanding the customer were substituted by the competency factor.

Adopted Scale (Minjoon Jun 2001)	*Proposed Scale*
Banking Service Quality	**Banking Service Quality**
(1 Dimension)	**(4 Dimension)**
Product variety /Diverse Feature	Product variety /Diverse Feature
	Information Quality
	Efficiency of e-services
	Availability of e-services
Customer Service Quality	**Customer Service Quality**
(10 dimensions)	**(6 dimensions)**
Reliability	Reliability
Responsiveness	Responsiveness
Competence	Competence
Courtesy	
Creditability	Creditability
Access	
Communication	Communication
Understanding the customer	
Collaboration	
Continuous improvement	Continuous improvement
Online system quality	**Online system quality**
(6 Dimensions)	**(5 Dimensions)**
Contents	Contents
Accuracy	
Ease of use	Ease of use
Timeline	
Aesthetics	Aesthetics
Security	Security
	Efficiency of Web Site

Table 1: Comparison between adopted and proposed sales

Definitions of Scale factors

In measuring the consumer's perception of e-banking service quality, 64 Likert-Type items were identified ranging from 1-strongly agree to 5- strongly disagree or 1-Never to 5-Always according to the context of the question. The

questions were adopted from the previous research of Loonam and O'Loughlin (2008); Sadiq (2007) and Minjoon (2001), revised and modified after building a prototype and trialing it on two bank customers.

Product variety /Diverse Feature

In measuring the Product variety /Diverse Feature, 4 Likert-type items were identified to measure the degree of satisfaction on offered services. The variety and diversity of e-banking services and products are considered a very important factor for customers (Minjoon Jun 2001).The proposed items included the range of product, description of product, and financial comparison of products. An additional item about the localization of services was suggested in discussion with pilot study interviewees and added to the dimension.

Information Quality

The information provided by the e-banking website should be relevant to the financial services as customers do not care about the generic information and more specifically should be related to their financial records. It also should not be forced upon customers who will acquire it whenever needed (Loonam and O'Loughlin 2008). This factor was also proposed by the SITEQUAL instrument measuring accessibility quality, contextual quality, representational quality, and intrinsic quality (Webb and Webb 2004). Therefore the factor was added to the e-banking service quality group instead of online system quality group and included 3 Likert-Type items: accuracy and relevance of product/service information, well formatted information, and ease of understanding of the financial terms. The information quality dimension replaced accuracy and timeliness dimensions as it is more relevant to the banking service and products.

Efficiency of Banking Transactions

The Efficiency factor was drawn from E-S-QUAL which is an instrument proposed by (Parasuraman *et al.* 2005) for measuring e-service quality.

Efficiency is defined as “The ease and speed of accessing and using the site” (Parasuraman et al. 2005), however for the purpose of the study, Efficiency of e-service quality and web site quality will be measured. The efficiency factor was also identified by Sadiq (2007) in his instrument for measuring e-banking service quality in the Middle East and was identified as one of the most important facotrs. This factor was measured though 6 Likert-Type items: speed of transaction, option to cancel transaction, instruction about transaction, transaction status confirmation, help instructions when transaction fails, and tracing transaction status.

Availability of banking e-services

A new proposed factor was derived from the product variety / diverse features measuring the availability of a number of important e-services. It is different in terms of checking whether or not the service exists rather than assessing its quality. Eleven Likert-Type items were proposed: notification service through email/sms, disabling notification, and bill payment, registration of bill payers, editing customer profile, account inquiry, credit card inquiry, money transfer, and insurance, loans, and fixed deposits.

Reliability

Reliability has been defined as the technical functioning of the site, and the accuracy of execution of service promises (Zeithmal and Bitner 2000). “Reliability involves consistency of performance and dependability” (Parasuraman et al. 1985) and that reliability is achieved when the service is delivered right from the first time accurately and at the designated time. The online service can be considered reliable when it is delivered on time and accurately (Van Riel et al. 2003). Customers closed their accounts due to inaccurate records, and multiple errors and mistakes (Allred and Addams 2000).The reliability factor included four Likert-Type items: correctness of service, accuracy of financial records, delivery of product/service as promised, and access to customer service while abroad.

Competence

Competence is “the skill, expertise and professionalism with which the service is executed” (Johnston 1995), he further mentioned that competence is satisfied when the service is carried out correctly according to customer instructions and by knowledgeable provider staff. “Competence means possession of the required skills and knowledge to perform the service” (Parasuraman *et al.* 1985) and involves knowledge and skills of contact and support personnel. It has been known to happen that: “..bank customers defected because of lazy, irresponsible, and unknowledgeable employees” (Allred and Addams 2000). Five Likert-Type items were identified for the competence factor including: knowledge of employees in solving problems efficiently, customer can find assistance from the customer service representative, offering live help in case of problems, solving problems quickly, and addressing complaints in a friendly and transparent way.

Creditability

Creditability was defined as trustworthiness, believability of the customer in the firm as a result of company reputation and personal characteristics of the contact personnel and the degree of proper interaction with customers (Parasuraman *et al*. 1985). Three Likert-Type items were identified: no disclosure of private customer records, degree of customer confidence in the bank, providing electronic complaints and suggestion service.

Communication

Communication is keeping the customers well informed with the ability to listen and understand them through explaining the service, its cost, tradeoffs between service and cost and the support procedures (Parasuraman et al. 1985).Communication was defined as the ability to speak the language, listen and understand the customer. Many customers switch to other banks due to hidden costs, changing policies and increasing fees (Allred and Addams 2000). Communication factor included three Likert-Type items: communicating to customer service via emails and getting feedback,

receiving clear answers regarding inquiries, and receiving individualised news, product, and service-related emails.

Continuous improvement

To meet the customer changing needs through providing the desired e-service quality, banks should continuously work on improving the level of quality of e-services, products, customer services and website features (Minjoon Jun 2001). Hence customers will have the feeling that the bank takes care of their needs, suggestions, and complaints. This factor is very important for the evaluation of e-banking service quality in this study. The Continuous Improvement factor is measured through four Likert-Type items: performing improvement on online services, performing improvement on banking products, performing improvement on customer service, and implementing suggestions and complaints system.

Contents

Contents was identified as an online system quality factor by Doll and Torkzadeh (1988) and Minjoon (2001) and was identified as an important factor in the e-SQ instrument (Palmer *et al.* 2000). The accuracy of content, usefulness, integration with other sources are all considered important satisfaction items. Four Likert-Type items were identified: publishing policies regarding customer information, free of errors content, availability of FAQ, and providing linkage with general financial service web sites.

Ease of use

Ease of Use is considered an important factor for measuring the online system quality and particularly ease of web site navigation(Jun and Cai 2001). It is also defined as "user friendliness" and as a measure of how better end users can find an application more usable and be able to benefit from its various features in becoming more productive or support decision makers (Doll and Torkzadeh 1988). It is becoming an important factor in software design (Branscomb and Thomas 1984). Six Likert-Type items identified the

Ease of Use factors: Search capability, providing Site map, Easy login procedures, accessibility of web site 24/7, Navigation of web site is easy, availability of content in multiple languages.

Aesthetics

An appealing web site usually attracts customer attention (Minjoon Jun 2001). The aesthetics of the web site and its "Visual appeal" was included in the WebQual instrument for measuring web site quality such as using attractive colors and graphics that are pleasing to the customer's eye (Loiacono et al. 2002). Two Likert-Type items were identified for the Aesthetics factor: Web site appearance is user friendly, and use of graphics and icons is reasonable.

Security

Security was defined as the freedom from danger, risk, or doubt and involves physical safety, financial security, and confidentiality (Parasuraman *et al*. 1985). It was identified as the most influential factor affecting the evaluation of e-banking service quality(Sohail and Shaikh 2007). The Security factor was included in many instruments of previous research (Francis and White 2002 ;Novak *et al.* 2000;Szymanski and Hise 2000). One of the main findings of adoption of e-banking in Oman was that security and data confidentiality issues have been a major barrier to consumers using the e-banking services (Khalfan 2006). Security factor was measured using four Likert-Type items: usage of Virtual keyboard on login page, changing authentication method regularly, displaying safety/privacy notifications, and encryption of transaction information.

Efficiency of Web Site

The Efficiency factor measures both e-service and website quality and was already mentioned in Banking Service Quality group. The website efficiency is usually measured as how easy it is to navigate the web site, how fast to download files, or search for information which are mentioned in previous research on e-service quality in the concept of "Ease of Use". Efficiency of

Web Site included six Likert-Type items: compatibility of web site with different browsers, speed of downloading files, finding information and services easily, well preparation and organization of the website, getting quick response, and load pages promptly.

Statistical Analysis Techniques

The initial scale for measuring e-banking service quality included number of newly added factors and items and to validate the results empirically, factor analysis and reliability test of the measurement instrument were carried out before performing the data analysis.

“Reliability refers to the instrument’s ability to provide consistent results in repeated uses” and “Which provide confidence that the empirical findings accurately reflect the proposed constructs” (Flynn et al. 1994). Cronbach (1951) proposed another measure for Cronbach’s α which is loosely equivalent to splitting the data in two in every possible way and computing the correlation coefficient for each split. The average of these values is equivalent to Cronbach’s α, which is the most common measure of scale reliability (Field 2005). Books and articles considers 0.7-0.8 is an acceptable value for Cronbach’s α , however Cortina (1993) noted that the value of Cronbach’s α depends on the number of items in the scale as the top half of the equation of Cronbach’s α includes the number of items squared, therefore as the number of items increase, α also will increase (Field 2005).

$$\alpha = \frac{N^2\,\overline{\mathrm{Cov}}}{\sum S^2_{\mathrm{item}} + \sum \mathrm{Cov}_{\mathrm{item}}}$$

Another interpretation of Cronbach’s α was mentioned by (Field 2005) as it measures “Unidimensionality”, which means the extent to which the scale can measure one underlying factor or construct. However (Grayson 2004) argues that a Cronbach’s α of 0.8 can be achieved in a scale with one underlying

factor or two correlated or uncorrelated factors. (Cortina 1993) has shown that with more than 12 items with a high correlation ($r > 0.5$), Cronbach's α can reach above 0.7 which shows that it should not be used as a measure\e of "Unidimensionality". Therefore, Cronbach (1951) suggested that if several factors exist then the formula should be applied separately and only to groups of items relating to different factors.

In a reliable scale all items should correlate with the total score, so we are looking for items that don't correlate with the overall score from the scale with values less than 0.3. Another method used to check the scale reliability is to analyze whether the **α** for any item is greater than the overall value of α for the scale, and if it does, then the deletion of the item will improve the overall value of α and deletion of this item then commensurately improves reliability (Field 2005).

SPSS software was used for conducting the reliability analysis, factor analysis, and generating frequencies and descriptive information about factors and items.

Summary of Chapter

The primary objectives of this chapter were to provide conceptual overview about the methodology of research in terms of : (1) data collection through the online survey application obtaining 60 usable responses, (2) the framework for developing the questionnaire by replication of a previous study for developing a measurement instrument for e-banking service quality and discussion of the modifications made to it to suit the purpose of this study, (3) provided definitions for the factors, and (4) discussed the techniques used in purifying the instrument and analyzing the data.

In the next Chapter, the procedures for data analysis and findings of the study are covered in more detail. The internal reliability of each factor was examined using Cronbach's Alpha and the results of the exploratory factor

analysis were used in confirming the final factors and results of the data analysis discussed.

CHAPTER 4: FINDINGS OF THE STUDY

Introduction of Chapter

The purpose of this chapter is to describe the data analysis and present the results of the study. The statistical analysis of data collected from the questionnaire is presented in the three sections within this chapter: the first section presents how the measures used in this study were refined by conducting preliminary analysis to explore the factor structure; the second section explains the results of the reliability test that was conducted to check the scale reliability; and the third section concludes with the results of data analysis and discusses the main findings of the study.

Factor Analysis

Factor analysis was conducted using SPSS software to assess whether the 64 items load on the proposed factors of the e-banking service quality scale. “Factor analysis was employed to reduce data set to more manageable size while retaining as much of the original information as possible” (Field 2005).

Factor analysis using principle components factor analysis with varimax rotation with maximum iteration for convergence 30 was conducted on the 64 items of the scale. Coefficient values below 0.3 were suppressed. Results of the factor analysis showing the loadings of items on each of the extracted factors are shown in Table 2.

Items were added to factors according to their loading values. Usually items are added to factors with higher loading values, however four items were shifted from high loading factors to lower loading ones because they were logically belonged to the items within those factors. VAR55: Transaction information is encrypted and secured was shifted from Factor 1 with loading value of 0.612 to Factor 4 with a loading value of 0.409, VAR28: “I have confidence in the bank’s service” was shifted from Factor 2 with a loading value of 0.567 to factor 8 with the loading value of 0.36, VAR56: Transaction status is traceable was shifted from Factor 2 with a loading value of 0.462 to

Factor 3 with the loading value of 0.36, and VAR26: “I get clear answers regarding my inquiries” was shifted from factor 2 with a loading value of 0.454 to Factor 7 with the loading value of 0.433.

Factors	***Factor Loading***
Factor 1	
VAR57: Transactions can be conducted quickly	0.815
VAR39: Navigation and moving to different areas of the site is easy	0.812
VAR54: site is well prepared and organized	0.767
VAR27: I get quick response for my actions	0.755
VAR23: Finding what I need is simple and easy	0.714
VAR53: This site initiates and operates immediately After entering my transaction information,	0.688
VAR63: Website is Compatible with different browsers	0.685
VAR43: Pages load promptly	0.682
VAR20: Files can be downloaded at high speed	0.671
VAR15: Easy login procedures	0.670
VAR61: Web site is accessible 24/7	0.609
VAR45: Product/ Service can be obtained as advertised	0.509
VAR64: When I complete a transaction, a confirmation statement is displayed	0.417
Factor 2	
VAR32: Information is well formed and structured	0.865
VAR34: It is easy to understand the financial terms	0.715
VAR37: My complaints are addressed friendly and transparently	0.686
VAR21: Financial information is accurate, timely and relevant	0.662
VAR44: Problems are taken care of quickly	0.607
VAR24: Help instructions about transactions are available	0.539
VAR11:Customer service employee is knowledgeable and can solve problems efficiently	0.458
Factor 3	
VAR36: Money Transfer service to other banks is available	0.763
VAR2: Authentication method changes from time to time	0.679

VAR59: Virtual keyboard is used is enter password on login page	0.618
VAR50: Search capability is helpful	0.503
VAR19: FAQ pages are available	0.491
VAR51: Site map is provided and useful	0.430
VAR56: Transaction status is traceable	0.371
Factor 4	
VAR49: Safety/privacy notifications are displayed	0.753
VAR17: Email /SMS notification is sent when a transaction is processed	0.636
VAR18: Email/SMS service can be enabled and disabled	0.626
VAR38: My personal details and password can be changed	0.545
VAR55: Transaction information is encrypted and secured	0.409
VAR31: Information is given on what to do if the transaction is failed	0.327
Factor 5	
VAR7:Continuous improvement on customer services is performed	0.737
VAR6: Continuous improvement on banking products is performed	0.699
VAR52: Suggestions and complaints are considered and implemented	0.569
VAR8:Continuous improvement on online services is performed	0.511
Factor 6	
VAR12:Customer service is accessible when I am abroad	0.812
VAR13:Customer service representative is assigned to deal with each e-banking customer when they need assistance	0.714
VAR33: Insurance, Loans, fixed Deposit requests are available	0.575
VAR10:Credit Card transaction inquiry service is available	0.428
Factor 7	
VAR16: Electronic complaint and suggestion service is available	0.764
VAR25: I can communicate to customer service via emails and get quick response	0.752
VAR30: In the case of problems, the site offers live help with a person	0.445
VAR26: I get clear answers regarding my inquiries	0.433
Factor 8	
VAR9:Correct service is received at all times	0.716

VAR22: Financial records are accurate	0.515
VAR28: I have confidence in the bank's service	0.362
Factor 9	
VAR47: Provide financial product/service comparisons	0.740
Factor 10	
VAR40: New bill payers can be registered	0.728
VAR46: Provide considerable range of products	0.463
VAR3: Bill Payments service is available	0.448
VAR48: Provide localized products/services (Islamic Banking)	0.426
Factor 11	
VAR4: Content is available in multiple languages.	0.800
VAR60: Web site appearance is user friendly	0.504
Factor 12	
VAR14: Describe product features in detail	0.547
VAR35: Linkage between e-banking web site and general financial service providers web site	0.323
Factor 13	
VAR42: Option to cancel transactions is provided	0.846
Factor 14: Dropped by SPSS in the rotated component matrix	
Factor 15	
VAR41: No Disclosures regarding confidentiality and privacy of customer records	0.774
Factor 16	
VAR1: Account inquiry service is detailed and useful	0.710
Factor 17	
VAR5: Content is free of errors	0.672
VAR62: Web site policies regarding customer information is published	0.605

Table 2: Extracted factors of the e-banking service quality instrument

Reliability Analysis

The initial proposed instrument composed of 64 items across 15 factors. Reliability test was carried out on each factor separately as there were a large number of item (Cronbach 1951).

