THE UNIVERSITY OF HULL

The Value of E-Banking Services in the Egyptian Environment: An Integrated Model

Being a Thesis submitted for the Degree of Doctor of Philosophy
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by

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Abstract

The Value of E-Banking Services in the Egyptian Environment: An Integrated Model

Introduction: Driving the introduction of e-banking services in Egypt are structural changes, which have intensified competition across the banking sector. The value (net benefits) of e-banking services to their suppliers lies in their ability to attract new customers and retain those interested in using them. To achieve these objectives, requires an understanding of the value management process in e-banking services specifically within the Egyptian environment.

Study Problem: Extant literature lacks an integrated model of value management relevant to the e-banking services. Empirical studies addressing the value of e-banking services in terms of antecedents and consequence in general and in the Egyptian environment are limited. Moreover, customer relationship management (CRM) literature disagrees on the factors reflecting the role of the internal operating environment and overlooks the role of the external environment in affecting the ability of service suppliers to create and deliver the value of e-banking services.

Aim and objectives: This study sought to develop an integrated model for managing the value of e-banking services in the Egyptian environment through the following objectives. **First**, to identify the antecedents (requirements) and consequence of e-banking services perceived value from the demand side of e-banking services. **Second**, to explore factors shaping banks' ability to create and deliver value of offered e-banking services.

Paradigm and research methods: This study adopted the critical realism paradigm, an anti-positivist paradigm, which supports the exploratory and the abductive nature of this research. To identify the antecedents and consequence of e-banking services perceived value from the demand side of e-banking services, an exploratory sequential strategy, in which in-depth interviews preceded the survey phase, was conducted. To explore factors shaping the banks' ability to create and deliver the value of e-banking services, semi-structured interviews were used.

Key Findings: Findings related to the demand side indicated that improving e-banking services perceived value can significantly and positively strengthen the relationship between banks and customers. Antecedents of value were identified to be a combination of the explicit involvement of service suppliers in supporting face-to-face service encounters, e-banking services quality, and the role of external environment in promoting e-banking services.

The ability of banks to create and deliver value of e-banking services is affected by their positioning strategy, bank branch design, employment scheme, criteria of recruiting front-office employees, and criteria of evaluating front-office employees' performance. The nature of the Egyptian economy, output of education system and legal system development were defined as highly influential within this process.

Conclusion: It could be concluded that, managing the value of e-banking services is a dynamic process between service users and service suppliers.

Keywords: E-banking services, perceived value, loyalty, service quality, and customer relationship management (CRM).

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First and foremost, thanks to Allah, the most Gracious and most Merciful

Finally, it is time to write my feelings freely without any references or any academic writing restrictions. I have recognized the meaning of *PhD is a lonely and painful journey,* after I experienced it. For me, it was much worse than a lonely journey and painful feelings. However, without the support of my Dad and Mum, I would have never completed this thesis. They always support me emotionally and financially. No words can express how I am truly indebted to them.

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Chapter 1

Introduction

1.1 Introduction

This chapter provides an overview of the study, which is concerned with e-banking services in the Egyptian environment, and highlights the research context. In doing so, this chapter serves three main purposes. First, it suggests a working definition of e-banking services, which is employed throughout the study. Second, it provides the rationale for the study. Third, is establishes the foundation for the research objectives and questions. The main areas discussed in this chapter are depicted in **Figure 1.1**.

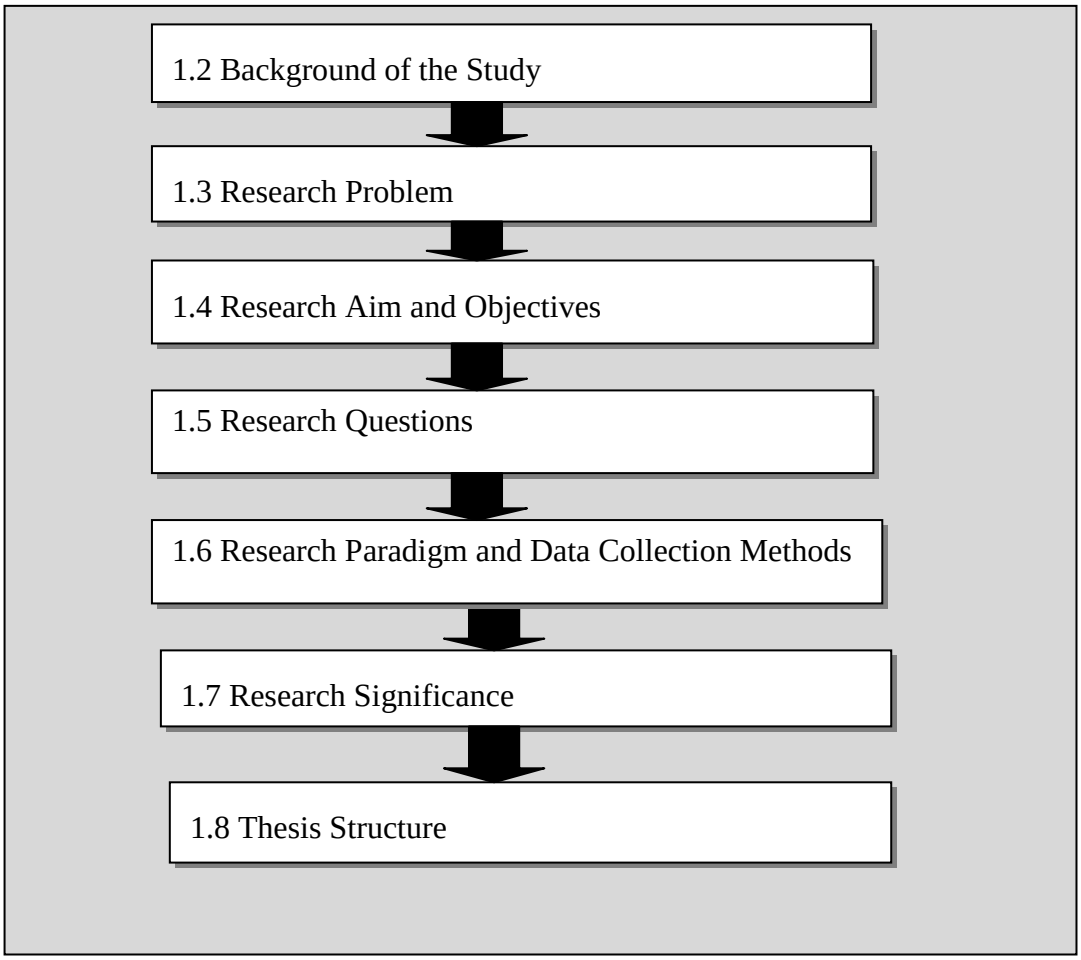


Figure 1.1: The structure of the introduction chapter

1.2 Background of the Study

Information technology (IT) applications penetrate consumers' daily lives and the business environment, as well. This section overviews the impact of e-commerce as an IT innovation on the business environment in general and the banking industry in particular.

Information Technology applications have affected the way businesses are managed internally and externally by creating new goods, services, delivery channels and tools by which the organisation can enhance relationships with its customers (Karimi *et al*. 2001; Mulligan and Gordon 2002). They therefore provided a new basis for competition (Fraser *et al*. 2000; Rivard *et al*. 2006). A key example of this is ***e-commerce*.**

E-commerce, an IT innovation has affected the way an organisation is managed internally and how it manages relationships with its customers (Molla and Licker 2001). However, there is no consensus on a clear definition for ***e-commerce.*** Extant definitions differ on two criteria:

The first criterion is the range of IT applications or parties involved in the definition of e-commerce. For example, Eastin (2002) viewed e-commerce as the utilization of electronic information technology which might not include the internet to conduct business between trading partners. However, for others, e-commerce is viewed as the use of the internet and the www technology to conduct business-to-business or business to customer trading (Bin *et al.* 2003; Gibbs *et al*. 2003). This difference might be due to the research objectives and the environment the researcher investigates (Grandon and Pearson 2004).

The second criterion is the extended effect of e-commerce on the adopting organizations. Some view e-commerce as merely a channel that facilitates the act of buying and selling through the internet. Others adopt a wider perspective, viewing e-commerce as a business strategy. Those advocating the wider perspective consider e-commerce to be a strategic choice and a transformational force that requires reviewing of resource allocation to build competitive advantage.

Zwass (1996:3), for example, maintained a wider perspective by defining e-commerce as:

> *"the sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunications networks".*

Also, Shalhoub and Al Qasimi (2006: 11) defined e-commerce from a wider perspective stating:

> *"E-commerce is not just a technology or tool, as a matter of fact it is a combination of technologies, applications, processes and business strategies".*

However, the ability of the organization to benefit from e-commerce depends on the existence of well structured strategies able to manage changes brought by the adoption of e-commerce (Jayawardhena and Foley 2000). **Figure 1.2** presents two perspectives of e-commerce, based on the scope of and the degree of e-commerce involvement in organization activities.