The reliability test was applied to Factor 1 which included 13 items**.** Cronbach's α increased from 0.922 to 0.931 by removing variable 64: "When I complete a transaction, a confirmation statement is displayed" and variable 61: Web site is accessible 24/7. The values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to Factor 2 which included 7 items**.** Cronbach's α was 0.878. No items had Cronbach's α greater than the overall Cronbach's α. The values of the corrected item-Total correlation were > 0.3, therefore the subscale has high reliability.

The reliability test was applied to Factor 3 which included 7 items**.** Cronbach's α increased from 0.848 to 0.856 by removing variable 1: Site map is provided and useful. Values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to Factor 4 which included 6 items**.** Cronbach's α increased from 0.760 to 0.777 by removing variable 55: Transaction information is encrypted and secured. Values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to Factor 5 which included 4 items**.** Cronbach's α increased from 0.841 to 0.872 by removing variable 52: Suggestions and complaints are considered and implemented. Values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to Factor 6 which included 4 items**.** Cronbach's α was 0.775. No items had Cronbach's α greater than the overall Cronbach's α. values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to Factor 7 which included 4 items**.** Cronbach's α was 0.778. No items had Cronbach's α greater than the overall Cronbach's α. values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to factor 8 which included 3 items**.** Cronbach's α was 0.765. No items had Cronbach's α greater than the overall Cronbach's α. values of corrected item-Total correlation were >0.3, so the subscale has high reliability.

The reliability test was not applied to Factor 9 since it has only one item. The reliability test was applied to Factor 10 which included 4 items**.** Cronbach's α increased from 0.715 to 0.734 by removing variable 40: "New bill payers can be registered". Values of corrected item-Total correlation were > 0.3, so the subscale has high reliability.

The reliability test was applied to Factor 11 which included 2 items**.** Cronbach's α had low value of 0.427 < .7 and values of corrected item-Total correlation were < 0.3, so the subscale has low reliability.

The reliability test was applied to Factor 12 which included 2 items**.** Cronbach's α had low value of 0.553 < .7, so the subscale has low reliability.

The reliability test was not applied to Factor 13 as again it has only one item.

Factor 14 was dropped by SPSS in the rotated matrix.

The reliability test was not applied to Factor 15 as it has one item.

The reliability test was not applied to Factor 16 as it has one item.

The reliability test was applied to Factor 17 which included 2 items**.** Cronbach's α had low value of 0.384 < .7 and values of corrected item-Total correlation were < 0.3, so the subscale has low reliability.

Factors 13, 15, and 16 were dropped from the scale as they had small % of variance and single item which is not useful to measure the factor. Extracted factors were reduced from 17 to 9 factors.

The final step was renaming the extracted factors according to the logical meaning of items within each factor as shown in Table 3.

Factor	*Named Factor*	*Cronbach's α*	*% of Various*	*Reliability Result*
Factor 1		0.931	30.028	
Factor 2		0.878	7.729	
Factor 3		0.856	6.067	
Factor 4		0.777	5.459	
Factor 5		0.872	4.671	
Factor 6		0.775	3.519	
Factor 7		0.778	3.063	
Factor 8		0.765	2.766	
Factor 9		0.734	2.600	Dropped
Factor 10		0.427	2.494	
Factor 11		0.553	2.318	Dropped
Factor 12			2.154	Dropped
Factor 13			2.040	Dropped
Factor 14			1.860	Dropped
Factor 15		0.384	1.758	Dropped
Factor 16		0.878	1.674	Dropped
Factor 17		0.856	1.597	Dropped

Table 3: Summary of factors after factor analysis and reliability test

In the final purified instrument shown in Table 4 after extracting the factors from collected data and employing reliability test on each factor were reduced from initially proposed15 factors to 9 factors and the items reduced from 64 to 46 by removing 18 items.

The Reliable instrument for measuring e-banking service quality

Efficiency

- Transactions can be conducted quickly
- Navigation and moving to different areas of the site is easy

- Web Site is well prepared and organized
- I get quick response for my actions
- Finding what I need is simple and easy
- This site initiates and operates immediately after entering my transaction information
- Website is Compatible with different browsers
- Pages load promptly
- Files can be downloaded at high speed
- Easy login procedures
- VAR45: Product/ Service can be obtained as advertised

Information Quality

- Information is well formed and structured
- It is easy to understand the financial terms
- My complaints are addressed friendly and transparently
- Financial information is accurate, timely and relevant
- Problems are taken care of quickly
- Help instructions about transactions are available
- Customer service employee is knowledgeable and can solve problems efficiently

Ease of Use

- Money Transfer service to other banks is available
- Authentication method changes from time to time
- Virtual keyboard is used is enter password on login page
- Search capability is helpful
- AQ pages are available
- Transaction status is traceable

Security

- Safety/privacy notifications are displayed
- Email /SMS notification is sent when a transaction is processed
- Email/SMS service can be enabled and disabled
- My personal details and password can be changed
- Information is given on what to do if the transaction is failed

Continues Improvement

- Continuous improvement on customer services is performed
- Continuous improvement on banking products is performed
- Continuous improvement on online services is performed

Competence

- Customer service is accessible when I am abroad
- Customer service representative is assigned to deal with each e-banking customer when they need assistance
- Insurance, Loans, fixed Deposit requests are available
- Credit Card transaction inquiry service is available

Reliability

- Electronic complaint and suggestion service is available
- I can communicate to customer service via emails and get quick response
- In the case of problems, the site offers live help with a person
- I get clear answers regarding my inquiries

Creditability

- Correct service is received at all times
- Financial records are accurate
- I have confidence in the bank

Product variety /Diverse Feature

- Provide considerable range of products
- Bill Payments service is available
- Provide localized products/services

Table 4: E-banking service quality measurement instrument

Data Analysis

The purpose of the study was to identify the satisfaction and dissatisfaction factors of the consumer's perception of the e-banking service quality, in addition to exploring the performance of different banks in the U.A.E. and Oman in providing e-banking services.

The factor analysis and reliability test performed on the survey data resulted in deriving the final scale composed of 9 factors and 46 items. The data was analyzed to uncover the satisfaction/dissatisfaction factors for the whole sample, reduced down to compare the service quality in each country, and further for each bank.

The measurement scale was Likert-Type 1 to 5 with middle neutral point of value 3. The recording of the responses into 3 values (1, 3 and 5) resulted in categorizing the data into 3 groups: 1 Satisfied, 3 Neutral (neither satisfied nor dissatisfied), and 5 Dissatisfied.

By ranking the factors according to mean values, the lower three values were considered satisfaction factors for consumers and the higher three values were considered dissatisfaction factors. Satisfaction factors of the e-banking services were: Continuous Improvement (Mean=3.050), Reliability (Mean=3.154), and Ease of Use (Mean=3.156) and dissatisfaction factors were: Security (Mean=3.577), Product Variety/Diverse Features (Mean=3.617) and Creditability (Mean=3.783).

Factor	***Rank***	***Mean***	***SD***	***Scale***
Continues Improvement	1	3.050	1.045	1-5
Reliability	2	3.154	1.230	1-5
Ease of Use	3	3.156	1.275	1-5

Competence	4	3.250	1.241	1-5
Efficiency	5	3.371	0.997	1-5
Information Quality	6	3.410	1.012	1-5
Security	7	3.577	1.258	1-5
Product variety /Diverse Feature	8	3.617	1.177	1-5
Creditability	9	3.783	1.043	1-5

Table 5 Mean scores of factors of e-banking service quality

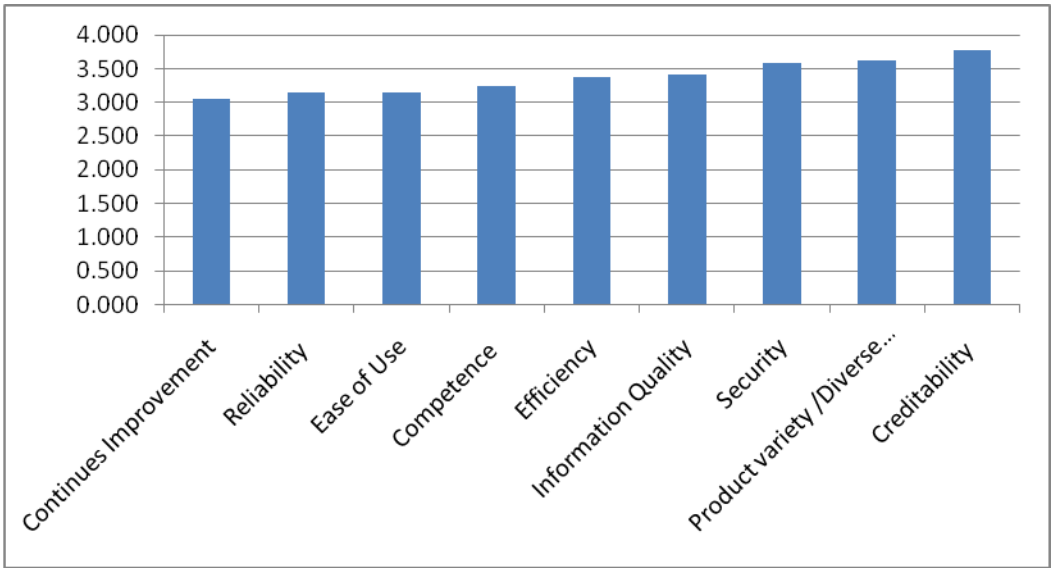


Figure 1: Chart for mean scores of factors of e-banking service quality

By comparing the mean values of e-banking service quality between the U.A.E. and Oman, we found that there were six factors with lower mean score in U.A.E. than Oman indicating more satisfaction level from U.A.E. respondents: Efficiency, Information Quality, Ease of Use, Security, Continuous Improvement, and Creditability. Three factors have higher mean values in Oman than U.A.E.: Competence, Reliability, Product Variety/Diverse

Features Two satisfaction factors identified by the overall factor scores are listed within the three higher score factors of Oman, which indicated that higher level of satisfaction of e-banking services are achieved in Oman than U.A.E.

Factor	***Mean Oman***	***Mean U.A.E.***
Efficiency	3.410	***3.347***
Information Quality	3.416	***3.405***
Ease of Use	3.156	***3.156***
Security	3.609	***3.557***
Continues Improvement	3.072	***3.036***
Creditability	3.841	***3.748***
Competence	***3.141***	3.318
Reliability	***3.141***	3.162
Product Variety /Diverse Features	***3.464***	3.712

Table 6: Mean scores of e-banking service quality factors for Oman & U.A.E.

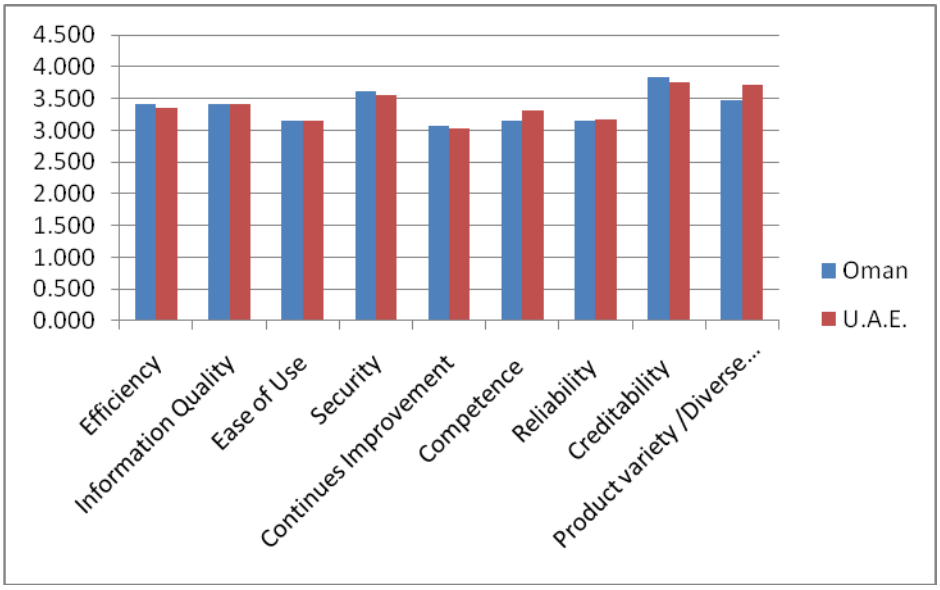


Figure 2: Chart for mean scores of e-banking service quality factors for Oman & U.A.E.

By looking at the mean scores of the different banks studied in the U.A.E. and Oman, it is noticeable that Abu Dhabi Islamic Bank had the highest score and

Noor Islamic bank had the lowest score. Noor Islamic bank is a relatively new bank and had only recently introduced its e-banking services. The National Bank of Oman had the highest score in Oman and Oman Arab Bank had the lowest score.

Country	*Bank*	*Mean*
UAE	Abu Dhabi Islamic Bank	3.048
	Mashreq Bank	3.167
	National Bank of Dubai	3.298
	Union National Bank	3.402
	National Bank of Abu Dhabi	3.537
	Dubai Islamic Bank	3.602
	Noor Islamic Bank	3.837
Oman	National Bank of Oman	3.194
	Muscat Bank	3.646
	Oman Arab Bank	3.918

Table 7: Mean scores of e-banking service quality factors for banks in Oman & U.A.E.

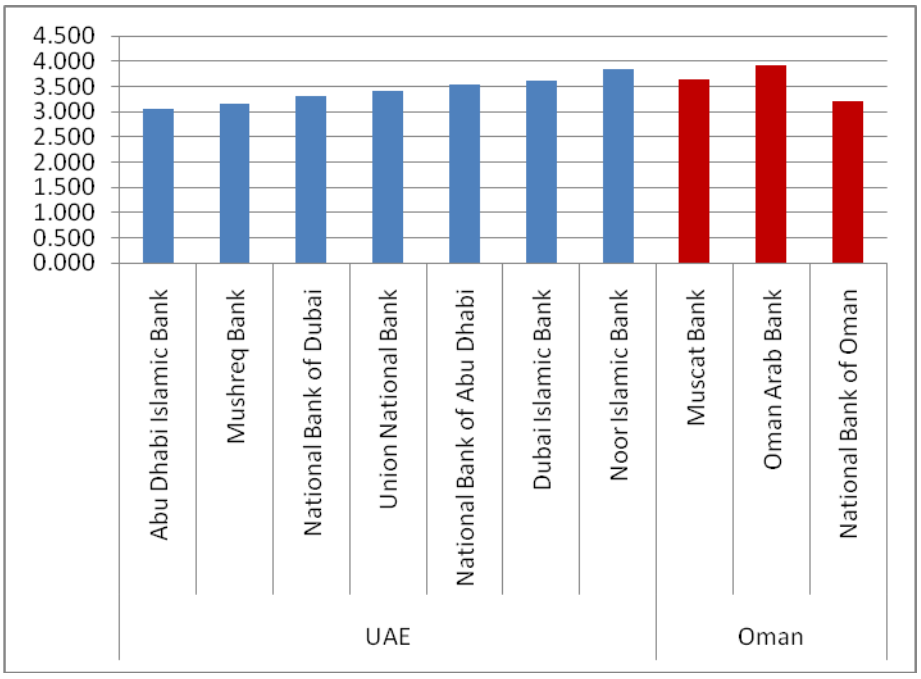


Figure 3: Chart for mean scores of e-banking service quality factors for banks in Oman & U.A.E.

Further analysis was carried out on the satisfaction/dissatisfaction factors using frequencies for the answers to examine the results after considering neutral answers (neither satisfied nor dissatisfied). The first step was to record the scores into three values using SPSS software: 1 and 2 transferred to 1 indicating satisfied, 4 and 5 transferred to 5 indicating dissatisfied and 3 is indicating neutral (neither satisfied nor dissatisfied).

By generating the frequencies of answers by using SPSS software, the number and percent of answers for each group are displayed in Table 8. The results indicated that the percentage of dissatisfaction scores in all factors except Reliability are higher than the satisfaction percentage and that the neutral percentage (neither satisfied nor dissatisfied) is about 40% in most of the factors which is probably attributable to the fact that either respondents have insufficient knowledge and awareness of the e-banking services or the affordability of the services is not up to their required level of satisfaction.

Factor	***Satisfied***		***Neutral***		***Dissatisfied***	
	N	***%***	***N***	***%***	***N***	***%***
Efficiency	8	14	27	45	25	42
Information Quality	11	18	23	38	26	44
Ease of Use	15	26	22	36	23	38
Security	12	19	16	27	32	54
Continues Improvement	17	29	24	40	19	31
Competence	14	23	23	39	23	38
Reliability	19	31	23	39	18	30
Creditability	5	9	21	35	34	56
Product variety /Diverse Features	8	13	22	37	30	49

Table 8: Satisfaction/Dissatisfaction frequencies by factor

The graphical representation of the satisfaction/dissatisfaction frequencies demonstrates the different points on the scale where satisfaction and dissatisfaction lines having small difference indicating the “Good Work” of e-banking on 3 factors: ease of use, continues improvement, and product

variety/diverse features and other points where a significant difference has been noticed indicating “Improvement is Needed” for 3 factors: efficiency, security, and creditability.

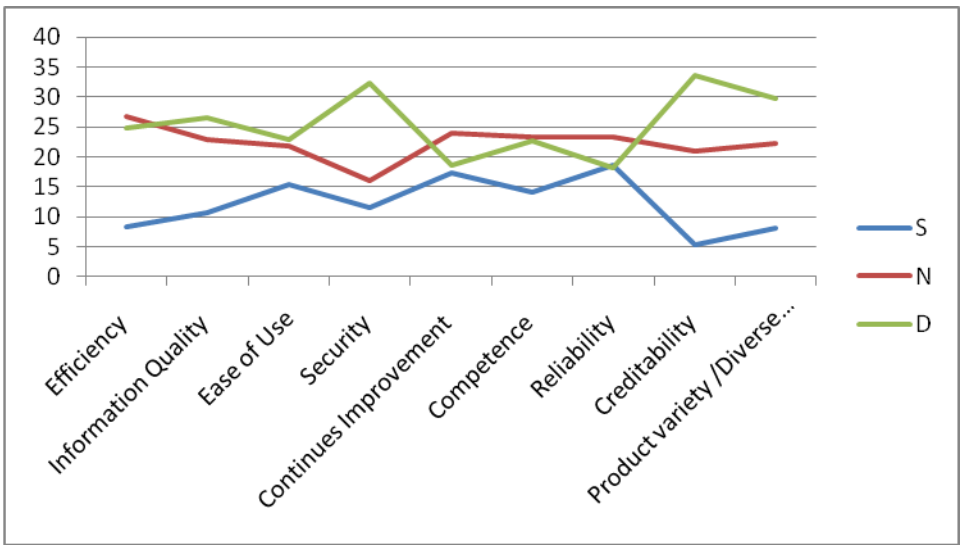


Figure 4: Chart for Satisfaction/Dissatisfaction frequencies by factor

A final analysis step of frequencies was analyzing the percentage of each factor to total value of satisfaction/dissatisfaction score which is shown in Tables 9 and 10.

The top 5 factors in the satisfaction Table 9 represented 71% of the total score which indicated there were more satisfaction on reliability, usability, and security and less satisfaction about quality of information, loading and downloading time, variety of services and creditability in general.

Factor	***N***	***%***
Reliability	19	17
Continues Improvement	17	16
Ease of Use	15	14
Competence	14	13
Security	12	11
Information Quality	11	10
Efficiency	8	8
Product variety /Diverse Feature	8	7

Creditability	5	5
Total	**109**	**100**

Table 9: Satisfaction percentage for factors

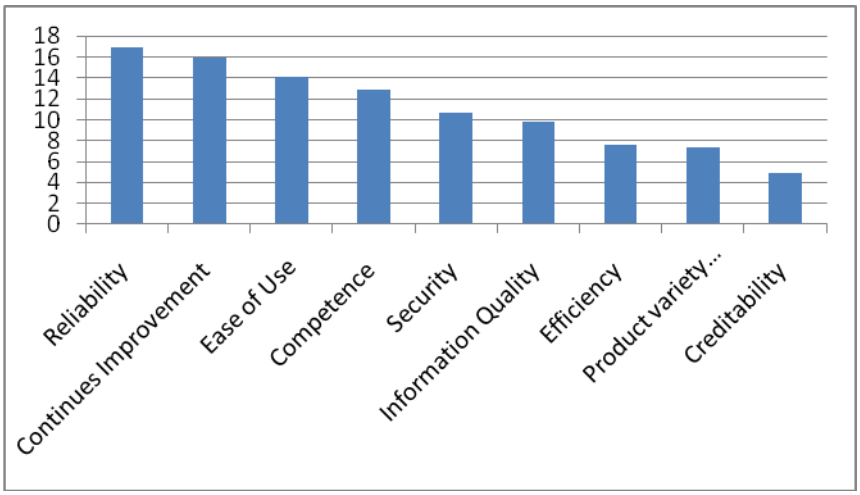


Figure 5: Chart for satisfaction percentage of factors

Similarly, the top 5 factors in the dissatisfaction Table 10 represented 64% of the total score indicating that creditability, security, variety of services and products, information quality and security need improvements by service providers.

Factor	***N***	***%***
Creditability	34	15
Security	32	14
Product variety /Diverse Feature	30	13
Information Quality	26	11
Efficiency	25	11
Ease of Use	23	10
Competence	23	10
Continues Improvement	19	8
Reliability	18	8
Total	**230**	**100**

Table 10: Dissatisfaction percentage by factors

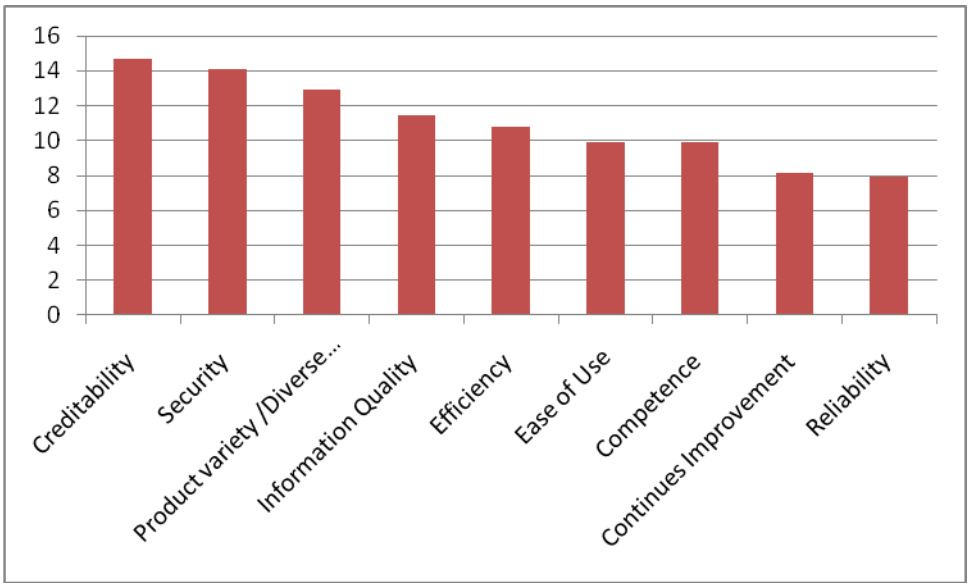


Figure 6: Chart for dissatisfaction percentage by factors

Summary of Chapter

This chapter presented the analysis and findings performed on the collected data. It started by employing factor analysis on the data and resulted in extracting 17 factors. Secondly a reliability test was carried out on the extracted factor and resulted in reducing the items from 64 to 46 items and identifying 9 reliable factors for measuring consumer's perception of e-banking service quality: efficiency, information quality, ease of use, security, continuous improvement, competence, reliability creditability, and product variety/diverse features. Finally, the data was analyzed and satisfaction factors were: reliability continuous improvement and ease of use, dissatisfaction factors were security, product variety/diverse features, and security.

The next chapter will discuss the findings, present conclusions, limitations, implications for academics and practitioners, and recommend future research.

CHAPTER 5: CONCLUSIONS

Introduction of Chapter

This chapter concludes this research by discussing the statistical results from Chapter 4 in the light of the literature review, providing implications for academics, practitioners, and politicians. In addition it identifies the limitations associated with the study and provides recommendations for future research.

Discussion of Findings

The development of an instrument for measuring e-banking service quality was not a major objective for this study. However, a valid measurement scale was required to conduct the survey. By examining the instruments proposed by previous research, it was found that e-service quality was usually measured according to the type of studied industry or location and it was difficult to find a generic instrument for measuring the quality of kinds of e-services. Researchers have recommended that studies examine the validity of proposed scale attributes for the target e-services.

This study has replicated the generic measurement instrument proposed by Minjoon (2001) for measuring e-banking service quality and has derived 9 factors out of the original 17 dimensions. These factors had identified in particular the key satisfaction and dissatisfaction attributes of e-banking service quality perceived by customers in the U.A.E. and Oman and can be utilized in other research studies that may investigate e-banking in G.C.C. countries. A review of derived factors relative to previous instruments measuring e-service quality in general and e-banking service quality in particular was conducted in order to compare the importance of each factor with previous research.

Table 11 summarizes the different attributes proposed by previous research which measured the main two dimensions of e-services, namely: web site

quality and e-service quality and in some cases addressed the customer service dimension as well. The factors of the derived instrument in this study were compared with the attributes of the instruments proposed by previous research as shown in Table 12 which indicates that most of the identified factors in this study were addressed in previous instruments. It also states the number of times each factor were included in an instrument in order to indicate the importance of the factors. In regard to satisfaction factors proposed by this study, Efficiency and Continuous Improvement factors were included in few previous instruments; however the reliability factor was included in most of the instruments which indicates the importance of this factor in customer satisfaction. On the other hand, dissatisfaction factors which include creditability, security, and product variety were identified as important factors in most of the instruments.

Previous research which has addressed the assessment of e-service quality in general and banking e-service quality in particular have proposed instruments such as WebQual, e-TailQ,S-Qual, RecS-Qual, e-TransQual and PIRQual to measure the e-service quality without identifying the determinants which causes customer satisfaction or dissatisfaction. They aimed to measure the importance of determinants rather than the impact on customer's perception (Johnston 1995). By considering the importance of the factors only, different scales with different attributes were proposed according to the particular objectives of each study. For example, Parasuraman (2005) concluded that efficiency and fulfillment are the most critical factors of Web site service quality. Loonam (2008) identified web usability as a leading dimension and a basic pre-qualifier to e-banking service quality and concluded that security was essential to the adoption and continual use of e-banking. Parasuraman (2005) also identified security as a major key attribute influencing customers' overall quality/value perceptions and loyalty intentions. Wolfinbarger and Gilly (2003) suggested that the quality of an online site is strongly related to web site design factors and fulfillment/reliability. It is obvious that the importance of e-service quality factors cannot be absolute; instead, it can be relative to consumers' perception of how they satisfy their

needs which are continuously changing. Therefore, this study derived a scale from the adopted instrument which included what have been perceived by customers as important factors. In addition it identify which factors were a source of customers' satisfaction and which are a source of customers' dissatisfaction which may need different solutions to address them.

Another important concept is to understand that the sources of dissatisfaction are not necessarily the obverse of the sources of satisfaction(Johnston 1995). For example, the dissatisfaction factors identified in this study included security and product variety and by improving security of e-banking e-services dissatisfaction of customers might be reduced; however, this will not necessarily increase their satisfaction such as in adding new products and services.

Researcher	***e-Service Quality Attributes***
Website & E-services Quality Instruments	
Barnes and Vidgen (2001), WEBQUAL2	Tangibles (aesthetics, navigation), reliability (reliability, competence), responsiveness (responsiveness, access), assurance (credibility, security) and empathy (communication, understanding the individual).
Loiacono (2002), WebQual™	Informational fit-to-task, interactivity, trust, response time, ease of understanding, intuitive operations, visual appeal, innovativeness, flow/emotional appeal, consistent image, online completeness and better than alternative channels.
Wolfinbarger and Gilly, (2003) eTailQ	Fulfillment/reliability, Web site design, customer service and security/privacy.
Parasuraman (2005), E-S-QUAL	Efficiency, fulfillment, system availability, and privacy.
Parasuraman (2005), E-RecS-QUAL	Responsiveness, compensation, and contact.
Bauer (2006),eTransQual	Functionality/design, enjoyment, process, reliability and responsiveness.
Chen and Wells. (1999)	Website relationship, building, intentions to revisit,

	satisfaction with service, comfort in surfing, and the judgment.
Liu and Arnett (2000)	Information and service quality, system use, playfulness, and system design.
Szymanski and Hise (2000)	Online convenience, merchandising (product offerings and product information), site design and financial security.
Novak (2000)	Ease of contact, ordering, payment returns, and ease of cancellation, customer support, cutting edge, variety, quality information, reliability, security and low prices.
Francis and White (2002), PIRQUAL	Web store functionality, product attribute description, ownership conditions, delivery, customer service and security.
Doll and Torkzadeh (1988)	End-user satisfaction - content, accuracy, format, ease of use, and timeliness.

e-banking Service Quality Instruments

Loonam and O'Loughlin, (2008)	Web usability, Security, Information quality, Access, Trust, Reliability, Flexibility, Responsiveness, Self-recovery, Personalization / customization.
Mateos (2001)	Site content, speed, accessibility and navigability.
Bahia and Nantel (2000)	Access; price; tangibles; services portfolio and reliability.
Johnston (1997)	Commitment, Attentive/help, Friendliness, Care, Courtesy, Responsiveness, Flexibility, Competence, Comfort, Communication, Availability, Access, Cleanliness/tidy Security, Reliability, Functionality, Integrity, and Aesthetics.
Jayawardhena and Foley (2000)	Speed, Content Design, Navigation, Interactivity, and Security.
Joseph (1999)	Convenience/accuracy; feedback/complaint management; efficiency; queue management; accessibility; and customization.
Sathye (1999)	No security concern, ease of use, awareness of service and its benefits, reasonable price, no resistance to change, availability of infrastructure.