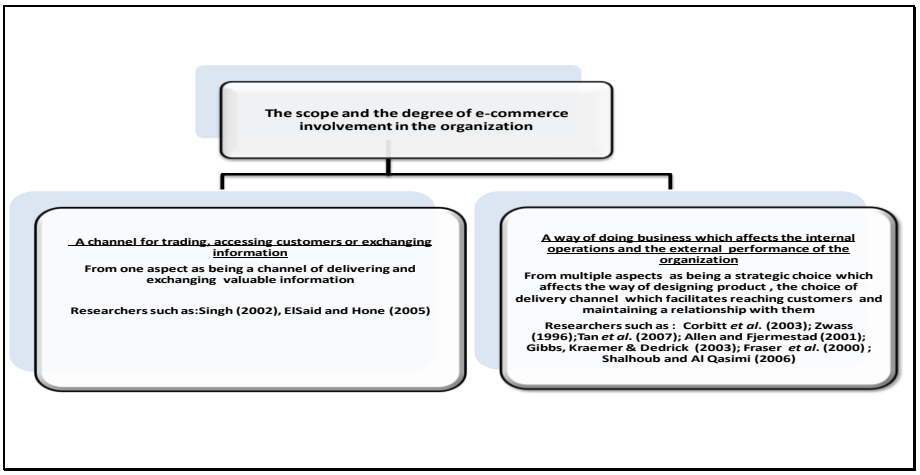


Figure 1.2: Classifying e-commerce according to the degree of involvement in the organization

The rapid development of IT increases the technological gap between developing and developed countries. This necessitates adopting a holistic view of ***e-commerce*** to match the technological status of Egypt as a developing country. Accordingly, ***e-commerce*** could be defined as follows:

> **E-commerce is the use of information technology applications in business-to-customer or business-to-business contexts to attract new customers and strengthen relationships with existing ones, through improving internal processes, existing products, and enhancing customers' experiences with product delivery.**

The above definition does not restrict e-commerce to internet applications. It also considers the outcome of using e-commerce applications on the organization.

E-commerce has extended to affect the basic cost dimensions and the distribution structure for the financial services industry in most countries (Joseph *et al*. 2005). Moreover, it has affected the types of financial product launched to customers and the way such products are delivered (Lee 2002; Akinci *et al*. 2004). The application of e-commerce in the banking sector is known as ***e-banking services***.

Researchers disagree on defining e-banking services. Most researchers use the terms 'internet banking' or 'online banking' as synonymous with e-banking (Gonzalez *et al*. 2004; Simpson 2002; Daniel 1999). Similarly, Shah *et al*. (2007) defined internet banking with e-banking, stating:

> *"Banks offer most financial products such as current accounts, saving accounts, and different payment services via the Internet, which collectively we refer to as e-Banking (EB)"*

Others adopt a wider view of e-banking services to include a wide range of IT applications, rather than merely internet banking. Accordingly, they view e-banking services as the delivery of financial products using automatic teller machines (ATMs) electronic media such as personal computer (PC), and tele-banking which refers to the use of the telephone as a means of conducting business with the banks, as well as the internet (Joseph *et al*. 1999; Harden 2002; Yu and Hway-Boon 2003; Kolodinsky *et al*. 2004; Kamakodi and Khan 2008). A similar breadth can be inferred from Frambach *et al*. (1998:162) who described electronic banking services, as:

> *"a financial service innovation that offers banking firms opportunities to reduce costs of banking transactions, enhance the relationship with customers and to distribute wider range of semi-financial products".*

A working definition for E-banking services in the Egyptian environment

In the Egyptian environment, the adoption of e-banking services was stimulated by the entry of foreign multinational banks, with the aim of attracting and/or strengthening relationship with customers.

However, the nature of Egypt, as a developing country, might have delayed transfer of the full range and capabilities of e-banking services from the western culture to the Egyptian environment. In most western environments, all stages of the financial transaction cycle (information provision, initiation, negotiation, execution/settlement, after sales support) are processed electronically without the need for personal face-to-face interaction with employees (Bauer *et al*. 2005). In the Egyptian environment, internet banking or call banking are not yet sufficiently developed to provide all the above mentioned stages electronically. Although internet banking was adopted recently, ATMs and their related e-product plastic cards such as ATM cards, visa cards, and master cards continue to dominate the range of e-banking services offered by the Egyptian banks to their customers, while internet banking is the least common type of e-banking services offered by banks (Central Bank of Egypt 2009). This highlights the gap in IT applications involved in e-banking services between the western developed culture and the Egyptian environment.

From this brief review of the context that shaped the introduction and the nature of e-banking services in the Egyptian environment, ***e-banking services*** could be defined as:

> **Use of self-service technology, such as ATMs and their related plastic cards, phone and internet banking to strengthen the relationships between banks and customers interested in using these services.**

Defining e-banking services in terms of self-service technology is consistent with Meuter *et al*. (2000). The above definition extends e-banking services applications beyond internet banking to include all forms of self service technology offered by the banking sector in the Egyptian environment.

E-banking services have proved to have several benefits to both the adopting banks and customers in western societies. From bank customers' perspective, they allowed customers to perform a variety of functions, ranging from basic information provision to

full transactional capability (Waite and Harrison 2002; Gurau 2002; Kaynak and Harker 2005).

Moreover, e-banking services proved to be of financial benefits to the adopting banks. For example, in India, Malhotra and Singh (2009) found that the asset quality and cost of operations are significantly better for banks offering internet banking than those not offering internet banking.

Although IT applications could enhance service delivery and potentially extends the market share, they may create a gap between customers and the service (Bitner *et al* 2000). Thus, grasping the full benefits of e-banking services from the supplier side depends on the way customers perceive the value of e-banking services. Without the continuous investigation of customers' perceived value with existing service offerings, service providers will be unable to survive in an increasingly competitive and technological market.

1.3 Research Problem

Financial services in general and banks in particular are amongst the service organizations that face severe competition all over the world (Leal and Pereira 2003). A highly competitive environment facilitates the copying of financial services features (Bick *et al*. 2004). This creates a necessity for financial services suppliers to distinguish their services and to position themselves relative to their competitors through offering value added services.

In Western developed countries such as the United Kingdom, the financial services industry has recognized the effect of adopting e-banking services on financial and marketing performance (Daniel 1999). Accordingly, banks have adopted e-banking services to defend their market share, i.e to retain existing customers.

Similarly, the adoption of e-banking services in the Egyptian banking sector was driven by several factors. **First,** is the growing competition between banks or between banks and other financial intermediaries, such as the capital market, in the Egyptian market. **Second,** is the invasion of technology in the banking services, due to the entry of

foreign banks, which led to emergence of e-banking services. **Third,** is the expected contraction in the demand for banking services in the Egyptian environment, due to deteriorating economic performance on the customer level (**see chapter 2, section 2.3.3**).

In response to these three factors, e-banking services were introduced by banks in the Egyptian environment to retain existing customers and/or attract those interested in using these services (Kamel and Hassan 2003). It is argued that the business value (net benefits) of e-banking services lies in their ability to attract new customers and retain those who are interested in their usage (Stamoulis *et al*. 2002; Lee 2002). Value management is considered a strategic tool in providing a superior service offering to retain customers (Woodruff 1997; Ulaga and Chacour 2001; Kale 2004). Thus, offering e-banking services of value to their users could enable financial institutions to retain their customers and create competitive advantage (Wang *et al*. 2004).

This highlights the concept of e-banking services' value and its effect on customer retention (commitment or loyalty). To improve the role of e-banking services in strengthening the relationship between banks and their customers, suppliers should understand what shapes the value of e-banking services from bank customers, who could be current or potential users of e-banking services (**the demand side of e-banking services**).

From a review of consumer buying behaviour theories and relationship marketing theory with a special focus on value-related literature, the following gaps could be highlighted:

- Factors that explain the antecedents of e-banking value arise from the interaction among customers who are the current or potential users of services, culture, service features and their related product characteristics, the surrounding external environment, situational and contextual circumstances and service supplier practices. The definition of e-banking services adopted in this research differs from that adopted in most studies from western culture. This might emphasize certain quality dimensions in shaping the perceived value of e-banking services in the Egyptian environment. Moreover, situational and

contextual factors could have an indirect impact on the relative importance of certain quality dimensions in a given environment, to act as **antecedents of e-banking services' perceived value**.

- There is a lack of and/or disagreement among empirical studies addressing the role of e-banking services' perceived value in strengthening the relationship between banks and their customers (the marketing performance of e-banking services). Moreover, few if any empirical studies have addressed the role of e-banking services in strengthening the relationship between banks and their customers in the Egyptian environment (**the consequence of e-banking services perceived value**).

- Moreover, studies addressing value were more concerned with defining value or its consequence. Value improvement requires linking antecedents with consequences. Empirical studies addressing the value of e-banking services in terms of antecedents and consequence in general and in the Egyptian environment are limited. This necessitates filling the gap of knowledge in this area by establishing **e-banking services value-adding model.**

Whilst filling those knowledge gaps would provide insight into the demand side of e-banking services, any attempt to improve the value of e-banking services, must take account of the dynamic process between the demand and the supply sides of the service. Hence, the supply side of e-banking services, the banks, must be included into the value management process. Creating and delivering the best possible value of e-banking services requires implementing a customer relationship management (CRM) strategy to manage people and technology to improve customers' experience with service delivery encounters (Payne and Frow 2005).