Minjoon (2001)	product variety/diverse features, reliability, responsiveness, competence, courtesy, creditability, access, communication, understanding the customer, collaborations, continues improvement, contents, accuracy, ease of use, timeline, aesthetics, security.

Table 11: Summary of e-service quality instruments

	Efficiency	Information Quality	Ease of Use	Security	Continues Improvement	Competence	Reliability	Creditability	Product variety /Diverse
Barnes and Vidgen (2001), WEBQUAL2				✓			✓	✓	
Loiacono (2002), WebQual™		✓	✓		✓			✓	
Wolfinbarger and Gilly, (2003) eTailQ				✓			✓		
Parasuraman (2005), E-S-QUAL	✓			✓			✓		
Parasuraman (2005), E-RecS-QUAL						✓			
Bauer 2006),eTransQual							✓		✓
Chen and Wells. (1999)								✓	
Liu and Arnett (2000)		✓							
Szymanski and Hise (2000)		✓		✓					✓
Novak (2000)		✓	✓	✓				✓	✓
Francis and White (2002), PIRQUAL		✓		✓					✓
Doll and Torkzadeh (1988)		✓	✓						
Loonam and O'Loughlin, (2008)		✓		✓			✓	✓	
Mateos (2001)	✓		✓						✓
Bahia and Nantel (2000)								✓	✓
Johnston (1997)				✓		✓		✓	✓
Joseph (1999)	✓	✓				✓			
Sathye (1999)		✓	✓			✓			
Minjoon (2001)			✓	✓	✓	✓	✓	✓	✓
Total	**3**	**9**	**6**	**9**	**1**	**5**	**6**	**8**	**8**

Table 12: Matrix of derived e-banking service quality attributes against previous e-service quality instruments.

Implications of the study for academics

The study of measuring e-service quality has received considerable attention in research within the services and retailing fields, however there has been limited examination of e-service quality in online banking. Previous research in this field has focused on exploring the adoption of e-banking in different countries and few researchers have proposed general instruments for measuring e-banking service quality. This research expanded the body of knowledge in e-banking service quality by deriving a reliable scale for measuring the key attributes of e-banking service quality and identified the sources of satisfaction and dissatisfaction perceived by customers. It was obvious that general instruments cannot satisfy the requirements of measuring e-banking service quality for national banks in different countries due to the differences in cultural, economic, and technological aspects within these countries, so the measurement scale proposed in this study was derived from the generic instrument developed by Minjoon (2001) to address the relevant attributes of the studied environment.

This study has also supported the assumption of considering service quality as the customers' overall impression of the relative superiority of the organization and its services (Bitner *et al.* 1990). It has addressed the assessment of customer satisfaction and dissatisfaction rather than otherwise evaluating the banking e-services. Additionally, it aimed to clearly identify the determinants that tend to be the source of satisfaction and source of dissatisfaction as recommended by Johnston (1995). Furthermore, this research has examined the construct of e-banking service quality and from three perspectives using single scale: customer perception of e-banking service quality, customer perception of customer service quality, and customer perception of system service quality (Jun and Cai 2001) using a single scale. This scale provided a comprehensive assessment of all components affecting the quality of the e-banking services including system-related activities such as transactions, inquiries, and requests, and customer related activities such as approvals and follow up.

This dissertation has also offered a reliable construct for measuring the e-banking service quality for the national banks in the U.A.E. and Oman which can now be utilized as a measurement scale for future evaluation of e-banking within the G.C.C. countries. Moreover, identification of the dissatisfaction factors can assist with providing an investigation field for future research to explore the reasons behind the customer dissatisfaction.

Researchers can also utilize the questionnaire of this study, which included a large number of items, when developing future surveys investigating the quality of e-banking. However, it is recommended to construct smaller questionnaires that are focused more on existing services and features and are easy-to-understand to assist respondents with submitting valid and correct responses. It is also recommended to seek the assistance of the selected banks to identify the active customers who are accessing the online banking services that may assist with achieving a good response rate.

Different from previous e-banking research, this study has: (1) has explored the consumer perception of e-banking service quality in two countries and offered a performance comparison of e-banking services between the U.A.E. and Oman; (2) derived a measurement scale for evaluating e-banking service quality that can be utilized in the similar countries in the G.C.C. and (3) compared the derived scale with the proposed instruments in the previous research.

Implications of the study for banking practitioners

The findings from the study provided insights for banking practitioners when identifying the important e-banking drivers and understanding customer needs. Further it provides recommendations to improve online service performance. The findings of the research had highlighted the key factors influencing the customers' perception of e-banking service quality.

In order to achieve consumer satisfaction and loyalty, e-banking practitioners have to continuously improve the quality of banking services, customer relation services, and web site usability. The study identified the sources of

customers' satisfaction as reliability, continuous improvement and ease of use which need to be consciously improved by banks to retain existing customers. As a matter of fact, continuous improvement of e-banking services was one of the satisfaction attributes which indicates the customers' expectations of higher levels of service quality. On the other hand, sources of dissatisfaction identified by the study were security, product variety and creditability which are considered critical attributes in attracting new customers to use e-banking services. Bankers and customers are uncertain about how to achieve robust services that can be provided without any technological problems. Issues like the lack of awareness about the service benefits and security, difficulty of using the system, resistance to change, and customer education are matters that all contribute to the lack of trust in e-banking security. It is recommended to invest in improving customers' awareness about e-banking benefits through providing better publicity. This can be achieved by placing demonstration kiosks in public places and even in bank branches, providing free educational sessions and offering incentives to customers to access the e-banking which will certainly contribute to achieving a high return on investment for banks by reducing operational cost and improving efficiency (Sathye 1999).

Banks in the U.A.E. and Oman are facing competition from new entrants such as international banks who can offer higher level of service quality and product variety. Hence, Ignoring the trend in online banking could be strategic mistake for the banks seeking customer satisfaction (Vichuda Nui and Serap 2001). It is recommended that they consider the internet banking as a strategic channel for achieving customer loyalty, attracting new customers, and facing the competition and challenges of the open market in the region. Banks should invest in acquiring the technological infrastructure and gain the know-how in running competitive internet banking by improving services offered on their web sites. It is also recommended to utilize the findings of this study which provides a comparison of e-banking performance of different banks within the U.A.E. and Oman and use the proposed scale for measuring

e-banking service quality to continuously evaluate customer satisfaction and/or dissatisfaction attributes and improve the e-banking performance.

Implications of the study for politicians

The internet banking provides many opportunities for financial organizations to extend their operations globally without any limitation on physical interaction. International banks are using internet banking in attracting overseas customer to local investment opportunities and offer the business wide range of virtual services over different countries which add a totally new dimension to the economic growth. Internet banking has also facilitated the payment for other services including bills payment and shopping that also assist the growth of electronic commerce(Jayawardhena and Foley 2000).

These findings of this study indicate that the creditability of e-banking in the U.A.E. and Oman is the main reason for customers' dissatisfaction. Although customers have expressed a higher satisfaction about e-banking service quality in the U.A.E. than Oman, dissatisfaction rates in both countries were higher than satisfaction rates which are something that banks should be concerned about. The Ministry of Finance in the U.A.E. and Oman should take the responsibility in evaluating, regulating, and facilitating the infrastructure and legal framework to build a robust e-banking environment which in return will create other opportunities for developing the e-commerce and contributing to the growth of the national economy. Ecommerce in the U.A.E. and Oman was moving slowly due to the lack of electronic payment channels which can be provided by e-banking channels. A good e-banking environment can be considered as a foundation for successful e-commerce which will create new business opportunities for investors, supports international trading, and opens new global markets for local industries and businesses.

It is also recommended to permit financial organizations to establish full internet banks without physical branches which will offer all services through the web site and ATM machines. These types of online banking facilities are

operating successfully in other countries and help to change the attitude of consumers towards e-banking by enhancing the trust and eliminating the need for physical interactions with bank employees. Thus internet banks will significantly contribute in enhancing the creditability of-banking and will enforce traditional banks to improve their e-services to face the emergent competition. Finally, evaluating and recognizing e-banking achievements including international banks that offer local services will certainly contribute in creating a positive completion among the banks in the U.A.E. and Oman which will eventually leads to outstanding e-banking services that meet consumers' expectations.

Limitations and Future Research

The study has several limitations and was based on a number of assumptions which need to be overcome in future research. A major limitation was the method used to conduct the survey and collect the data. Many of the respondents failed to send their responses because they could not use the software application or faced technical problems while submitting the survey. The aim of using the online survey application was to assist the respondents with accessing their e-banking accounts and navigate the web site while answering the survey in order to improve the quality of their answers. However, this technique required a long time for the respondents to answer the survey and hence resulted in a low response rate. Additionally, the large number of questions (64 questions) was also a reason for ignoring our invitation to complete the survey by some persons. Another limitation was the availability of customer information as it was difficult to convince the management of the banks in the U.A.E. and Oman to invite their customers to complete the survey due to confidentiality reasons. Hence only personal and business contacts that have internet bank account were invited to complete the survey which resulted in a small sample size.

Another limitation was the assumption that a reasonable percent of bank customers in the U.A.E. and Oman are using e-banking services and are aware of their features. It was obvious that this assumption was incorrect

especially with the customers of national banks. Some of the invited bank customers were found using e-banking services of international banks which was outside of the scope of this study and others were unable to understand the questionnaire as they were unaware of the available services and features of their e-banking accounts.

The consumer's perception of e-banking attributes was measured by a scale adopted from other instruments of previous research in the e-banking field and was used as the basis for developing the survey for this research. However, the final derived scale, which involved attributes that were extracted from the collected data, had a smaller number of factors and items which indicated that the scale was actually derived based on the consumers' perception of existing e-services and features of the e-banking web sites. Therefore it would be better to consider these e-services and features while developing the survey and avoid using irrelevant questions in order to simplify it and get better responses. Moreover, another limitation was the high number of scale items (64 items) that did not permit reliability tests on the whole scale. Instead, it was carried out on the items of each factor. Another option was break down the scale into three subscales which logically group the factors and conduct the reliability analysis on each subscale. These subscales would be: e-banking service quality, customer service quality, and online system quality.

Finally, there was a significant difference in the number of responses for the banks due to the popularity of some more banks than others. A minimum number of responses should be allowed to involve the bank in the study.

Conclusion

This study has investigated the consumers' perception of the satisfaction and/or dissatisfaction with (key) factors of internet banking in the U.A.E. and Oman. A comprehensive literature review in the field of e-service quality and e-banking was conducted to understand the key attributes for evaluating the quality of e-banking services and investigating the instruments proposed by

previous research studies. An e-banking instrument developed by Minjoon (2001) was adopted for development of the survey used in this study which included 64 items spread over 15 dimensions and three broad categories: e-banking service quality, customer service quality and online system quality.

An online survey application was developed and bank customers in the U.A.E. and Oman were invited to complete it which resulted in 60 responses. The collected data was analyzed by employing factor analysis and reliability tests that resulted in fulfilling the first objectives of the study by deriving a reliable measurement scale including 9 key dimensions for measuring e-banking service quality: efficiency, information quality, ease of use, security, continues improvement, competence, reliability, creditability, and product variety /diverse features.

The second objective of this study, which was identifying the satisfaction and/or dissatisfaction factors of e-banking service quality perceived by consumers, was realized by analyzing the frequencies of responses and identifying the sources of satisfaction as: reliability, ease of use, and continuous improvement; and the sources of dissatisfaction as: security, creditability, and product variety /diverse of features. It was obvious that the national banks have been working on improving the quality of e-services, however the measured dissatisfaction ratios were higher than satisfaction ones for most of the factors and the lack of trust and creditably was identified as a major source of dissatisfaction. It is important to remember that working on eliminating the reasons of dissatisfaction will not necessarily result in achieving satisfaction of customers; instead, each of them should be addressed separately in order to eliminate the dissatisfaction issues and continuously improve the quality of the services to sustain good reputation, retain current customers, attract new customers, and attain the completion of new prospective customers. The proposed scale was also recommended to be utilized in evaluating the e-banking services in G.C.C. countries due to the common economic, cultural, and technological environment.

The third fulfilled objective was identifying the substantial discrepancies between perceived e-banking service quality in the U.A.E. and Oman. The findings indicated that customers were more satisfied with e-banking services quality in the U.A.E. than Oman. The six identified factors that had a higher score in the U.A.E. than Oman were: Efficiency, Information Quality, Ease of Use, Security, Continues Improvement, and Creditability. In contrast, the three identified factors that had higher score in Oman than the U.A.E. were: Competence, Reliability, and Product Variety /Diverse Features. This result concludes that customers perceive more creditability and trust in the e-banking services in the U.A.E. than Oman. The reasons behind the customers' perceptions are due to rapid developments in the banking sector and the rapid growth in the U.A.E. economy during the last few years. In addition to the international banks organizations and the cosmopolitan environment in the U.A.E. can also be considered as motivators for creating a greater demand for e-banking services in the U.A.E. However dissatisfaction ratios in general were higher than the satisfaction ratios in both countries which needs to addresses while designing and developing the e-banking services in the future. It is also recommended that Omani banks study and adopt the best practices of e- banking services in the U.A.E. in order to improve their performance, offer new services and products, and enhance the e-banking creditability perceived by their customers.

Recommendations for researchers are considering the development of specific scales for measuring the quality of e-banking services rather than using generic instruments if they target G.C.C. countries due to cultural, economic, and technological differences with other regions in the world. Additionally, considering the evaluation of e-banking services provided by international banks operating in the U.A.E. and Oman will add value to the future research due to the broad customer base and variety of services offered by these banks in comparison to national banks. Additionally, the study has suggested creating new opportunities for financial organizations to set up full internet banking services without having physical branches which

will significantly contribute in developing the trust and creditability of e-banking in the region.

Finally, it is recommended that banking practitioners and politicians consider the e-banking as an important foundation for developing a robust e-commerce infrastructure that can contribute to the growth of the national economy. Therefore this study has highlighted the reasons behind the low customer awareness and trust in e-banking and suggested solutions to overcome these issues. Additionally, evaluation and improvement of e-banking should be considered as an ongoing dynamic process having changing attributes and rules according to economic, political, and cultural parameters that are important to be considered in the future research.

Summary of Chapter

This chapter has provided conclusion of the dissertation findings that included: (1) the research findings were discussed in the light of literature review with a focus on the derived scale in this study and instruments proposed by the previous research studies. (2) Implications for academics were presented and highlighted the importance of developing or deriving particular scales for measuring the e-banking quality in the region; (3) Implications for banking practitioners emphasized the lack of trust and creditability as major reasons for customer dissatisfaction and recommended continuous evaluation and improvement of e-banking services to face the completion of newcomers; (4) Implications for politicians highlighted the important role of e-banking in developing the e-commerce environment and suggested founding full internet banking to create a competitive environment and better creditability for e-banking; (5) Limitations of the study discussed the difficulties in accessing customer information as a main reason for the low response rate and recommended considering international banks in the future research; and (5) Finally, the conclusion section summarized the findings of this study.

Bibliography

Allred, Anthony T. and H. Lon Addams, 2000. 'Service quality at banks and credit unions: what do their customers say?', *International Journal of Bank Marketing,* 18:4, 200-207.

Anderson, Carl R. and Carl P. Zeithaml, 1984. 'Stage of the Product Life Cycle, Business Strategy, and Business Performance', *The Academy of Management Journal,* 27:1, 5-24.

Babakus, Emin and Gregory W. Boller, 1992. 'An empirical assessment of the SERVQUAL scale', *Journal of Business Research,* 24:3, 253-268.

Bahia, Kamilia and Jacques Nantel, 2000. 'A reliable and valid measurement scale for the perceived service quality of banks ', *The International Journal of Bank Marketing,* 18:2, 84-91.

Barnes, Stuart I. and Richard Vidgen, 2001. 'An Evaluation of Cyber-Bookshops: The WebQual Method', *International Journal of Electronic Commerce,* 6:1, 11-30.

Bateson, John E. G., 1977. 'Do We Need Service Marketing?', *Marketing Consumer Services: New Insights, Cambridge, MA: Marketing Science Institute,* 77:115.

Bauer, Hans H., Tomas Falk and Maik Hammerschmidt, 2006. 'eTransQual: A transaction process-based approach for capturing service quality in online shopping', *Journal of Business Research,* 59:7, 866-875.

Berry, L.L. and A. Parasuraman, 1991. 'Marketing Services: Competing through Quality', New York: *The Free Press*.

Berry, Leonard L. , 1980. 'Services Marketing Is Different Business', 30:May-June, 24-28.

Bitner, Mary Jo, Bernard H. Booms and Mary Stanfield Tetreault, 1990. 'The Service Encounter: Diagnosing Favorable and Unfavorable Incidents', *The Journal of Marketing,* 54:1, 71-84.

Bolton, Ruth N. and James H. Drew, 1991. 'A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes', *The Journal of Marketing,* 55:1, 1-9.

Branscomb, L.M. and J.C. Thomas, 1984. 'Ease of Use: A System Design Challenge', *IBM Systems Journal,* 23:33, 224-235.

Carmen, Jm., 1990. 'Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions', *Journal of Retailing,* 66:Spring, 33-55.

Chen, Qimei and William D. Wells., 1999. 'Attitude Toward the Site.', *Journal of Advertising Research,* 39:September/October, 27-37.

Cortina, Jose M., 1993. 'What is coefficient alpha? An examination of theory and applications', *Journal of Applied Psychology,* 78:1, 98-104.

Cronbach, Lee, 1951. 'Coefficient alpha and the internal structure of tests', *Psychometrika,* 16:3, 297-334.

Diniz, Eduardo, Roseli Morena Porto and Tomi Adachi, 2005. 'Internet Banking in Brazil: Evaluation of Functionality, Reliability and Usability', *The Electronic Journal of Information Systems Evaluation,* 8:1, 41-50.

Doll, William J. and Gholamreza Torkzadeh, 1988. 'The Measurement of End-User Computing Satisfaction', *MIS Quarterly,* 12:2, 259-274.

Field, Andy, 2005. 'Discovering Statistics Using SPSS', London: *SAGE Publications*.

Flynn, B.B., R.G. Schroeder and S. Sakakibara, 1994. 'A framework for quality management research and associated instrument', *Journal of Operations Management,* 11:1, 339-366.

Francis, J.E. and L. White 2002 'PIRQUAL: a scale for measuring customer expectations and perceptions of quality in Internet retailing.' In Scheer, K. Evans and L. (Ed.) *Marketing Educators' Conference: Marketing Theory and Applications:* 263-270.

Gronroos and Christian, 1982. 'Strategic Management and Marketing in the Service Sector, Helsingfors: Swedish School of Economics and Business Administration'.

Gronroos, Christian, Fredrik Heinonen, Kristina Isoniemi and Michael Lindholm, 2000. 'The NetOffer model: a case example from the virtual marketspace', *Management Decision,* 38, 243-252.

Humphrey, David B., Lawrence B. Pulley and Jukka M. Vesala, 2000. 'The Check's in the Mail: Why the United States Lags in the Adoption of Cost-Saving Electronic Payments', *Journal of Financial Services Research,* 17:1, 17-39.

J. Joseph Cronin, Jr. and Steven A. Taylor, 1992. 'Measuring Service Quality: A Reexamination and Extension', *The Journal of Marketing,* 56:3, 55-68.

Jayawardhena, Chanaka and Paul Foley, 2000. 'Changes in the banking sector - the case of Internet banking in the UK', *Internet Research,* 10, 19-31.

Johnston, Robert, 1995. 'The determinants of service quality: satisfiers and dissatisfiers', *Journal of Service Management,* 6:5, 53-71.

Johnston, Robert, 1997. 'Identifying the critical determinants of service quality in retail banking: importance and effect', *International Journal of Bank Marketing,* 15:4, 111-116.

Jun, Minjoon and Shaohan Cai, 2001. 'The key determinants of Internet banking service quality: a content analysis', *International Journal of Bank Marketing,* 19:7, 276-291

Khalfan, Abdulwahed Mo. Sh., 2006. 'Factors influencing the adoption of internet banking in Oman: a descriptive case study analysis', *International Journal of Financial Services Management,* 1:2/3, 155-172

Lewis, R. and B. Booms 1983. 'The Marketing Aspects of Service Quality.' In Berry, L.L., Shostack, L. and Upah (Ed.) *Proceedings of American Marketing Association: Emerging Perspectives on Services Marketing:* 99-104.

Liu, Chang and Kirk P. Arnett, 2000. 'Exploring the factors associated with Web site success in the context of electronic commerce', *Information & Management,* 38:1, 23-33.

Loiacono, Eleanor T., Richard T. Watson and Dale L. Goodhue 2002. 'WebQual™: A Measure of Web Site Quality.' *AMA Winter Educators' Conference*.

Loonam, Mary and Deirdre O'loughlin, 2008 'Exploring e-service quality: a study of Irish online banking', *Marketing Intelligence & Planning,* 26:7, 759-780.

Lovelock, Christopher H., 1980. 'Towards a Classification of Services', *in Theoretical Developments in Marketing, C. Lamb and P. Dunne, eds., Chicago: American Market- ing*, 72-76.

Mateos, María Buenadicha, Antonio Chamorro Mera, Francisco Javier Miranda González and Óscar Rodrigo González López, 2001. 'A new Web assessment index: Spanish universities analysis', *Internet Research: Electronic Networking Applications and Policy,* 11:3, 226-234.

Meuter, Matthew L., Amy L. Ostrom, Robert I. Roundtree and Mary Jo Bitner, 2000. 'Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters', *The Journal of Marketing,* 64:3, 50-64.

Minjoon Jun, Shaohan Cai, 2001 'The key determinants of Internet banking service quality: a content analysis', 19 7, 276 - 291

Miranda, F.J. , R. Cortés and C. Barriuso, 2006. 'Quantitative Evaluation of e-Banking Web Sites: an Empirical Study of Spanish Banks', *The Electronic Journal Information Systems Evaluation,* 9:2, 73-82.

Novak, Thomas P., Donna L. Hoffman and Yiu-Fai Yung, 2000. 'Measuring the Customer Experience in Online Environments: A Structural Modeling Approach', *Marketing Science,* 19:1, 22-42.

Palmer, J.W., Bailey J.P. and S. Faraj, 2000. 'The role of intermediaries in the development of trust on the WWW: the use and prominence of trusted third parties and privacy statements', *Journal of Computer Mediated Communication,* 1:3, 7-20.

Parasuraman, A., Valarie A. Zeithaml and Arvind Malhotra 2005. 'E-S-QUAL A Multiple-Item Scale for Assessing Electronic Service Quality ', *Journal of Service Research,* 7:x, 1-21.

Parasuraman, A., Valarie A. Zeithaml and Leonard L. Berry, 1985. 'A Conceptual Model of Service Quality and Its Implications for Future Research', *The Journal of Marketing,* 49:4, 41-50.

Parasuraman, A., Valarie A. Zeithaml and Leonard L. Berry, 1988. 'SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality', *Journal of Retailing,* 64:1, 12-40.

Rust, Roland T. and Katherine N. Lemon, 2001. 'E-Service and the Consumer', *Int. J. Electron. Commerce,* 5:3, 85-101.

Sasser, W.E., R.P. Olsen and D.D Wyckoff, 1978. 'Management of Service Operations', Boston, MA.: *Allyn & Bacon*.

Sathye, Milind, 1999. 'Adoption of Internet banking by Australian consumers: an empirical investigation', *International Journal of Bank Marketing,* 17, 324-334.

Shostack, G. Lynn, 1977. 'Breaking Free from Product Mar- keting,' *Journal of Marketing Management,* 41:April, 73-80.

Smith, Anne M., 1995. 'Measuring Service Quality: is SERVQUAL now Redundant?', *Journal of Marketing Management,* 11:1-3, 257-276.

Sohail, M. Sadiq and Nassar M. Shaikh, 2007. 'Internet banking and quality of service: Perspectives from a developing nation in the Middle East', *Online Information Review,* 32:1, 58-72.

Szymanski, D. M. and R. T. Hise, 2000. 'E-satisfaction: an initial examination', *Journal of Retailing,* 76, 309-322.

Van Riel, Allard, Janjaap Semeijn and Wendy Janssen, 2003. 'E-service quality expectations: a case study', *Total Quality Management & Business Excellence,* 14:4, 437-450.

Van Riel, Allard. C. R., Veronica Liljander and Pettra Jurrience, 2001. 'Exploring consumer evaluations of e-services: a portal site', *International Journal of Service Industry Management,* 12:4, 359-377.

Vichuda Nui, Polatoglu and Ekin Serap, 2001. 'An empirical investigation of the Turkish consumers acceptance of Internet banking services', *The International Journal of Bank Marketing,* 19, 156-165.

Webb, Harold W. and Linda A. Webb, 2004. 'SiteQual: an integrated measure of Web site quality', *The Journal of Enterprise Information Management,* 17:6, 430–440.

Wolfinbarger, Mary and Mary C. Gilly, 2003. 'eTailQ: dimensionalizing, measuring and predicting etail quality', *Journal of Retailing,* 79:3, 183-198.

Zeithaml, V.A. and M.C. Gilly, 1987. 'Characteristics affecting the acceptance of retailing technologies: a comparison of elderly and nonelderly consumers', *Journal of Retailing,* 63:1, 49-68.

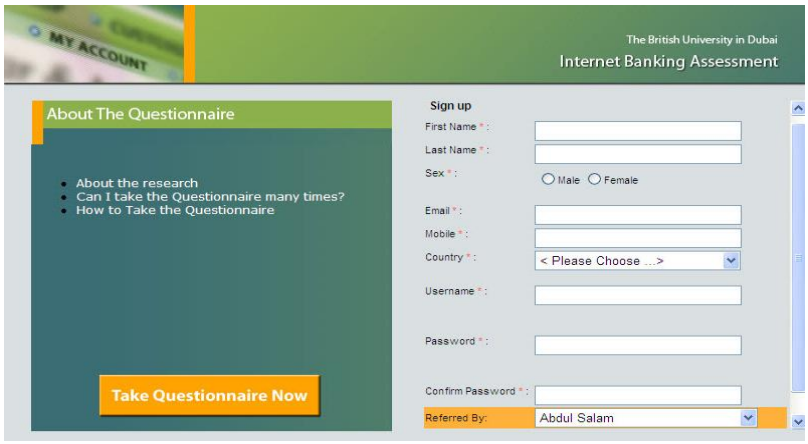
Zeithaml, Valarie A. 1981. 'How Consumer Evaluation Pro- cesses Differ between Goods and Services,.' In Donnelly, J. and W. George (Eds.) *Marketing of Services:* 186-190. Chicago: American Marketing.

Zeithaml, Valarie A., A. Parasuraman and Arvind Malhotra, 2002. 'Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge', *Journal of the Academy of Marketing Science.,* 30:4, 362-375.

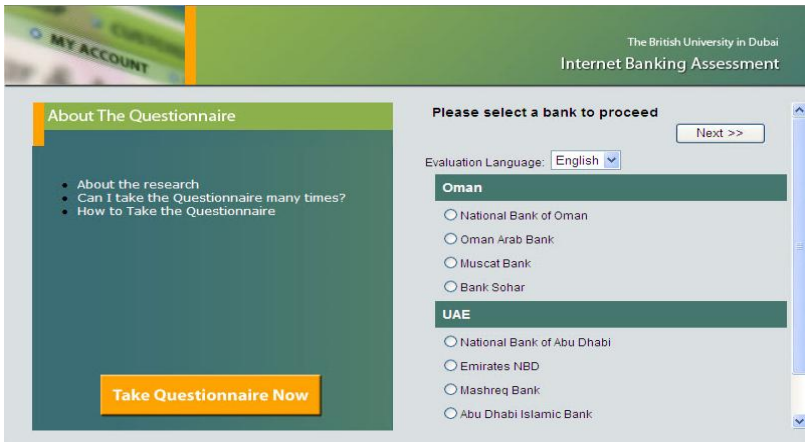
Zeithmal, V.A. and Mary Jo Bitner, 2000. 'Services Marketing: Integrating Customer Focus across the Firm,' *2nd edn (Boston, MA, McGraw-Hill).*

Appendices

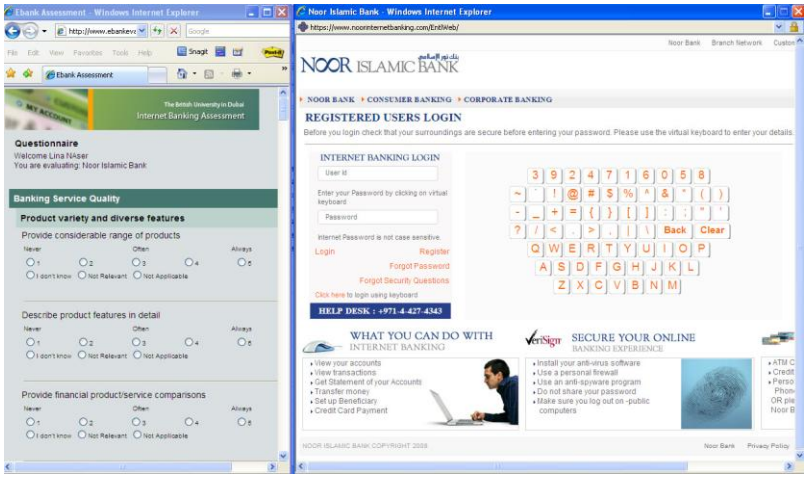
Appendix A: Screenshots from the Online Survey Application



User Registration



Language and Bank Selection



Answering the Questions

Appendix B: Factor Analysis on SPSS Sheets

```
GET
  FILE='C:\Users\Amr\Documents\research\Final data\19-7-2009.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
GET
  FILE='C:\Users\Amr\Documents\research\analysis\27-5-2009\factors data.sav'.
DATASET NAME DataSet2 WINDOW=FRONT.
DATASET ACTIVATE DataSet1.
DATASET CLOSE DataSet2.
GET
  FILE='C:\Users\Amr\Documents\research\data\data 3-6-2009.sav'.
DATASET NAME DataSet3 WINDOW=FRONT.
DATASET ACTIVATE DataSet1.
DATASET CLOSE DataSet3.
SAVE OUTFILE='C:\Users\Amr\Documents\research\Final data\19-7-2009.sav' /COMPRESSED.
FACTOR
  /VARIABLES var1 var2 var3 var4 var5 var6 var7 var8 var9 var10 var11 var12 var13 var14 v
ar15 var16 var17 var18 var19 var20 var21 va
   r22 var23 var24 var25 var26 var27 var28 var29 var30 var31 var32 var33 var34 var35 var3
6 var37 var38 var39 var40 var41
    var42 var43 var44 var45 var46 var47 var48 var49 var50 var51 var52 var53 var54 var55 v
ar56 var57 var58 var59 var60 var61 var62 va
   r63 var64
  /MISSING LISTWISE
  /ANALYSIS var1 var2 var3 var4 var5 var6 var7 var8 var9 var10 var11 var12 var13 var14 va
r15 var16 var17 var18 var19 var20 var21 var
   22 var23 var24 var25 var26 var27 var28 var29 var30 var31 var32 var33 var34 var35 var36
 var37 var38 var39 var40 var41
    var42 var43 var44 var45 var46 var47 var48 var49 var50 var51 var52 var53 var54 var55 v
ar56 var57 var58 var59 var60 var61 var62 va
   r63 var64
  /PRINT INITIAL EXTRACTION ROTATION
  /FORMAT SORT BLANK(.3)
  /CRITERIA MINEIGEN(1) ITERATE(25)
  /EXTRACTION PC
  /CRITERIA ITERATE(30)
  /ROTATION VARIMAX
  /METHOD=CORRELATION.
```