However, it is argued that the ability of CRM to create and deliver the required value depends to a large extent on the organization's internal operating and external environments (Plakoyiannaki and Tzokas 2002; Chen and Popovich 2003; Zablah *et al*. 2004; Zhu *et al*. 2004; Eid 2007; Becker *et al*. 2009). Despite this, the following gaps in CRM literature could be identified:

- CRM literature shows no agreement on a list of factors reflecting the role of internal operating environment in value creation and delivery.
- CRM literature gives little or no explicit consideration to factors reflecting the role of the external environment in value creation and delivery of e-banking services.

This necessitates filling the gap of knowledge in this area, by exploring those factors and explaining the extent to which they support or hinder the value of e-banking services in the Egyptian environment.

Bringing together the antecedents of e-banking services' perceived value revealed from the **demand side**, and factors affecting the ability of banks (**the supply side**) to create and deliver the required value of e-banking services would assist in providing an integrated model that guide value management of e-banking services in the Egyptian environment.

1.4 Research Aim and Objectives

The main aim of this research is to establish an integrated model that guides the value management process of e-banking services in the Egyptian environment. This is achieved via a systematic flow of research objectives, derived from the literature and guided by value management activities suggested by Payne and Holt (2001), as well as the customer value determination model established by Woodruff (1997). Value management of e-banking services is a reciprocal process between customers and service suppliers. Accordingly, both parties are involved in the study and reflected on the research objectives. ***The main aim is achieved through the following objectives:***

1st Objective: **To review and evaluate consumer buying behavior theories to understand customer usage of e-banking services, in general.**

Reviewing and evaluating consumer buying behaviour theories and models in e-banking services usage context assists in addressing the knowledge gap in explaining usage behaviour.

This knowledge gap arises from failure of widely used models, such as the technology acceptance model (TAM) and task- technology fit (TTF) model, to consider explicitly the role of service supplier in explaining e-banking services usage. This calls for extending the relationship between customer and service to involve service supplier in the adoption decision, by considering Relationship Marketing theory and focusing on the concept of perceived value. This is because e-banking services are not only technological innovation, but rather financial services. They share financial services the characteristics of intangibility, inseparability and shared ownership.

In this study, perceived value, a key concept in relationship marketing, is seen from two perspectives. **The first** is a uni-dimensional perspective, where perceived value is simply ***perceived benefits versus perceived risks=net benefit***.

The second is a multidimensional perspective, where perceived value is seen as a process having antecedents leading to an output (consequence). Defining value as a multidimensional concept requires explicit identification of antecedents, and assists in addressing the complex nature of customer perceived value.

As indicated previously, factors that explain the antecedents of e-banking value arise from the interaction among customers who are the current or potential users of services, culture, services features and their related products characteristics, the surrounding external environment, situational and contextual circumstances and service supplier practices. The definition of e-banking services adopted in this research might emphasize certain quality dimensions in shaping the perceived value of e-banking services in the Egyptian environment. Moreover, situational and contextual factors could have an indirect or moderating role on the relative importance of certain quality dimensions in a given environment.

The complex way in which these factors interact to generate antecedents of e-banking services value justifies the use of an exploratory sequential strategy to investigate the demand side of e-banking services in the Egyptian environment.

2nd Objective: To understand the role of customer relationship management (CRM) in creating and delivering value to e-banking service offering.

This objective is achieved by examining CRM literature, as an empirical interpretation of Relationship Marketing theory, in order to identify the requirements of creating and delivering value in general and value of e-banking services in particular. Fulfilling this objective assists in identifying gaps in the literature need to be addressed and filled by integrating the supply side of e-banking services into the value creation and delivery process.

The fulfillment of the first and second objectives provides the basis for establishing a conceptual framework to justify the methodology and guide the flow of the research methods.

3rd Objective: To identify antecedents and consequence of e-banking services perceived value in the Egyptian environment.

To retain customers, the organization should understand what their requirements from the service offering are (Gronroos 1984; Liao and Cheung 2002). Customers should be viewed as resources with whom value is created and improved (Lusch *et al*. 2008). Without feedback from customers, the service offering might lack its core value from the customer's perspective (Foss and Stone 2003: 205).

Feedback from customers has been proved to assist in designing products and services that maximize customer satisfaction (Devlin 1998; Krishnan *et al*. 1999). Similarly, Payne and Frow (2005: 172) addressed value assessment as a tool for improving products and services, stating:

> *"To determine the value proposition is likely to result in a superior customer experience, a company should undertake a value assessment to quantify the relative importance that customers place on a various attributes of a product"*

Understanding the way customers perceive the service offering enables financial institutions to strengthen relationships with their customers (Zineldin 2005; Peppard 2000).

To identify factors shaping the perceived value of e-banking services in the Egyptian environment, in-depth interviews followed by questionnaire were conducted. This served two main purposes. **The first** was to gain an overall understanding of the factors affecting e-banking services perceived value in the Egyptian environment.

The second was to guide the design of the questionnaire in the subsequent quantitative phase, in order to identify the antecedents (requirements) and measuring the consequence of e-banking services perceived value, in the Egyptian environment.

4th Objective: To explore factors shaping the ability of banks to create and deliver the value of e-banking services offered in the Egyptian environment.

Understanding factors shaping e-banking services users' behaviour in the Egyptian environment is not enough to secure effective value creation and delivery. Accordingly, both customers and suppliers should be involved in the process of creating value (Brandnburger and Staurt 1996; Gronroos 1997).

Similarly, Khalifa (2004: 660) emphasized the role of suppliers in creating value, stating:

> *"To be able to offer customers superior value for exchange, a firm should understand how to generate and accumulate value for customers, what forms customer value may take, and what factors influence the accumulation of value".*

Thus, service suppliers are key players in the value management process. Their internal operating and external environments affect their ability to create and deliver the required e-banking services value.

However, little is known about factors reflecting the ability of banks in developing countries to manage the value of e-banking services. For this reason, semi-structured interviews were conducted with practitioners in Egyptian banks, to explore the factors that shape the ability of banks to achieve CRM requirements for value creation and delivery in e-banking services context.

5th Objective: **To establish an integrated model to guide the value management process of e-banking services in the Egyptian environment.**

Identifying reasons behind detected gaps between customer requirements and banks' ability to meet these requirements is a crucial phase in customer value management (Foss and Stone 2002: 204; Gunes and Aksin 2004). Accordingly, in this study, factors revealed from the supply side reflecting the internal and external environments affecting the way e-banking services are created and delivered, are linked to the antecedents of e-banking perceived value revealed from the demand side, in an integrated model. This assists in providing a wider view to guide the value management process of e-banking services in the Egyptian environment. This model also assists in identifying the reasons behind any perceived gap between e-banking services value (determinants) antecedents and what is currently offered.

1.5 Research Questions

This research aims at answering the following questions:

1. What are the factors shaping customers' perceived value of e-banking services offered in the Egyptian environment? (**antecedents of e-banking services perceived value**) **RQ1**
2. To what extent can e-banking services strengthen the relationship between banks and customers in the Egyptian environment? (**consequence of e-banking services perceived value**) **RQ2**
3. What are the factors shaping the ability of banks to create and deliver the value of e-banking services in the Egyptian environment? **RQ3**
4. How could the value of e-banking services be managed to strengthen the relationship between banks and customers in the Egyptian environment? **RQ4**

1.6 Research Paradigm and Data Collection Methods

The critical realism paradigm, an anti-positivist paradigm, dominated the whole study. The rationale behind employing the critical realism paradigm emerges from the theoretical background informing the research knowledge gaps concerning the demand and the supply sides of e-banking services. These knowledge gaps are driven by prior theories. As discussed before, the concepts of perceived value and CRM are established in literature. However, factors explaining the perceived value or those affecting the ability to implement CRM improve the value of services depend on the context under investigation. Exploring these factors in the Egyptian context could add new dimensions to the theory, which might have been overlooked in other contexts. On the other hand, it might validate existing, previously tested, dimensions and causal relationships. The dependence on prior theory, while considering the role of context in expanding and validating such theories is an indication of the abductive nature of this research. It also justifies the use of critical realism (anti-positive) paradigm along the whole study**.**

Understanding the role of context in adding new dimensions to the theory or validating existing dimensions dictates considering banks' practices (supply side of e-banking services) and customers' behaviour and actions (demand side of e-banking services) as open systems. The nature of interaction between customers or organizations and their surrounding context creates and validates causal relationships. This implies that context shapes study findings, making it difficult to generalize relationships and outcomes to other contexts. Hence, relationships are seen as relative rather than fixed. This ontological perspective contradicts with that in purely positivistic paradigm.

The way critical realism paradigm is operationalized on the demand and supply sides of e-banking services are discussed below.

1.6.1 The Demand Side of E-Banking Services

Under the critical realism paradigm, customers' behaviour and action should always be understood within a context. Perceived value is one of the main determinants of customers' attitudes. However, factors that shape customers' perceived value of e-

banking services and affect their behaviour, result from the interaction of customer characteristics, contextual factors, external environment, service supplier and service or product characteristics. This made it difficult to generalize factors shaping perceived value towards e-banking services in the western culture, to the Egyptian environment. Accordingly, an exploratory sequential strategy was the most appropriate to employ in investigating the demand side of e-banking services and answering the **first** and **second** research questions. This was done by conducting in-depth interviews followed by survey.