Factor Analysis

Notes

Output Created		2009-07-20T12:45:06.631
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>

Notes

Input	Split File	<none>
	N of Rows in Working Data File	65
Missing Value Handling	Definition of Missing	MISSING=EXCLUDE: User-defined missing values are treated as missing.
	Cases Used	LISTWISE: Statistics are based on cases with no missing values for any variable used.
Syntax		FACTOR /VARIABLES var1 var2 var3 var4 var5 var6 var7 var8 var9 var10 var11 var12 var13 var14 var15 var16 var17 var18 var19 var20 var21 var22 var23 var24 var25 var26 var27 var28 var29 var30 var31 var32 var33 var34 var35 var36 var37 var38 var39 var40 var41 var42 var43 var44 var45 var46 var47 var48 var49 var50 var51 var52 var53 var54 var55 var56 var57 var58 var59 var60 var61 var62 var63 var64 /MISSING LISTWISE /ANALYSIS var1 var2 var3 var4 var5 var6 var7 var8 var9 var10 var11 var12 var13 var14 var15 var16 var17 var18 var19 var20 var21 var22 var23 var24 var25 var26 var27 var28 var29 var30 var31 var32 var33 var34 var35 var36 var37 var38 var39 var40 var41 var42 var43 var44 var45 var46 var47 var48 var49 var50 var51 var52 var53 var54 var55 var56 var57 var58 var59 var60 var61 var62 var63 var64 /PRINT INITIAL EXTRACTION ROTATION /FORMAT SORT BLANK(.3) /CRITERIA MINEIGEN(1) ITERATE (25) /EXTRACTION PC /CRITERIA ITERATE(30) /ROTATION VARIMAX /METHOD=CORRELATION.
Resources	Processor Time	0:00:00.109
	Elapsed Time	0:00:00.050
	Maximum Memory Required	458872 (448.117K) bytes

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Communalities

	Initial	Extraction
VAR1: Account inquiry service is detailed and useful	1.000	.838
VAR2: Authentication method changes from time to time	1.000	.832
VAR3: Bill Payments service is available	1.000	.763
VAR4: Content is available in multiple languages.	1.000	.728

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
VAR5: Content is free of errors	1.000	.829
VAR6: Continuous improvement on banking products is performed	1.000	.851
VAR7:Continuous improvement on customer services is performed	1.000	.884
VAR8:Continuous improvement on online services is performed	1.000	.839
VAR9:Correct service is received at all times	1.000	.826
VAR10:Credit Card transaction inquiry service is available	1.000	.862
VAR11:Customer service employee is knowledgeable and can solve problems efficiently	1.000	.797
VAR12:Customer service is accessible when Iam abroad	1.000	.795
VAR13:Customer service representative isassigned to deal with each e-bankingcustomer when they need assistance	1.000	.827
VAR14: Describe product features in detail	1.000	.800
VAR15: Easy login procedures	1.000	.760
VAR16: Electronic complaint and suggestion service is available	1.000	.880
VAR17: Email /SMS notification is sent when a transaction is processed	1.000	.801
VAR18: Email/SMS service can be enabled and disabled	1.000	.716
FVAR19: AQ pages are available	1.000	.796
VAR20: Files can be downloaded at high speed	1.000	.859
VAR21: Financial information is accurate, timely and relevant	1.000	.779
VAR22: Financial records are accurate	1.000	.842
VAR23: Finding what I need is simple and easy	1.000	.832
VAR24: Help instructions about transactions are available	1.000	.822
VAR25: I can communicate to customer service via emails and get quick response	1.000	.847

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
VAR26: I get clear answers regarding my inquiries	1.000	.837
VAR27: I get quick response for my actions	1.000	.881
VAR28: I have confidence in the bank's service	1.000	.804
VAR29: I receive individualized emails regarding latest financial news, products,and services	1.000	.837
VAR30: In the case of problems, the site offerslive help with a person	1.000	.782
VAR31: Information is given on what to do if the transaction is failed	1.000	.778
VAR32: Information is well formed and structured	1.000	.864
VAR33: Insurance, Loans, fixed Deposit requests are available	1.000	.821
VAR34: It is easy to understand the financial terms	1.000	.806
VAR35: Linkage between e-banking web site and general financial service providers web site	1.000	.792
VAR36: Money Transfer service to other banks is available	1.000	.837
VAR37: My complaints are addressed friendly and transparently	1.000	.779
VAR38: My personal details and password can be changed	1.000	.742
VAR39: Navigation and movingto different areas of the site is easy	1.000	.739
VAR40: New bill payers can be registered	1.000	.853
VAR41: No Disclosures regarding confidentiality and privacy of customer records	1.000	.836
VAR42: Option to cancel transactions is provided	1.000	.824
VAR43: Pages load promptly	1.000	.786
VAR44: Problems are taken care of quickly	1.000	.813
VAR45: Product/ Service can be obtained as advertised	1.000	.832
VAR46: Provide considerable range of products	1.000	.762
VAR47: Provide financial product/servicecomparisons	1.000	.803

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
VAR48: Provide localized products/services (Islamic Banking)	1.000	.803
VAR49: Safety/privacy notifications are displayed	1.000	.797
VAR50: Search capability is helpful	1.000	.895
VAR51: Site map is provided and useful	1.000	.731
VAR52: Suggestions and complaints areconsidered and implemented	1.000	.894
VAR53: This site initiates and operates immediately After entering my transaction information,	1.000	.840
VAR54: site is well prepared and organized	1.000	.924
VAR55: Transaction information is encrypted and secured	1.000	.865
VAR56: Transaction status is traceable	1.000	.822
VAR57: Transactions can be conducted quickly	1.000	.817
VAR58: Use of graphics and icons is reasonable	1.000	.814
VAR59: Virtual keyboard is used is enter password on login page	1.000	.832
VAR60: Web site appearance is user friendly	1.000	.770
VAR61: Web site is accessible 24/7	1.000	.805
VAR62: Web site policies regarding customer information is published	1.000	.873
VAR63: Website is Compatible with different browsers	1.000	.827
VAR64: When I complete a transaction, aconfirmation statement is displayed	1.000	.824

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	19.218	30.028	30.028	19.218	30.028	30.028	9.188
2	4.947	7.729	37.758	4.947	7.729	37.758	6.486
3	3.883	6.067	43.824	3.883	6.067	43.824	3.619
4	3.494	5.459	49.283	3.494	5.459	49.283	3.334
5	2.989	4.671	53.954	2.989	4.671	53.954	3.236

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings	
	% of Variance	Cumulative %
1	14.357	14.357
2	10.135	24.492
3	5.655	30.147
4	5.209	35.356
5	5.057	40.413

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
6	2.252	3.519	57.473	2.252	3.519	57.473	3.108
7	1.960	3.063	60.536	1.960	3.063	60.536	2.818
8	1.770	2.766	63.302	1.770	2.766	63.302	2.400
9	1.664	2.600	65.903	1.664	2.600	65.903	2.207
10	1.596	2.494	68.396	1.596	2.494	68.396	2.154
11	1.483	2.318	70.714	1.483	2.318	70.714	2.114
12	1.378	2.154	72.867	1.378	2.154	72.867	2.108
13	1.305	2.040	74.907	1.305	2.040	74.907	2.006
14	1.190	1.860	76.767	1.190	1.860	76.767	1.968
15	1.125	1.758	78.524	1.125	1.758	78.524	1.964
16	1.071	1.674	80.198	1.071	1.674	80.198	1.923
17	1.022	1.597	81.795	1.022	1.597	81.795	1.715
18	.954	1.490	83.285				
19	.846	1.322	84.607				
20	.831	1.299	85.906				
21	.766	1.197	87.103				
22	.737	1.152	88.255				
23	.638	.997	89.251				
24	.610	.953	90.204				
25	.592	.925	91.129				
26	.506	.791	91.920				
27	.481	.751	92.671				
28	.462	.721	93.393				
29	.453	.707	94.100				
30	.394	.615	94.715				
31	.347	.542	95.257				
32	.333	.521	95.778				
33	.286	.446	96.224				
34	.263	.410	96.635				
35	.256	.400	97.035				
36	.229	.359	97.393				
37	.213	.333	97.726				
38	.181	.284	98.009				
39	.177	.277	98.287				
40	.155	.243	98.529				
41	.141	.221	98.750				
42	.131	.205	98.955				
43	.104	.163	99.118				
44	.099	.154	99.273				
45	.093	.145	99.418				
46	.070	.109	99.527				
47	.061	.095	99.622				
48	.055	.085	99.708				
49	.048	.075	99.783				

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings	
	% of Variance	Cumulative %
6	4.857	45.270
7	4.403	49.673
8	3.750	53.422
9	3.448	56.870
10	3.365	60.236
11	3.303	63.539
12	3.294	66.833
13	3.134	69.967
14	3.075	73.042
15	3.069	76.111
16	3.005	79.115
17	2.679	81.795
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
50	.035	.055	99.838				
51	.031	.049	99.887				
52	.027	.042	99.929				
53	.016	.025	99.954				
54	.013	.020	99.974				
55	.008	.012	99.986				
56	.005	.008	99.994				
57	.002	.004	99.998				
58	.001	.002	100.000				
59	6.462E-16	1.010E-15	100.000				
60	1.671E-16	2.611E-16	100.000				
61	1.015E-16	1.586E-16	100.000				
62	7.023E-17	1.097E-16	100.000				
63	-1.887E-16	-2.949E-16	100.000				
64	-3.190E-16	-4.984E-16	100.000				

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings	
	% of Variance	Cumulative %
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
VAR57: Transactions can be conducted quickly	.815							
VAR39: Navigation and movingto different areas of the site is easy	.812							
VAR54: site is well prepared and organized	.767							
VAR27: I get quick response for my actions	.755							
VAR23: Finding what I need is simple and easy	.714				.363			
VAR53: This site initiates and operates immediately After entering my transaction information,	.688							
VAR63: Website is Compatible with different browsers	.685					.322		
VAR43: Pages load promptly	.682							
VAR20: Files can be downloaded at high speed	.671				.314			
VAR15: Easy login procedures	.670							
VAR55: Transaction information is encrypted and secured	.612			.409				
VAR61: Web site is accessible 24/7	.609		.318					
VAR45: Product/ Service can be obtained as advertised	.509	.341						.382
VAR64: When I complete a transaction, aconfirmation statement is displayed	.418			.300	-.412			
VAR32: Information is well formed and structured		.865						
VAR34: It is easy to understand the financial terms		.715						
VAR37: My complaints are addressed friendly and transparently		.686						
VAR21: Financial information is accurate, timely and relevant		.662						
VAR44: Problems are taken care of quickly	.323	.607						
VAR28: I have confidence in the bank's service		.567						.360
VAR24: Help instructions about transactions are available		.539		.340				
VAR56: Transaction status is traceable		.462	.371					

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	9	10	11	12	13	15	16	17
VAR57: Transactions can be conducted quickly								
VAR39: Navigation and movingto different areas of the site is easy								
VAR54: site is well prepared and organized								
VAR27: I get quick response for my actions							.372	
VAR23: Finding what I need is simple and easy								
VAR53: This site initiates and operates immediately After entering my transaction information,								
VAR63: Website is Compatible with different browsers								
VAR43: Pages load promptly							.332	
VAR20: Files can be downloaded at high speed								
VAR15: Easy login procedures								
VAR55: Transaction information is encrypted and secured								
VAR61: Web site is accessible 24/7								
VAR45: Product/ Service can be obtained as advertised				.306				
VAR64: When I complete a transaction, aconfirmation statement is displayed						.379		
VAR32: Information is well formed and structured								
VAR34: It is easy to understand the financial terms								
VAR37: My complaints are addressed friendly and transparently								
VAR21: Financial information is accurate, timely and relevant								
VAR44: Problems are taken care of quickly								
VAR28: I have confidence in the bank's service								
VAR24: Help instructions about transactions are available								
VAR56: Transaction status is traceable								

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
VAR11:Customer service employee is knowledgeable and can solve problems efficiently		.458						
VAR26: I get clear answers regarding my inquiries	.325	.454					.433	
VAR36: Money Transfer service to other banks is available			.763					
VAR2: Authentication method changes from time to time	.310		.679	.328				
VAR59: Virtual keyboard is used is enter password on login page			.618					
VAR50: Search capability is helpful	.395	.306	.503					
FVAR19: AQ pages are available	.365		.491					
VAR51: Site map is provided and useful			.430	-.302				
VAR49: Safety/privacy notifications are displayed				.753				
VAR17: Email /SMS notification is sent when a transaction is processed		.410		.636				
VAR18: Email/SMS service can be enabled and disabled		.348		.626				
VAR38: My personal details and password can be changed				.545				.348
VAR7:Continuous improvement on customer services is performed		.324			.737			
VAR6: Continuous improvement on banking products is performed	.344				.699			
VAR52: Suggestions and complaints areconsidered and implemented					.569		.397	
VAR8:Continuous improvement on online services is performed	.353		.322		.511			
VAR12:Customer service is accessible when Iam abroad						.812		
VAR13:Customer service representative isassigned to deal with each e-bankingcustomer when they need assistance						.714		
VAR33: Insurance, Loans, fixed Deposit requests are available		.368	.325			.575		.394

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	9	10	11	12	13	15	16	17
VAR11:Customer service employee is knowledgeable and can solve problems efficiently	.392							-.396
VAR26: I get clear answers regarding my inquiries		.327						
VAR36: Money Transfer service to other banks is available								
VAR2: Authentication method changes from time to time								
VAR59: Virtual keyboard is used is enter password on login page			.404					
VAR50: Search capability is helpful				.359				
FVAR19: AQ pages are available				.431				
VAR51: Site map is provided and useful						.318		
VAR49: Safety/privacy notifications are displayed								
VAR17: Email /SMS notification is sent when a transaction is processed								
VAR18: Email/SMS service can be enabled and disabled								
VAR38: My personal details and password can be changed								
VAR7:Continuous improvement on customer services is performed								
VAR6: Continuous improvement on banking products is performed								
VAR52: Suggestions and complaints areconsidered and implemented			.313					
VAR8:Continuous improvement on online services is performed								
VAR12:Customer service is accessible when Iam abroad								
VAR13:Customer service representative isassigned to deal with each e-bankingcustomer when they need assistance								
VAR33: Insurance, Loans, fixed Deposit requests are available								

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
VAR58: Use of graphics and icons is reasonable	.451					-.479		
VAR10:Credit Card transaction inquiry service is available						.428		
VAR16: Electronic complaint and suggestion service is available						.329	.764	
VAR25: I can communicate to customer service via emails and get quick response					.308		.752	
VAR30: In the case of problems, the site offerslive help with a person							.445	
VAR9:Correct service is received at all times								.716
VAR22: Financial records are accurate		.478						.515
VAR47: Provide financial product/servicecompariso ns								
VAR40: New bill payers can be registered				.354				
VAR46: Provide considerable range of products	.409	.365						
VAR3: Bill Payments service is available				.320				
VAR48: Provide localized products/services (Islamic Banking)		.394						
VAR4: Content is available in multiple languages.								
VAR60: Web site appearance is user friendly	.368							
VAR14: Describe product features in detail		.334						
VAR35: Linkage between e-banking web site and general financial service providers web site								
VAR42: Option to cancel transactions is provided								
VAR31: Information is given on what to do if the transaction is failed				.327				
VAR41: No Disclosures regarding confidentiality and privacy of customer records								
VAR1: Account inquiry service is detailed and useful		.422						

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	9	10	11	12	13	15	16	17
VAR58: Use of graphics and icons is reasonable			.354					
VAR10:Credit Card transaction inquiry service is available							.416	
VAR16: Electronic complaint and suggestion service is available								
VAR25: I can communicate to customer service via emails and get quick response								
VAR30: In the case of problems, the site offerslive help with a person								
VAR9:Correct service is received at all times								
VAR22: Financial records are accurate								
VAR47: Provide financial product/servicecomparisons	.740							
VAR40: New bill payers can be registered		.728			-.320			
VAR46: Provide considerable range of products		.463						
VAR3: Bill Payments service is available		.448					.349	
VAR48: Provide localized products/services (Islamic Banking)	.412	.426						
VAR4: Content is available in multiple languages.			.800					
VAR60: Web site appearance is user friendly			.504		.325	-.303		
				.761				
VAR14: Describe product features in detail		.315		.547				
VAR35: Linkage between e-banking web site and general financial service providers web site				.323				
VAR42: Option to cancel transactions is provided					.846			
VAR31: Information is given on what to do if the transaction is failed								
VAR41: No Disclosures regarding confidentiality and privacy of customer records						.774		
VAR1: Account inquiry service is detailed and useful							.710	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	1	2	3	4	5	6	7	8
VAR5: Content is free of errors	.426							
VAR62: Web site policies regarding customer information is published				.431				

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Rotated Component Matrix[a]

	Component							
	9	10	11	12	13	15	16	17
VAR5: Content is free of errors								.672
VAR62: Web site policies regarding customer information is published								.605

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.