1.6.2 The Supply Side of E-Banking Services

Banks' ability to implement CRM to improve the value of e-banking services is bounded by the internal operating and external environments. These two environments might influence the successful implementation of CRM, and hence, e-banking services value creation and delivery in the Egyptian environment. This necessitated exploring factors reflecting internal operating and external environments and explaining the way they contribute to the process of e-banking services value creation and delivery. This was achieved by employing data triangulation through conducting semi-structured interviews and secondary data analysis.

Figure 1.3 provides a comprehensive presentation of the research objectives linked to the research questions, the paradigm and the research methods employed to answer these questions.

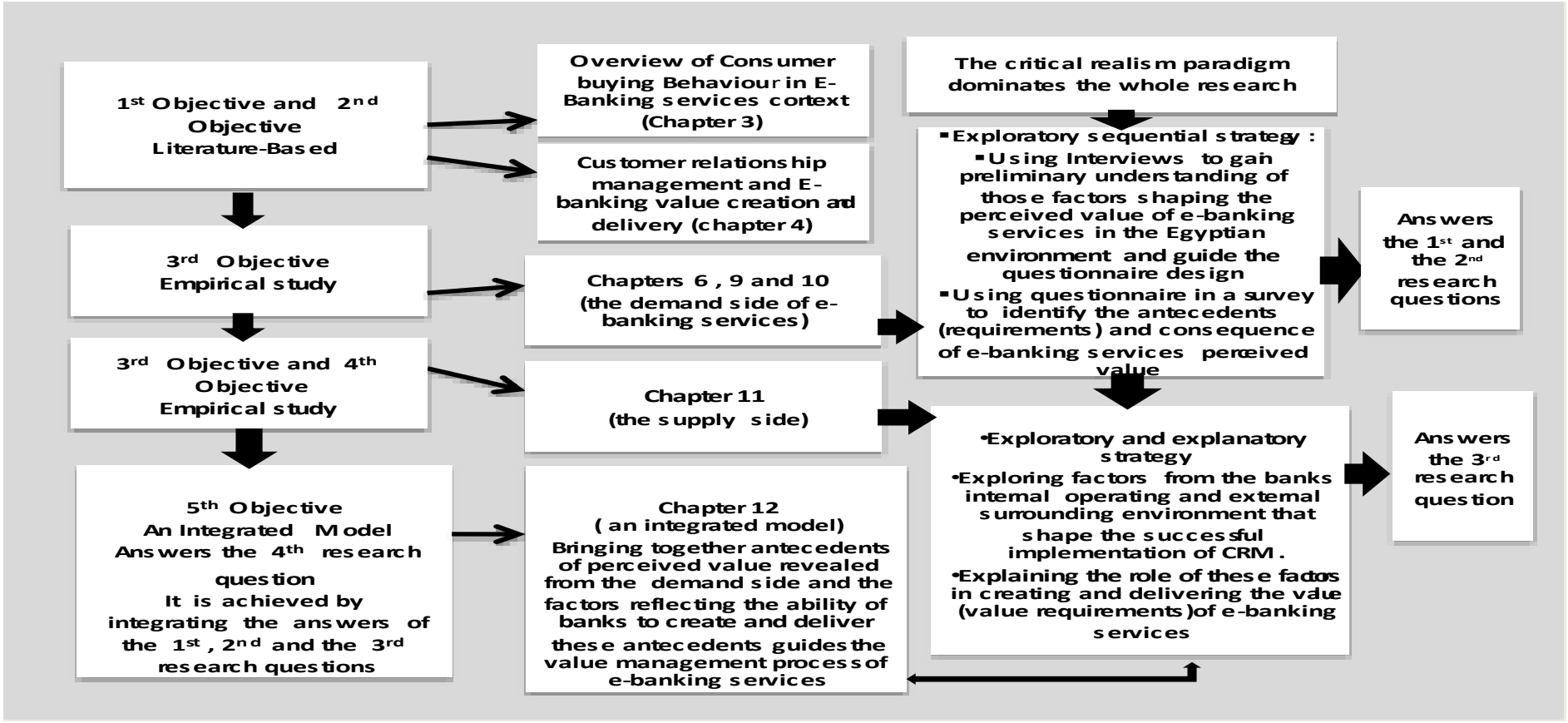


Figure 1.3: Research Objectives, research questions and research methods

1.7 Research Significance

The significance of this research stems from two main sources:

1.7.1 Industry Related Significance

Understanding Egyptian customers' behaviour towards e-banking services in the Egyptian banking will help in improving the expected role of these services in increasing and/or defending market share. Managing the value of e-banking services and improving their role in strengthening relationship between banks and their customers justifies the resource invested by banks in these services.

1.7.2 Theoretical Significance

Little is known about consumer buying behaviour in e-banking services in the Egyptian environment. Also, little is known about customer relationship management (CRM) success factors, in the Egyptian environment. The theoretical contribution of this research stems from four main areas:

- This study extends the literature of consumer buying behaviour in e-banking services, and the literature of CRM to the Egyptian environment. This resulted in the explicit consideration of factors that have been overlooked in previous studies in western culture, to explain Egyptian behaviour towards e-banking services offered in the Egyptian environment. In examining CRM implementation in the Egyptian environment, factors reflecting the context of developing countries in general and the Egyptian environment in particular, are considered.
- The critical realism paradigm adopted throughout the study resulted in new factors being considered in the consumer buying behaviour towards e-banking services, and the CRM literature, to reflect the Egyptian context.
- Moreover, lack of studies addressing the value of services in general and e-banking services in particular, as a process having inputs (antecedents), leading to output (consequence) increases the theoretical significance of this study. This

study contributes in filling the knowledge gap in this area by presenting an ***e-banking services value-adding model***, reflecting the Egyptian context.

- Guiding the overall process of e-banking services value management requires integrating customer requirements with banks' ability to meet those requirements, by highlighting factors in the internal operating and external environments in the process of creating and delivering the value of e-banking services. However, literature lacks this integrated view of value management in e-banking services context. This study contributes to closing the knowledge gap in this area, by presenting an integrated model that brings the antecedents of e-banking services perceived value together with the factors shaping the ability of banks to create and deliver these requirements. This integrated view considers both demand and supply side of e-banking services and the reality of the Egyptian environment.

By identifying the above mentioned knowledge gaps in literature and the contribution of this study in closing these gaps, this study contributes to developing the consumer behavior, value and CRM theory.

1.8 Thesis Structure

Figure 1.4 shows that the structure of this thesis follows the systematic flow of research methodology. It starts with examining the relevant literature to identify the research gaps and formulate research questions. Then, the thesis moves to decide on the appropriate paradigm and research methods to address gaps in knowledge and answer the research questions. Finally, answers to the research questions are reported.

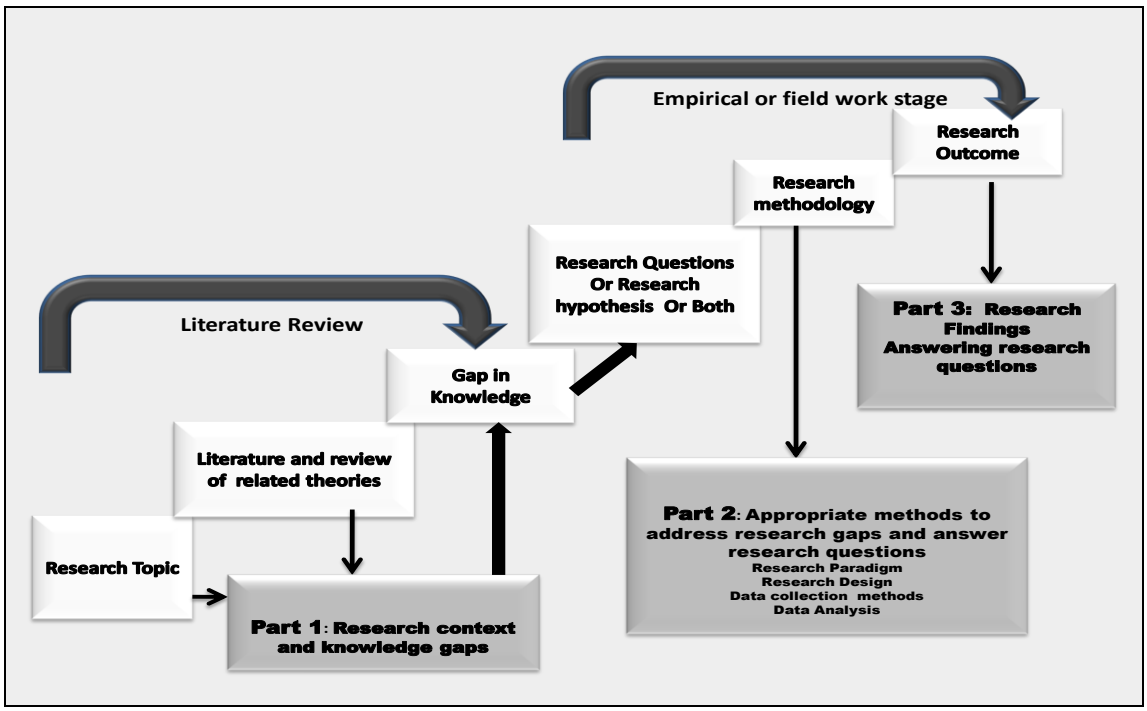


Figure 1.4: Research stages and thesis structure
Source: Adapted from Lindgreen (2001: 76) and Collis & Hussey (2003: 16)

This thesis is divided into three interrelated parts: **Part 1, Part 2 and Part 3.** The objective of each part and the chapters included, are as follows:

Part 1 lays out the building blocks and the logical basis for the research context and questions. It incorporates chapters **2**, **3** and **4**.

Part 2 is concerned with identifying the research paradigm and the research methods (data collection tools) by which the first, second and third research questions will be answered. **Part 2** includes chapter **5**.

Part 3 is concerned with presenting findings and validating them through the analysis stages or techniques employed. This part is composed of seven chapters. **Chapters 6, 7, 8, 9** and **10** are concerned with analysing, presenting and discussing findings revealed from searching the demand side of e-banking services.

Chapters 7 and **8** are concerned with discussing the methodology employed to answer the questions related to the demand side of e-banking services. **Chapter 6, 9 and 10** are concerned with presenting the findings of the two stages used to investigate the demand side of the e-banking services.

Chapter 11 presents factors shaping the ability of Egyptian banks to support or add value to e-banking services in the Egyptian environment.

Chapter 12 concludes the research by presenting an integrated model for managing the value of e-banking services, developed by linking antecedents of e-banking perceived value revealed from the demand side, with factors shaping banks' ability to create and deliver value.

Part 1: Research Context and Key knowledge Gaps: Basis of Research Questions

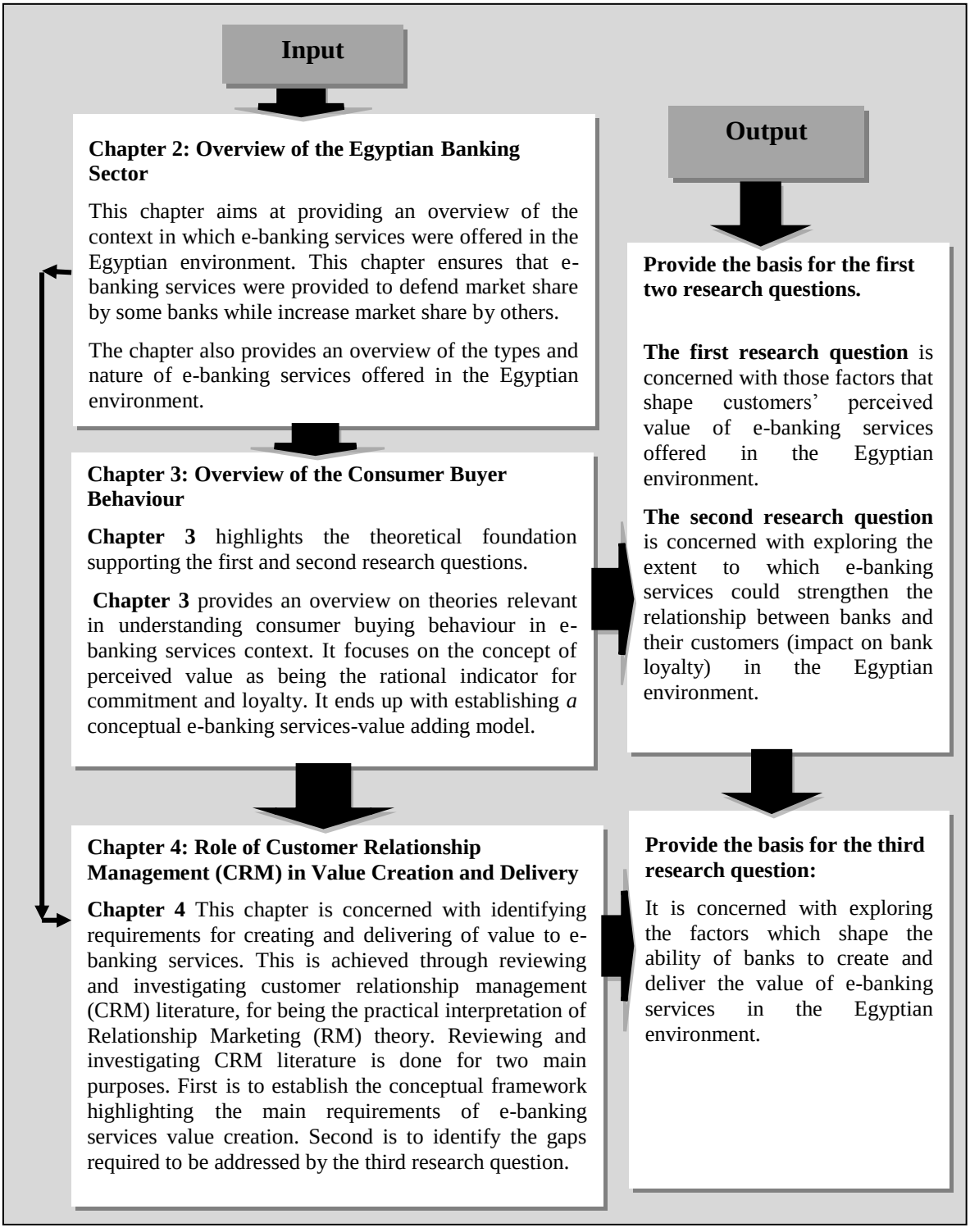
Part 1 lays out the building block and the logical basis for the research context and questions. It incorporates three chapters.

Chapter 2: This chapter overviews the evolution of the Egyptian banking sector, and highlights forces that drove the introduction of e-banking services in the Egyptian market, and justify their expected role in attracting and/or retaining bank customers.

Chapter 3: This chapter examines theories relevant to understanding consumer buying (usage) behaviour in e-banking services context. This is done to identify gaps in explaining e-banking usage behaviour and highlight research problem required to be addressed by answering the first and second research questions. To answer the first two research questions, this chapter considers the importance of involving Relationship Marketing theory in explaining e-banking services usage behaviour. This is done by focusing on the concept of perceived value and loyalty (commitment), for being key aspects in strengthening the relationship between suppliers and customers through service offerings.

Chapter 4: This chapter is concerned with identifying requirements for creating and delivering of e-banking services value. This is achieved through reviewing and investigating customer relationship management (CRM) literature, for being the practical interpretation of Relationship Marketing (RM) theory. Reviewing and investigating CRM literature is done for two main purposes. **First** is to establish the conceptual framework highlighting the main requirements of e-banking services value creation and delivery. **Second** is to identify knowledge gaps required to be addressed by the third research question.

The following figure summarizes the chapters in this part and the purpose behind each chapter.



Structure of Part 1

Chapter 2

An Overview of the Egyptian Banking Sector

2.1 Introduction

This chapter overviews the evolution of the Egyptian banking sector, and highlights forces that drove the introduction of e-banking services in the Egyptian market, and justify their expected role in attracting and/or retaining bank customers.

The chapter outlines the main direction of the research and justifies the inclusion of both the demand (bank customers) and the supply side (banks) in improving the value of e-banking services in the Egyptian environment.

2.2 Evolution of the Banking Sector in Egypt

Banking industry affects the economic development through passing the established monetary policies to both lenders and savers (Dobronogov and Lqbal 2005; Roy and Shekhar 2010). The banking sector represents around 80% to 90% of the total Egyptian financial sector (Bolbol *et al*. 2005:176).

Egypt had three banking categories: commercial banks, business and investment banks and specialized banks (Abu-Musa 2003:46). There are 28 commercial banks, representing 80.7% of the total banking sector (Abu-Musa 2003; Lotayif 2004). Commercial banks provide retail banking services for corporations and individuals, while specialized (state-owned) banks provide banking services for specific sectors in the economy. Investment banks include off-shore banks and some joint venture banks.

In Egypt, the Central Bank of Egypt (CBE) is the banking industry regulator. The CBE, established in 1960, is responsible for regulating and managing both the banking and monetary system as well as acting as the bankers' bank, dealing with the daily settlement of clearings. It is also the supervisory authority for deposit-taking banks, with wide powers vested in it by the banking law (El-Shazly 2001). Moreover the CBE regulates monetary, credit and banking policy and ensures banks' financial soundness (El-Shazly 2001) through subjecting all banks to in-site examination at least once every two years.

Prior to 1974, four commercial public sector banks and three specialized banks represented the banking sector in Egypt with the aim of serving the banking needs of the Egyptian economy. Between 1975 and 1983, Egypt witnessed the introduction of an open door policy, which encouraged local private investors to establish new Egyptian banks, and foreign banks to establish branches in Egypt. The entrance of foreign banks in the Egyptian banking sector produced new financial services, such as offering retail banking represented in all types of consumer loans (Omran 2003). Private sector banks preferred to finance working capital and trade activities whose transactions normally require short term credit and result in quicker and more secure returns (El-Shazely 2001). However, some of these banks entered to the Egyptian market, in a form of joint venture with the existing public banks, so that the public sector remained the dominant power.