Component Transformation Matrix

Co...	1	2	3	4	5	6	7	8	9	10
1	.569	.477	.274	.190	.251	.139	.212	.165	.176	.144
2	-.650	.303	.048	-.281	.187	.400	.339	.120	.168	-.006
3	-.425	.368	.207	.420	-.218	-.335	-.273	.280	-.129	.248
4	-.189	-.422	.445	.279	.242	-.193	.123	-.201	.187	-.127
5	-.033	-.040	-.353	.451	.100	.400	-.101	-.354	.014	.230
6	.045	-.142	.365	.253	-.565	.416	.033	.071	-.204	-.210
7	-.069	-.013	-.199	-.091	-.118	-.167	.038	-.044	-.084	-.227
8	.013	-.121	-.357	.171	-.283	-.148	.403	.244	.228	.398
9	-.051	-.018	-.131	.211	.430	.049	-.219	.258	-.188	-.355
10	.062	-.357	.212	-.327	.045	.284	-.178	.424	-.227	.402
11	.022	.107	-.038	.065	-.095	.327	-.341	.154	.394	-.223
12	-.070	-.023	-.124	.310	.221	.203	.267	.025	-.534	.069
13	-.067	-.114	-.189	.127	-.176	.185	-.127	.056	.352	-.106
14	.015	.227	.001	-.201	-.267	.115	.072	-.433	-.285	.006
15	-.051	.173	.343	.030	-.003	.015	.030	-.330	.110	.103
16	.100	.216	-.118	.009	-.156	-.094	.218	.245	-.167	-.445
17	-.008	-.224	.105	.126	-.035	.027	.490	.130	.125	-.179

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Component Transformation Matrix

Co...	11	12	13	14	15	16	17
1	.144	.190	.130	.121	.107	.161	.075
2	.102	.103	.017	.031	.112	.000	-.129
3	-.094	-.024	-.041	.155	-.002	.155	.121
4	.315	.178	-.034	.314	.044	-.230	.154
5	-.092	-.187	-.127	.261	.423	.028	-.051
6	.145	.088	.113	-.141	.100	.038	-.351
7	.109	-.020	.758	.159	.370	.188	.241
8	.457	-.174	.051	-.088	-.112	-.172	-.054
9	.487	-.303	-.085	-.224	-.064	.276	-.063
10	.065	-.154	-.037	.139	.211	-.012	.343
11	-.048	-.256	.246	.295	-.412	-.345	.132
12	-.190	.213	.247	-.145	-.354	-.273	.262
13	.022	.460	-.179	-.344	.035	.248	.534
14	.407	-.073	-.214	.299	-.317	.219	.308
15	.005	-.488	.106	-.568	.141	-.189	.297
16	-.032	-.086	-.384	.110	.380	-.439	.240
17	-.405	-.398	-.083	.144	-.160	.471	.138

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Appendix C: Reliability Analysis SPSS Sheets

Factor
1

```
RELIABILITY
  /VARIABLES=var57 var39 var54 var27 var23 var53 var45 var63 var64 var43 var61 var15 var2
0
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:21:50.386
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var57 var39 var54 var27 var23 var53 var45 var63 var64 var43 var61 var15 var20 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.006

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR57: Transactions can be conducted quickly	3.45	.964	60
VAR39: Navigation and movingto different areas of the site is easy	3.63	.956	60
VAR54: site is well prepared and organized	3.30	1.078	60
VAR27: I get quick response for my actions	3.22	1.091	60
VAR23: Finding what I need is simple and easy	3.20	.898	60
VAR53: This site initiates and operates immediately After entering my transaction information,	3.37	.991	60
VAR45: Product/ Service can be obtained as advertised	3.58	1.046	60
VAR63: Website is Compatible with different browsers	3.43	.998	60
VAR64: When I complete a transaction, aconfirmation statement is displayed	4.03	1.262	60
VAR43: Pages load promptly	3.42	.962	60
VAR61: Web site is accessible 24/7	3.67	1.258	60
VAR15: Easy login procedures	3.53	1.096	60
VAR20: Files can be downloaded at high speed	3.17	.886	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR57: Transactions can be conducted quickly	41.55	80.489	.798	.912
VAR39: Navigation and movingto different areas of the site is easy	41.37	80.880	.781	.912
VAR54: site is well prepared and organized	41.70	78.688	.803	.911
VAR27: I get quick response for my actions	41.78	77.935	.836	.909
VAR23: Finding what I need is simple and easy	41.80	82.366	.739	.914
VAR53: This site initiates and operates immediately After entering my transaction information,	41.63	81.728	.698	.915
VAR45: Product/ Service can be obtained as advertised	41.42	82.790	.595	.919
VAR63: Website is Compatible with different browsers	41.57	83.606	.582	.919

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR64: When I complete a transaction, aconfirmation statement is displayed	40.97	84.677	.385	.929
VAR43: Pages load promptly	41.58	82.112	.699	.915
VAR61: Web site is accessible 24/7	41.33	81.209	.548	.922
VAR15: Easy login procedures	41.47	81.067	.656	.917
VAR20: Files can be downloaded at high speed	41.83	84.040	.640	.917

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
45.00	95.220	9.758	13

```
RELIABILITY
  /VARIABLES=var57 var39 var54 var27 var23 var53 var45 var63 var43 var61 var15 var20
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:22:24.403
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.

Notes

Syntax		RELIABILITY /VARIABLES=var57 var39 var54 var27 var23 var53 var45 var63 var43 var61 var15 var20 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.005

[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.929	12

Item Statistics

	Mean	Std. Deviation	N
VAR57: Transactions can be conducted quickly	3.45	.964	60
VAR39: Navigation and movingto different areas of the site is easy	3.63	.956	60
VAR54: site is well prepared and organized	3.30	1.078	60
VAR27: I get quick response for my actions	3.22	1.091	60
VAR23: Finding what I need is simple and easy	3.20	.898	60
VAR53: This site initiates and operates immediately After entering my transaction information,	3.37	.991	60
VAR45: Product/ Service can be obtained as advertised	3.58	1.046	60
VAR63: Website is Compatible with different browsers	3.43	.998	60
VAR43: Pages load promptly	3.42	.962	60
VAR61: Web site is accessible 24/7	3.67	1.258	60

Item Statistics

	Mean	Std. Deviation	N
VAR15: Easy login procedures	3.53	1.096	60
VAR20: Files can be downloaded at high speed	3.17	.886	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR57: Transactions can be conducted quickly	37.52	70.695	.805	.919
VAR39: Navigation and movingto different areas of the site is easy	37.33	71.548	.755	.921
VAR54: site is well prepared and organized	37.67	68.938	.814	.918
VAR27: I get quick response for my actions	37.75	68.530	.828	.917
VAR23: Finding what I need is simple and easy	37.77	72.521	.742	.922
VAR53: This site initiates and operates immediately After entering my transaction information,	37.60	71.939	.699	.923
VAR45: Product/ Service can be obtained as advertised	37.38	72.444	.625	.926
VAR63: Website is Compatible with different browsers	37.53	73.575	.590	.927
VAR43: Pages load promptly	37.55	72.286	.701	.923
VAR61: Web site is accessible 24/7	37.30	71.366	.552	.931
VAR15: Easy login procedures	37.43	71.538	.644	.925
VAR20: Files can be downloaded at high speed	37.80	73.959	.652	.925

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
40.97	84.677	9.202	12

```
RELIABILITY
  /VARIABLES=var57 var39 var54 var27 var23 var53 var45 var63 var43 var15 var20
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created	2009-07-20T13:23:05.597

Notes

Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var57 var39 var54 var27 var23 var53 var45 var63 var43 var15 var20 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.007

[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.931	11

Item Statistics

	Mean	Std. Deviation	N
VAR57: Transactions can be conducted quickly	3.45	.964	60
VAR39: Navigation and movingto different areas of the site is easy	3.63	.956	60
VAR54: site is well prepared and organized	3.30	1.078	60

Item Statistics

	Mean	Std. Deviation	N
VAR27: I get quick response for my actions	3.22	1.091	60
VAR23: Finding what I need is simple and easy	3.20	.898	60
VAR53: This site initiates and operates immediately After entering my transaction information,	3.37	.991	60
VAR45: Product/ Service can be obtained as advertised	3.58	1.046	60
VAR63: Website is Compatible with different browsers	3.43	.998	60
VAR43: Pages load promptly	3.42	.962	60
VAR15: Easy login procedures	3.53	1.096	60
VAR20: Files can be downloaded at high speed	3.17	.886	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR57: Transactions can be conducted quickly	33.85	58.503	.809	.920
VAR39: Navigation and movingto different areas of the site is easy	33.67	59.446	.746	.923
VAR54: site is well prepared and organized	34.00	56.983	.812	.920
VAR27: I get quick response for my actions	34.08	56.315	.847	.918
VAR23: Finding what I need is simple and easy	34.10	59.990	.760	.923
VAR53: This site initiates and operates immediately After entering my transaction information,	33.93	59.826	.689	.925
VAR45: Product/ Service can be obtained as advertised	33.72	60.003	.634	.928
VAR63: Website is Compatible with different browsers	33.87	61.101	.594	.929
VAR43: Pages load promptly	33.88	59.834	.713	.924
VAR15: Easy login procedures	33.77	59.843	.608	.929
VAR20: Files can be downloaded at high speed	34.13	61.440	.658	.927

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
37.30	71.366	8.448	11

Factor 2

```
RELIABILITY
  /VARIABLES=var32 var34 var37 var21 var44 var24 var11
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:29:50.990
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var32 var34 var37 var21 var44 var24 var11 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.006

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR32: Information is well formed and structured	3.67	1.003	60
VAR34: It is easy to understand the financial terms	3.47	1.016	60
VAR37: My complaints are addressed friendly and transparently	3.45	.982	60
VAR21: Financial information is accurate, timely and relevant	3.78	1.121	60
VAR44: Problems are taken care of quickly	3.15	.936	60
VAR24: Help instructions about transactions are available	3.13	1.142	60
VAR11:Customer service employee is knowledgeable and can solve problems efficiently	3.22	.976	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR32: Information is well formed and structured	20.20	21.451	.796	.843
VAR34: It is easy to understand the financial terms	20.40	22.244	.685	.857
VAR37: My complaints are addressed friendly and transparently	20.42	22.383	.700	.855
VAR21: Financial information is accurate, timely and relevant	20.08	21.806	.648	.862
VAR44: Problems are taken care of quickly	20.72	22.783	.693	.857
VAR24: Help instructions about transactions are available	20.73	22.063	.604	.869
VAR11:Customer service employee is knowledgeable and can solve problems efficiently	20.65	23.892	.524	.877

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
23.87	29.846	5.463	7

Factor 3

```
RELIABILITY
  /VARIABLES=var36 var2 var59 var50 var19 var1 var56
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:33:00.215
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var36 var2 var59 var50 var19 var1 var56 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.031
	Elapsed Time	0:00:00.011

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR36: Money Transfer service to other banks is available	3.17	1.342	60
VAR2: Authentication method changes from time to time	2.78	1.316	60
VAR59: Virtual keyboard is used is enter password on login page	3.23	1.522	60
VAR50: Search capability is helpful	3.20	1.038	60
FVAR19: AQ pages are available	3.18	1.142	60
VAR1: Account inquiry service is detailed and useful	3.90	1.020	60
VAR56: Transaction status is traceable	3.37	1.288	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR36: Money Transfer service to other banks is available	19.67	29.785	.572	.832
VAR2: Authentication method changes from time to time	20.05	28.760	.672	.816
VAR59: Virtual keyboard is used is enter password on login page	19.60	26.854	.685	.815
VAR50: Search capability is helpful	19.63	29.829	.799	.803
FVAR19: AQ pages are available	19.65	30.943	.608	.827
VAR1: Account inquiry service is detailed and useful	18.93	34.538	.366	.856
VAR56: Transaction status is traceable	19.47	30.084	.582	.830

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
22.83	39.972	6.322	7

```
RELIABILITY
  /VARIABLES=var36 var2 var59 var50 var19 var56
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created	2009-07-20T13:33:22.849

Notes

Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var36 var2 var59 var50 var19 var56 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.005

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.856	6

Item Statistics

	Mean	Std. Deviation	N
VAR36: Money Transfer service to other banks is available	3.17	1.342	60
VAR2: Authentication method changes from time to time	2.78	1.316	60
VAR59: Virtual keyboard is used is enter password on login page	3.23	1.522	60

Item Statistics

	Mean	Std. Deviation	N
VAR50: Search capability is helpful	3.20	1.038	60
FVAR19: AQ pages are available	3.18	1.142	60
VAR56: Transaction status is traceable	3.37	1.288	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR36: Money Transfer service to other banks is available	15.77	24.589	.612	.839
VAR2: Authentication method changes from time to time	16.15	23.926	.690	.824
VAR59: Virtual keyboard is used is enter password on login page	15.70	22.146	.703	.822
VAR50: Search capability is helpful	15.73	25.318	.779	.815
FVAR19: AQ pages are available	15.75	26.157	.606	.840
VAR56: Transaction status is traceable	15.57	25.911	.531	.853

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.93	34.538	5.877	6

Factor 4

```
RELIABILITY
  /VARIABLES=var49 var17 var18 var38 var31 var55
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T15:08:01.312
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var49 var17 var18 var38 var31 var55 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.013

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR49: Safety/privacy notifications are displayed	3.43	1.212	60
VAR17: Email /SMS notification is sent when a transaction is processed	3.65	1.363	60
VAR18: Email/SMS service can be enabled and disabled	3.45	1.407	60
VAR38: My personal details and password can be changed	4.28	1.075	60
VAR31: Information is given on what to do if the transaction is failed	3.07	1.233	60
VAR55: Transaction information is encrypted and secured	3.55	1.156	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR49: Safety/privacy notifications are displayed	18.00	17.186	.674	.679
VAR17: Email /SMS notification is sent when a transaction is processed	17.78	16.376	.653	.680
VAR18: Email/SMS service can be enabled and disabled	17.98	17.101	.546	.713
VAR38: My personal details and password can be changed	17.15	20.197	.423	.745
VAR31: Information is given on what to do if the transaction is failed	18.37	19.118	.445	.740
VAR55: Transaction information is encrypted and secured	17.88	21.088	.284	.777

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
21.43	25.436	5.043	6