However, the structure of the banking sector and the geographic concentration of public bank branches created a highly segmented market and a low competitive environment. During that period, the public sector commercial banks were the largest operating banks in Egypt in terms of balance sheet size, accounting for nearly 80% of total banking sector assets. This allowed public sector banks to dominate the process of attracting savings, to control more than 60% to 70% of Egyptian citizens' deposits and 50% to 65% of loans (Ikram 2006; Central Bank of Egypt 2002; Country report 2001). This large market share in retail and corporate banking services was supported by a large network of branches and close relationship with state owned companies and a percentage of ownership in most joint venture banks (El-Shazly 2001). Accordingly, the banking system remained highly controlled by the public sector, which affected negatively competition and innovation (Mohieldin 2006).

However, in an attempt to control the overexpansion of private banks, the minimum capital requirement for all banks was raised. The minimum authorized capital for new banks is set at 100 million Egyptian pounds (L.E) of which 50 million has to be fully paid up, while for branches of foreign banks, the minimum authorized capital is set at 15 million U.S $ or the equivalent in major currencies. Banks unable to meet these high entry costs had to either merge or exit the market. As a result, since 1983 the legal route of entry was through acquisitions rather than issuing new licenses to banks (Oldham and Young 2004). This regulatory barrier to entry in the banking sector weakened the competition in favour of the four public banks (El-Shazly 2001). It is argued that the

absence of competition contributed to increasing the operating costs of those banks, with adverse effects on their performance (Ikram 2006).

During the years 1991-1998, the performance of the public sector bank showed high provision ratio[1] indicating poor asset quality, which contributed to the weak performance of the Egyptian banking sector (El-Shazly 2001; Oldham and Young 2004). Further, the increase in the reserve ratio required by the CBE has reduced the public banks' profitability (Ikram 2006; 186).

Also, the changes in Egypt's tax code affected the banking sector's profitability negatively, reflected in a weak profitability ratio of 0.5% on assets, indicating poor performance of the public banks (Omran 2003).

To improve the performance and soundness of the financial sector, the banking sector was given priority in the government's reform schedule in the 1990s. The reform plan took three main forms. The first was the liberalization of financial services as a result of the WTO financial services commitment.

Under the new liberalization policy, the banking sector witnessed further changes in compliance with a number of laws. Both foreign bank branches and joint venture banks were permitted to engage in local operations (Law 37 of 1992). Banks were allowed to determine their own lending and deposit rates within a specified range, and currency exchange rates were allowed to respond to market demand and supply (Abu-Musa 2003). The government minimized its intervention in credit allocation and the portfolio composition of banks. This enhances competition in the banking sector.

The second part of the banking reform programme, focused on improving the regulatory framework, by reviewing banks' periodic financial statements since 1997, to ensure their compliance with the international accounting standards (Mohieldin 2006). The third part of the banking sector reform is the financial restructuring of the banking system, which took the form of merging the six poorly performing banks with larger performing banks and establishing a planned privatization programme, in an attempt to reduce market concentration and enhance competition (Egypt-Country Brief 2005)[2].

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[1] The higher the ratio of annual loan loss provisions to total operating income, the less profitable the bank is

[2] Egypt-Country Brief, (2005)
http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/EGYPY
Accessed on 01/06/2006

Egypt's privatization programme started with the enactment of Law 203 in June 1991. Prior to the bank privatization process, the government controlled 30 banks; 23 joint ventures in which the Egyptian government held a 51% share, and another 7 fully owned by the government (four commercial and three specialized). Thus, more than 60% of the banks were controlled by the state through direct ownership or participation in ownership (Omran 2003). The government privatization strategy was implemented in two stages.

The first involved the progressive sale of the government share in joint venture banks, while the second stage involved the sale of 20% to 30% of the government share in one of the four state-owned banks (Abu-Musa 2003), so that the Government retained the largest two or three banks.

From the beginning of the privatization program until 2009, the Egyptian government sold all its shares in the joint venture banks to foreign banks, which affected the financial services sector significantly by increasing the level of competition and the emergence of new financial services. It sold also more than 75% of its shares in one public commercial bank, Bank of Alexandria. The new banking structure includes 37 private banks and 6 public banks (3 commercial and 3 specialized).

To summarize, the Egyptian banking sector has gone through major restructuring stages that changed competition regulations. Change in level of competition results in the emergence of new key players as basis for expanding and/or retaining existing market share. One of those key players is the adoption of e-banking services.

The next section highlights the main drivers towards the adoption of e-banking services as key player in extending and/or defending market share in the Egyptian banking sector.

2.3 Drivers of E-Banking services Introduction in the Egyptian Environment

The Egyptian banking sector witnessed challenges, which changed the way it manages relationship with their customers. Increased competition and technological advancement are the main drivers for the Egyptian banking sector to adopt e-banking services as a new basis in managing relationship with customers. In depth discussion of the nature of

these drivers and the way they drive the adoption of e-banking services, will be provided in the next sections.

2.3.1 Competitive Environment

The Egyptian banking sector remained directed by government policies for a long time. This inhibited the entrance of new competitors, discouraged the need to develop marketing and customer oriented philosophy. This also affected the mix of services offered and the way they were delivered. However, competition in the Egyptian banking sector strengthened since the full activation of Law 203 in June 1991. As a result, state-owned banks' market share has declined in favour of private investment and foreign banks, until the gap between the shares of the public banks and the private and multinational banks in the market declined. It is argued that the entry of the foreign banks into the financial services industry stimulates competition in the local market, and triggers positive changes in the financial services sector (Cleassens and Leaven 2004). These changes could result in cutting down the operating costs of poor performing banks or alter the way they market and deliver their financial services to create competitive advantage.

The revitalization of the stock exchange market as a step towards financial reform introduced in the 1990s was a challenge for the financial institutions by contributing in financial intermediary service. The capital market was considered as a driver for competition among banking institutions, according to a cross country study of 50 countries with at least 20 banks (Cleassens and Leaven 2004).

It might also have affected the market share of the Egyptian banking institutions by affecting the volume or the rate of increase in deposits. This is because; some customers with higher levels of financial need might have switched by withdrawing their deposits from the banks to invest in the stock market.

Further, the role of the post office agency in attracting savings should not be ignored. Savings in the post office increased from 5.77% of total savings in 2005 to 6.37% and 8.5% in years 2006 and 2007 successively[3].

[3] Total savings by type. Time series by Central bank of Egypt. Accessed on 10/07/2009.

This competitive environment is viewed as the main driver towards adopting a marketing oriented philosophy (Gima 1996; Avlonitis and Gounaris 1999). Responsiveness to changing market needs, dictates the introduction of new products and services to distinguish suppliers' services in order to meet customers' new expectations (Jaworski and Kohli 1993; Frambach *et al*. 1998). Competition also could affect the behaviour of customers towards their existing service supplier. Similarly, Nendapudi and Berry (1997: 20) pointed to the effect of a competitive environment on customers' tendency to maintain relationships with their service supplier by stating;

> *"Customers in constraint-based relationships preserve the relationship because they believe they have no other choice, customers in dedication based relationships desire continuance"*

Storbacka *et al*. (1994) argued that the relative importance of creating and managing customer relationship depends on the external environment in which the supplier operates. Competition was the main driving force for financial institutions to distinguish their services by offering value-added services, which acts as a defensive marketing strategy focusing on customer retention (Kaynak and Harker 2005; Ibrahim *et al*. 2006).

This competitive environment represented a challenge for the Egyptian banking sector and created pressure on the banks to alter the relationship with their customers and recognize the need to retain these customers and build strong relationships with them.

As a reaction to this competitive environment, some Egyptian banks recognized their customers' need to secure their investment in the capital and money market, and reacted by establishing mutual funds to manage the investments of their customers in the stock market. While, some banks started to think about using technology to survive in the business and retain customers, by altering the way these customers access their financial needs through promoting the launching e-banking services, especially ATMs, visa/master cards and point of sale POS machines, launched in the Egyptian environment (Kamel and Hassan 2003).

However, the competitive ability of the organization and its ability to exploit an opportunity and to defend itself from competition depend on management awareness of the appropriate strategies and tools that should be employed to extend its market share or even to defend its existing market share (Frambach *et al*. 1998).

2.3.2 Rapid Diffusion of IT Applications

The role of information technological innovations should not be overlooked when discussing the challenges facing the Egyptian banking sector. Information technology innovations invaded the financial services industry and affected it in many ways. These developments affected both the internal operations of the financial services industry and relationship with its customers through the mix of services offered. It allows a new range of financial services which did not exist before, thus speeding up transactions and decreasing costs (Harrison 2000). Information technology applications affect service delivery. This might have reflected in savings of customer time and effort, thus adding value to the core banking services in western culture (Walker *et al*.2002; Bitner *et al*. 2000; Mulligan and Gordon 2002).

Further, it allows for new channels to serve customers other than the traditional way face-to-face interaction, which might be perceived by some customers as a waste of time if the needed service is not so complicated and not specialized to deserve face-to-face consultancy from customer service employees.

To expand their client base and to enhance their competitive position against the state owned banks, in the mid 1980s, most of the private and foreign banks operating in the Egyptian environment started to launch e-banking services to distinguish their services and attract innovative customers interested in using them (Kamel and Hassan 2003). Consequently, some public banks have started to copy this IT innovation, to defend their market share.

Although, competition and IT innovation applications drive the introduction of e-banking services, the Egyptian economic and demographic market could justify the need for e-banking services to retain customers and strengthen their relationship with their banks.

2.3.3 Overview of the Egyptian Market

An overview of the Egyptian market assists in understanding the context in which the Egyptian banking sector operates. It provides justification for the introduction of e-banking services to retain banks' existing market share. Moreover, it provides further insights into the environment in which e-banking services are offered. Two main

dimensions could be identified: demographic factors and the characteristics of the economy, which will be discussed in turn.

I. Demographical Characteristics

The Egyptian population represents approximately 25% of the total Arab region population, making it the largest market in the Arab countries, with population of 77 million[4] in 2009 and projected to be approximately 80 million by the end of 2010[5]. However, this large population might not all constitute financial services customers or e-banking services users. This might be due to many factors, such as the population age structure, the regulations governing the age of membership in the banking institutions, poverty considerations, the unemployment considerations.

Age structure could affect the financial institutions from two aspects; the demand on the financial services and financial institutions in general. According to the 2007 census, 34% of the Egyptian population is under 15 years old[6]. This means that this percentage or more will be excluded from the financial institutions' projected customers, due to the Egyptian legislation which sets 21 years as the minimum age at which a person is eligible to own a bank account and undertake financial operations with no restrictions. However, considering age alone might fail to provide a complete picture about the threats facing the demand for financial institutions in the Egyptian market. Accordingly, unemployment rates and poverty rates should be considered as well, through providing an overview of the economic environment.

II. Economic Environment

The economic environment affects the demand for the financial institutions in the Egyptian market through the possibility of a shrink in existing and prospect customers. This might justify the need for improving the value of e-banking services offered by banks to defend their market shares.

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[4] Euromonitor Database www.Euromonitor.com

[5] Source: United Nations 2008. World Population Prospects, the 2006 revision population database.

[6] Source: Egyptian Central Agency for Statistics and Public Census 2007

According to the Human Development Report[7] in 2009, percentage of those with income of 1.25$ a day, is 23.4% of the whole Egyptian population with a small increase than poverty in 1996 which was 23%[8]. It is argued that there is a negative attitude among poor people towards formal financial institutions because of the fixed costs of bank account (Bertrand *et al*. 2004: 420).

Other factor that might contribute to the increase in poverty is inflation rate. Inflation rate might also affect the market share of the financial institutions by decreasing the possibility of attracting new prospective customers. With respect to the Egyptian environment, the current deposit interest rate[9] is 8.25%, while inflation rate[10] according to 2008 figures is 11.7% and 16.24% in 2009. This means that the nominal interest rate declared by the bank does not cover the inflation rate. This might result in the gradual withdrawal of customers with small deposits to cover their living expenses and/or the withdrawal of large deposit holders, searching for other sources of investments where they can hedge against inflation, such as investing in real estate or gold. Similarly, it is argued that rising inflation rates might cause the customer to view current nominal interest rates as unbeneficial (Cleassens and Leaven 2004).

The general increase in price level in a country like Egypt which suffers a relatively very low per capita and unfair distribution of income (Egypt is categorized as a lower middle income country[11]), could exacerbate the situation by affecting the middle income groups' ability to save, thus, decreasing the possibility of attracting prospective customers or keeping existing ones, who will no longer be profitable for banks.

On the other hand, the global economic crisis which started in mid 2008 might increase the poverty rates in most developing countries (Cord *et al*. 2008), especially in those countries suffering high poverty rates. Further, the devaluation of the Egyptian pound could increase the general price level, and could adversely affect domestic and foreign investors' confidence in the economy (El-Ramly and Haleim 2008).

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[7] Human Development report 2009- Country Fact Sheets, accessed from United Nations Development Index http://hdrstats.undp.org/en/countries/country_fact_sheets/cty_fs_EGY.html

[8] Human development report 1996

[9] Central bank of Egypt, deposit rate applied from 22 September 2009

[10] Obtained from two sources: World Bank facts and figures
http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/EGYPTEXTN/0,,menuPK:247804~pagePK:141159~piPK:141110~theSitePK:256307,00.html
and International Monetary Fund, World Economic outlook data base April 2010.

[11] The networked Readiness index (NRI) www.weforum.org

This might increase the unemployment rate, which is 8.9 of the labour force in 2005/2006, with a small decrease to be 8.7% in 2007/2008[12]. Previously mentioned forces could result in the gradual downgrading of those customers in the middle and limited income category to join the poor category and become no longer bank customers.

While this section highlighted forces derived the introduction of e-banking services to defend market share and/or attract new customers, next section overviews the types of e-banking services offered in the Egyptian environment.

2.4 Overview of the E-Banking Services in the Egyptian Environment

Egypt is one of the developing countries which are still facing challenges in the transformation to a cashless society with the use of cards, if compared to some Arab Middle East countries such as Saudi Arabia, and developed countries as the U.K. Despite the growth in IT investments, banks operating in the Egyptian environment, even those with foreign ownership are still in the early stage in terms of the technology infrastructure necessary for future large scale card issuing, ATMs, efficient call centres and automated clearing operations.

The most popular forms of e-banking services offered by the banks in the Egyptian environment are electronic payment cards supported with ATMs, internet banking and call banking.

2.4.1 ATMs and Electronic Plastic Cards

ATM service is the oldest form of e-banking service in most countries. ATMs are technology devices that facilitate the accessibility to one's bank current or saving account at any time, in any place (Thatcher *et al*. 2005). ATM is viewed as a financial service product, rather than merely a channel (Harrison 2000).

ATM is accompanied by the use of plastic cards which can take the form of debit or credit cards and represent forms of e-banking. In developed countries, plastic cards are

[12] Central bank of Egypt 2009

regarded as a substitute for cash, creating cashless societies (Kaynak and Harcar 2001). In the U.K., the number of personal debit cardholders in U.K. reached 40.8 million in 2005, and has grown by 16.4 million over the past ten years[13] (appendix 1). It has increased to 41.7 million representing 84% of the adult population according to 2007 figures[14]. The use of plastic cards in the U.K. has extended from obtaining cash availability to a means of paying for purchases, which increased by approximately 96.9% from 1998 to 2005[15].

In the Egyptian market, plastic cards, whether Visa or Master card, were first issued in the early 1990s, and now more than 26 banks in Egypt are issuing different types of Visa and Master cards. This is in addition to ATM cards which are withdrawal non-payment cards, operating in the ATM machines of the issuing bank. The number of plastic card holders, whether Visa or Master, is increasing in the Egyptian market. In December 2000, the number of cardholders was 300,000 (U.S. and Foreign Commercial Service, 2001), representing 7% of bank customers (Hassan and Kamel 2003). In 2006, the number of all Visa cards in Egypt, including both credit and debit cards, has increased by 40% [16] compared to an increase of 27% across the Middle East region, and accounts for 9% of the total Visa cards in the region. However, this percentage is still low if compared to cardholders in the U.K. as a developed country and leader in the electronic card market.

The difference in the rate of plastic card diffusion between the U.K. and the Egyptian environment, need to be justified from the Egyptian bank customers who could be current or potential users of e-banking services, and the banks who are the supplier of these services.

2.4.2 Internet Banking

Commercial internet access has been available since 1994, but internet banking services were not introduced to banks' customers until 2001, when CitiBank offered the first internet banking service. The number of banks introducing internet banking had increased to 10 banks by 2001 (Hassan and Kamel 2003). This number has now

[13] APACS, Plastic cards in the UK and how they are used in 2005.
[14] APACS, Plastic cards in the U.K. and how we used them in 2007.
[15] This percentage is calculated by the researcher from figures in Appendix 1.
[16] Visa solidifies its position in Egypt http://www.thedailynewsegypt.com/article.aspx?ArticleID=4884 accessed on the 20/06/2009

increased to 14 banks, including the two public banks, foreign and private banks, according to the latest data from the Central Bank of Egypt[17].

Although, the number of banks offering internet banking services is increasing, the range of services offered through internet banking is still limited to basic services in most banks in the Egyptian environment.

2.4.3 Call Centres (phone banking)

Some banks have recently established call centres (call banking), known in developed western countries as telephone banking. However, the number of banks offering call centre service is still relatively small compared to those offering internet banking. There are six banks, according to the latest data from the Central Bank of Egypt[18], offering call centres services to their customers. However, the services included through call centres are limited and do not extend to third party transactions, such as paying a bill or transferring funds to another bank member's account.

2.5 Summary

This chapter overviewed the evolution of the Egyptian banking sector. The context in which the Egyptian banking sector operates generates drivers justifying the adoption of e-banking services, as new key player in defending market share and managing relationship with customers. These drivers are:

- The increase in competition driven by the structural changes in the Egyptian banking sector, enthused the adoption of e-banking services to attract and /or retain customers.
- The entry of the foreign and multinational banks in the Egyptian market stimulated the use of information technology applications by offering e-banking services.

[17] Central Bank of Egypt, Banks Licensed to Carry out E-Banking 2009
[18] Central bank of Egypt, Banks Licensed to Carry out E-Banking 2009

- The demographic and economic nature of the Egyptian market increases competition as a result of the current and possible future shrinkage in the size of demand for financial institutions in general, and consequently e-banking services.

However, the ability of the e-banking services to retain bank customers and act as a defensive marketing strategy depends on the perceived value[19] of these services in the Egyptian environment. This requires improving the value of these services by understanding the way bank customers perceive the value of e-banking services and the antecedents of this value, in order to improve the role of e-banking services on bank loyalty.