```
RELIABILITY
  /VARIABLES=var49 var17 var18 var38 var31
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created	2009-07-20T15:08:16.086

Notes

Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var49 var17 var18 var38 var31 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.008

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.777	5

Item Statistics

	Mean	Std. Deviation	N
VAR49: Safety/privacy notifications are displayed	3.43	1.212	60
VAR17: Email /SMS notification is sent when a transaction is processed	3.65	1.363	60
VAR18: Email/SMS service can be enabled and disabled	3.45	1.407	60

Item Statistics

	Mean	Std. Deviation	N
VAR38: My personal details and password can be changed	4.28	1.075	60
VAR31: Information is given on what to do if the transaction is failed	3.07	1.233	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR49: Safety/privacy notifications are displayed	14.45	14.116	.604	.718
VAR17: Email /SMS notification is sent when a transaction is processed	14.23	12.792	.660	.695
VAR18: Email/SMS service can be enabled and disabled	14.43	13.063	.594	.720
VAR38: My personal details and password can be changed	13.60	16.041	.452	.766
VAR31: Information is given on what to do if the transaction is failed	14.82	15.237	.450	.768

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
17.88	21.088	4.592	5

Factor 5

```
RELIABILITY
  /VARIABLES=var6 var7 var8 var52
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:40:17.032
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var6 var7 var8 var52 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.031
	Elapsed Time	0:00:00.005

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.841	4

Item Statistics

	Mean	Std. Deviation	N
VAR6: Continuous improvement on banking products is performed	3.00	.939	60
VAR7:Continuous improvement on customer services is performed	3.05	1.111	60
VAR8:Continuous improvement on online services is performed	3.10	1.085	60
VAR52: Suggestions and complaints areconsidered and implemented	2.90	1.003	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR6: Continuous improvement on banking products is performed	9.05	6.896	.784	.757
VAR7:Continuous improvement on customer services is performed	9.00	6.102	.784	.747
VAR8:Continuous improvement on online services is performed	8.95	6.726	.665	.804
VAR52: Suggestions and complaints areconsidered and implemented	9.15	7.858	.494	.872

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
12.05	11.642	3.412	4

```
RELIABILITY
  /VARIABLES=var6 var7 var8
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:40:28.695
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>

Notes

Input	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var6 var7 var8 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.005

[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.872	3

Item Statistics

	Mean	Std. Deviation	N
VAR6: Continuous improvement on banking products is performed	3.00	.939	60
VAR7:Continuous improvement on customer services is performed	3.05	1.111	60
VAR8:Continuous improvement on online services is performed	3.10	1.085	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR6: Continuous improvement on banking products is performed	6.15	3.960	.807	.782
VAR7:Continuous improvement on customer services is performed	6.10	3.447	.770	.806
VAR8:Continuous improvement on online services is performed	6.05	3.743	.700	.869

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
9.15	7.858	2.803	3

Factor 6

```
RELIABILITY
  /VARIABLES=var10 var12 var13 var33
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T13:44:02.807
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var10 var12 var13 var33 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.012

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR10:Credit Card transaction inquiry service is available	3.47	1.384	60
VAR12:Customer service is accessible when Iam abroad	3.12	1.091	60
VAR13:Customer service representative isassigned to deal with each e-bankingcustomer when they need assistance	3.02	1.186	60
VAR33: Insurance, Loans, fixed Deposit requests are available	3.40	1.304	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR10:Credit Card transaction inquiry service is available	9.53	8.660	.525	.756
VAR12:Customer service is accessible when Iam abroad	9.88	9.359	.644	.695
VAR13:Customer service representative isassigned to deal with each e-bankingcustomer when they need assistance	9.98	9.034	.618	.702
VAR33: Insurance, Loans, fixed Deposit requests are available	9.60	8.854	.553	.736

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
13.00	14.847	3.853	4

Factor 7

```
RELIABILITY
  /VARIABLES=var16 var25 var26 var30
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:17:03.878
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var16 var25 var26 var30 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.015
	Elapsed Time	0:00:00.006

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR16: Electronic complaint and suggestion service is available	3.08	1.357	60
VAR25: I can communicate to customer service via emails and get quick response	2.92	1.306	60
VAR26: I get clear answers regarding my inquiries	3.22	1.075	60
VAR30: In the case of problems, the site offerslive help with a person	2.57	1.184	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR16: Electronic complaint and suggestion service is available	8.70	8.247	.585	.725
VAR25: I can communicate to customer service via emails and get quick response	8.87	7.643	.734	.637
VAR26: I get clear answers regarding my inquiries	8.57	9.741	.559	.738
VAR30: In the case of problems, the site offerslive help with a person	9.22	9.766	.470	.778

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
11.78	14.647	3.827	4

Factor 8

```
RELIABILITY
  /VARIABLES=var9 var22 var28
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:19:03.529
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var9 var22 var28 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.031
	Elapsed Time	0:00:00.010

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.765	3

Item Statistics

	Mean	Std. Deviation	N
VAR9:Correct service is received at all times	3.53	1.096	60
VAR22: Financial records are accurate	3.88	.976	60
VAR28: I have confidence in the bank's service	3.93	1.056	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR9:Correct service is received at all times	7.82	3.068	.625	.653
VAR22: Financial records are accurate	7.47	3.406	.643	.640
VAR28: I have confidence in the bank's service	7.42	3.468	.532	.757

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
11.35	6.672	2.583	3

Factor
10

```
RELIABILITY
  /VARIABLES=var40 var46 var48 var3
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:21:44.779
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var40 var46 var48 var3 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.006

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Item Statistics

	Mean	Std. Deviation	N
VAR40: New bill payers can be registered	3.38	1.303	60
VAR46: Provide considerable range of products	3.45	1.171	60
VAR48: Provide localized products/services (Islamic Banking)	3.33	1.336	60
VAR3: Bill Payments service is available	4.07	1.023	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR40: New bill payers can be registered	10.85	8.231	.374	.734
VAR46: Provide considerable range of products	10.78	7.732	.556	.621
VAR48: Provide localized products/services (Islamic Banking)	10.90	7.142	.532	.636
VAR3: Bill Payments service is available	10.17	8.243	.585	.617

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
14.23	12.724	3.567	4

```
RELIABILITY
  /VARIABLES=var46 var48 var3
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:22:01.874
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input

Factor
11

```
RELIABILITY
  /VARIABLES=var4 var60
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:24:40.253
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var4 var60 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.032
	Elapsed Time	0:00:00.008

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	59	90.8
	Excluded[a]	6	9.2
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.427	2

Notes

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var46 var48 var3 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.032
	Elapsed Time	0:00:00.005

[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.734	3

Item Statistics

	Mean	Std. Deviation	N
VAR46: Provide considerable range of products	3.45	1.171	60
VAR48: Provide localized products/services (Islamic Banking)	3.33	1.336	60
VAR3: Bill Payments service is available	4.07	1.023	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR46: Provide considerable range of products	7.40	4.075	.590	.610
VAR48: Provide localized products/services (Islamic Banking)	7.52	3.610	.559	.661
VAR3: Bill Payments service is available	6.78	4.749	.546	.671

Item Statistics

	Mean	Std. Deviation	N
VAR4: Content is available in multiple languages.	2.93	1.363	59
VAR60: Web site appearance is user friendly	3.46	1.194	59

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR4: Content is available in multiple ...	3.46	1.425	.274	.[a]
VAR60: Web site appearance is user ...	2.93	1.857	.274	.[a]

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
6.39	4.173	2.043	2

Factor 12

```
RELIABILITY
  /VARIABLES=var14 var35
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:25:46.269
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var14 var35 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.032
	Elapsed Time	0:00:00.006

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.553	2

Item Statistics

	Mean	Std. Deviation	N
VAR14: Describe product features in detail	3.25	1.019	60
VAR35: Linkage between e-banking web site and general financial service providers web site	2.87	1.127	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR14: Describe produ...	2.87	1.270	.384	.[a]
VAR35: Linkage between e-banking web site and general financial servic...	3.25	1.038	.384	.[a]

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
6.12	3.190	1.786	2

Factor
15

```
RELIABILITY
  /VARIABLES=var10 var1 var64
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-19T23:20:01.886
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var10 var1 var64 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.010

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.595	3

Item Statistics

	Mean	Std. Deviation	N
VAR10:Credit Card transaction inquiry service is available	3.48	1.372	60
VAR1: Account inquiry service is detailed and useful	3.93	.972	60
VAR64: When I complete a transaction, aconfirmation statement is displayed	4.05	1.241	60

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR10:Credit Card transaction inquiry service is available	7.98	3.271	.420	.481
VAR1: Account inquiry service is detailed and useful	7.53	4.287	.498	.404
VAR64: When I complete a transaction, aconfirmation statement is displayed	7.42	4.044	.331	.602

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
11.47	7.236	2.690	3

Factor
16

```
RELIABILITY
  /VARIABLES=var32 var5
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE SCALE
  /SUMMARY=TOTAL.
```

Reliability

Notes

Output Created		2009-07-20T14:28:06.667
Comments		
Input	Data	C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	65
	Matrix Input	Matrix Input
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=var32 var5 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE /SUMMARY=TOTAL.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.004

```
[DataSet1] C:\Users\Amr\Documents\research\Final data\19-7-2009.sav
```

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	92.3
	Excluded[a]	5	7.7
	Total	65	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.384	2

Appendix C: The Questionnaire

Name			
Phone Number		**Country**	○ Oman ○ U.A.E.
Email		**Bank**	

Banking Service Quality

Product variety and diverse features

	Never		Often		Always	
Provide considerable range of products	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Describe product features in detail	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Provide financial product/service comparisons	○	○	○	○	○	○ I Dont Know
	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Provide localized banking products/ services (Islamic Banking)	○	○	○	○	○	○ I Dont Know

Information Quality

	Never		Often		Always	
Financial information is accurate, timely and relevant	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Information is well formed and structured	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
It is easy to understand the financial terms	○	○	○	○	○	○ I Dont Know

Efficiency of Banking Transactions

	Never		Often		Always	
Option to cancel transactions is provided	○	○	○	○	○	○ I Dont Know
Help instructions about transactions are available	○	○	○	○	○	○ I Dont Know
When I complete a transaction, a confirmation statement is displayed	○	○	○	○	○	○ I Dont Know
Information is given on what to do if the transaction is failed	○	○	○	○	○	○ I Dont Know
Transaction status is traceable	○	○	○	○	○	○ I Dont Know

Availability of Banking Services

	Never		Often		Always	
Email /SMS notification is sent when a transaction is processed	○	○	○	○	○	○ I Dont Know
Email/SMS service can be enabled and disabled	Strongly disagree ○	○	Neither disagree nor agree ○	○	Strongly Agree ○	○ I Dont Know
Bill Payments service is available	○	○	○	○	○	○ I Dont Know
New bill payers can be registered	Strongly disagree ○	○	Neither disagree nor agree ○	○	Strongly Agree ○	○ I Dont Know
My personal details and password can be changed	Strongly disagree ○	○	Neither disagree nor agree ○	○	Strongly Agree ○	○ I Dont Know

	Never		Often		Always	
Account inquiry service is detailed and useful	○	○	○	○	○	○ I Dont Know
	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Credit Card transaction inquiry service is available	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Money Transfer service to other banks is available	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Insurance, Loans, fixed Deposit requests are available	○	○	○	○	○	○ I Dont Know

Customer Service Quality

Reliability

	Never		Often		Always	
Correct service is received at all times	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Financial records are accurate	○	○	○	○	○	○ I Dont Know
	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Product/ Service can be obtained as advertised	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Customer service is accessible when I am abroad	○	○	○	○	○	○ I Dont Know

Competence

	Never		Often		Always	
Customer service employee is knowledgeable and can solve problems efficiently	○	○	○	○	○	○ I Dont Know

	Never		Often		Always	
My complaints are addressed friendly and transparently	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Customer service representative is assigned to deal with each e-banking customer when they need assistance	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Problems are taken care of quickly	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
In the case of problems, the site offers live help with a person	○	○	○	○	○	○ I Dont Know

Credibility and Trust

	Strongly disagree		Neither disagree nor agree		Strongly Agree	
No Disclosures regarding confidentiality and privacy of customer records	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
I have confidence in the bank's service	○	○	○	○	○	○ I Dont Know
	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Electronic complaint and suggestion service is available	○	○	○	○	○	○ I Dont Know

Communication

	Never		Often		Always	
I can communicate to customer service via emails and get quick response	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
I get clear answers regarding my inquiries	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
I receive individualized emails regarding latest financial news, products, and services	○	○	○	○	○	○ I Dont Know

Continuous Improvement

	Never		Often		Always	
Continuous improvement on online services is performed	○	○	○	○	○	○ I Dont Know
Continuous improvement on banking products is performed	○	○	○	○	○	○ I Dont Know
Continuous improvement on customer services is performed	○	○	○	○	○	○ I Dont Know
Suggestions and complaints are considered and implemented	○	○	○	○	○	○ I Dont Know

Website Quality

Content

	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Web site policies regarding customer information is published	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Content is free of errors	○	○	○	○	○	○ I Dont Know
	Strongly disagree		Neither disagree nor agree		Strongly Agree	
FAQ pages are available	○	○	○	○	○	○ I Dont Know
	Never		Often		Always	
Linkage between e-banking web site and general financial service providers web site	○	○	○	○	○	○ I Dont Know

Ease of use

	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Search capability is helpful	○	○	○	○	○	○ I Dont Know

Site map is provided and useful	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know
Easy login procedures	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know
Web site is accessible 24/7	Never	○	○	Often	○	○	Always	○	I Dont Know
Navigation and moving to different areas of the site is easy	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know
Content is available in multiple languages	Never	○	○	Often	○	○	Always	○	I Dont Know

User Interface

Web site appearance is user friendly	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know
Use of graphics and icons is reasonable	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know

Security

Virtual keyboard is used is enter password on login page	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know
Authentication method changes from time to time	Strongly disagree	○	○	Neither disagree nor agree	○	○	Strongly Agree	○	I Dont Know

	Never		Often		Always	
Safety/privacy notifications are displayed	○	○	○	○	○	○ I Dont Know

	Strongly disagree		Neither disagree nor agree		Strongly Agree	
Please select an answer Transaction information is encrypted and secured	○	○	○	○	○	○ I Dont Know

Efficiency

	Never		Often		Always	
Website is Compatible with different browsers	○	○	○	○	○	○ I Dont Know

	Never		Often		Always	
Files can be downloaded at high speed	○	○	○	○	○	○ I Dont Know

	Never		Often		Always	
Finding what I need is simple and easy	○	○	○	○	○	○ I Dont Know

	Strongly disagree		Neither disagree nor agree		Strongly Agree	
This site is well prepared and organized	○	○	○	○	○	○ I Dont Know

	Never		Often		Always	
I get quick response for my actions	○	○	○	○	○	○ I Dont Know

Efficiency

	Never		Often		Always	
Transactions can be conducted quickly	○	○	○	○	○	○ I Dont Know

	Never		Often		Always	
Pages load promptly	○	○	○	○	○	○ I Dont Know

	Never		Often		Always	
This site initiates and operates immediately After entering my transaction information, the page neither locks nor freezes	○	○	○	○	○	○ I Dont Know