Then, to understand the extent to which banks internal and external operating environments are able to create and deliver these value antecedents through integrating technology, people and process to improve the perceived impact of e-banking services on bank loyalty. Accordingly, this research addresses both the demand side and the supply side of e-banking services for managing the value of e-banking services, to strengthen their role in driving customer loyalty to banks.

[19] The value is the ***net benefits*** these services add to bank customers.

Chapter 3

An Overview of Consumer Buying Behaviour in E-banking Services Context

3.1 Introduction

Previous chapter presented the context of introducing e-banking services to the Egyptian environment. This chapter overviews the theories relevant to understanding consumer buying behaviour in e-banking services adoption context. This is done to identify gaps in explaining e-banking usage behaviour and highlight research problems required to be addressed by answering the first and second research questions. The first research question is concerned with those factors that affect customers' perceived value and shape their attitudes towards e-banking services offered in the Egyptian environment. While, the second research question is concerned with exploring the extent to which e-banking services could strengthen the relationship between banks and customers in the Egyptian environment.

To answer previous research questions, this chapter considers the importance of involving Relationship Marketing theory in explaining e-banking services usage behaviour. This is done by focusing on the concept of perceived value and loyalty (commitment), for being key aspects in strengthening the relationship between suppliers and customers through service offering.

Perceived value in this chapter is seen from two perspectives. **The first** is a uni-dimensional perspective where perceived value is simply ***perceived benefits versus perceived risks=net benefit***. **The second** is a multidimensional perspective, where perceived value is seen as a process having inputs (sources or antecedents) leading to output (consequence). From this, a conceptual e-banking services value added model is identified and presented, where perceived value of e-banking services is considered as a means to an end. Moreover, in this model, perceived value is considered as having antecedents and leading to a consequence.

Antecedents of e-banking services results from the interaction of a set of interrelated factors. These factors are customer characteristics, product or service related factors, external environment, situational and contextual factors and supplier characteristics. Each one of those factors is necessary but not enough to explain antecedents of perceived value on its own. While the consequence of e-banking services perceived value is the expected impact on bank loyalty (as an operationalized measure of relationship strength). Main areas discussed in the chapter are presented in **Figure 3.1**

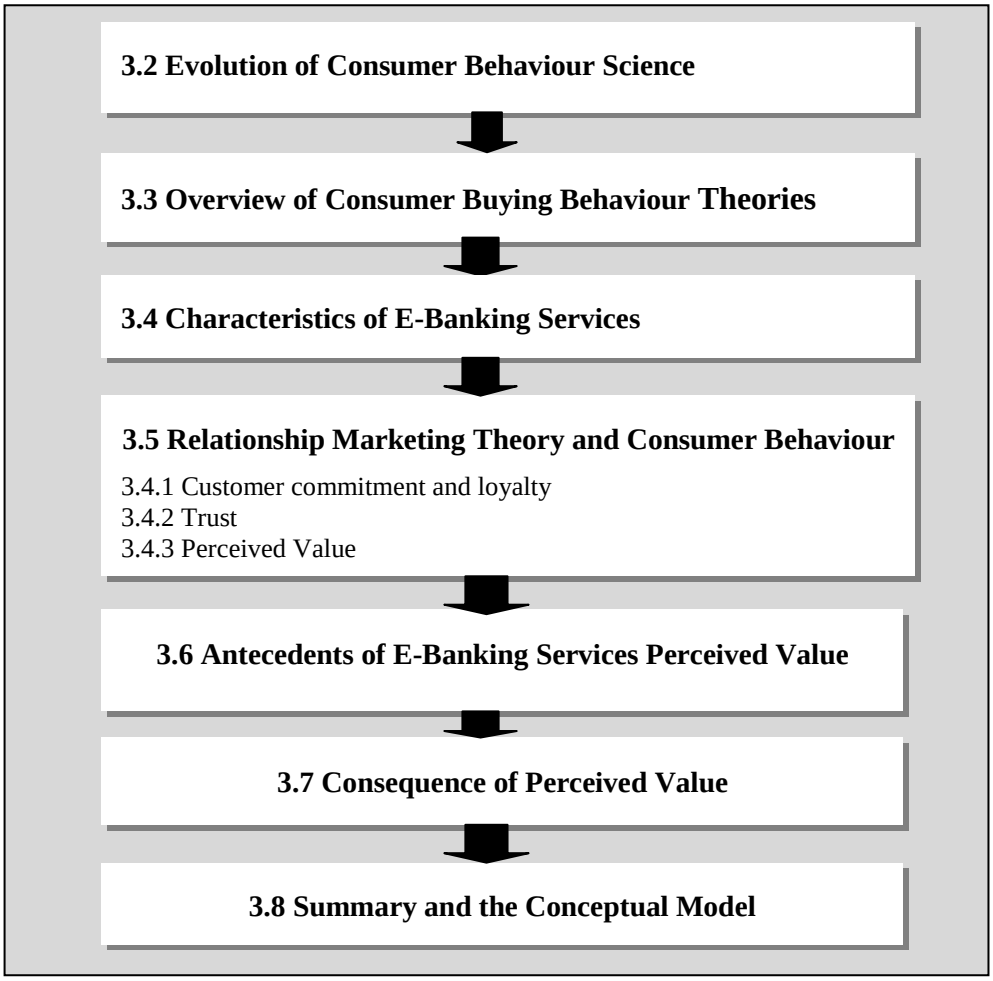

Figure 3.1: the structure of consumer buying behaviour chapter

3.2 Evolution of Consumer Behaviour Science

This section highlights the forces behind the growing need for understanding consumer buying behaviour. The growing need for understanding consumer buying behaviour reflects the change in marketing thinking as a result of several factors. They are: changing business environment, the emerging role of information technology in business. These factors are reflected gradually on involving customers in designing and marketing goods and services.

The earliest contributions to understanding consumer behaviour started in the 1920s, when manufacturing firms were obligated to switch from the manufacturing thought that dominated that period to the selling concept (Blackwell *et al.* 2001). However, consumer behaviour in this period concentrated on selling and promotional activities, more than extending the concept to affect the whole business operations. Thus, it was a one way effect from organizations to customers.

Since the emergence of marketing concepts in the mid 1950s, consumer behaviour started to affect the way products were designed and delivered to customers. This implies that the communication between customers and organizations became a two way channel. Thus, organizations become more concerned with those factors influencing customer attitudes towards buying the product. Kotler and Keller (2006: 16) described the thought dominating that era, stating:

> *"The job is not to find the right customers for your product but the right products for your customers".*

Since 1950s up till now, several factors stimulated the need to understand consumer buying behaviour. First, is the intensifying level of competition in all product or service related business sectors. This emphasizes concepts such as perceived value, perceived quality, satisfaction, which are deeply rooted in the consumer behaviour discipline.

Second, is the adoption of e-commerce among businesses that changed the way business access their customers and brought new forms of services. This had brought benefits to adopting organizations, by allowing them to widen their market share. However, it reduces switching costs, hence encourages switching to other suppliers. This calls for understanding consumer buying or usage behaviour in e-commerce context.

Third is the emergence of the new paradigm calling for the need to retain existing customers and defend market share. Defensive marketing strategies gained importance with studies linked retaining customers to organizations' profitability. Albinsson and Hansemark (2004) proved that retaining existing customers is more cost effective than acquiring new ones. Similarly, Brown (2000: 61) emphasized the importance of retaining customers, stating:

> *"it is more profitable to keep existing customers than acquire new ones".*

Creating and developing a continuous non-discrete long lasting relationship between the customers and suppliers becomes a prerequisite in a highly competitive environment (Mukherjee and Nath 2003). Thus, in an e-commerce or e-banking services context, it is not enough to understand what drives customers for usage; but rather, the most important is to understand how e-banking services can strengthen the relationship between banks and their customers, by understanding e-banking service usage behaviour. This calls for investigating consumer buyer behaviour literature and examines the extent to which it could explain Egyptians usage behaviour towards e-banking services.

Consumer behaviour theories provide the foundation for understanding buying or usage behaviour. However, there is no consensus among consumer behaviour theories on the type or number of factors to explain consumer buying behaviour (Beckett 20000). This is because; consumer buying behaviour theories are a blend of human psychology, economics and sociology. An investigation of consumer buying behaviour theories and the extent to which they can explain Egyptians' buying behaviour in e-banking services context will be provided next sections.

3.3 Overview of Consumer Buying Behaviour Theories

This section provides an overview of the most popular theories and models used to explain consumer buying behaviour. Although, these theories are concerned with predicting attitudes and behavioural intentions in face-to-face context, they were extended to explain consumer behaviour in e-commerce or e-banking services context. Although, they disagree on the range and depth of factors explaining consumer usage behaviour, they agree on considering attitudes in usage context as a consequence for a set of antecedents or driving factors. Attitudes are considered the basis for planning and implementing any marketing strategy (Neal *et al*. 2004).

Most of attitude theories are an extension to the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen (1975), and Theory of Planned Behaviour (TPB) developed by Ajzen as an extension to TRA. Both theories postulate that behavior is a direct function of behavioral intention and they agree that behavioral intention is a function of attitude and subjective norm (Karjaluoto *et al*. 2002: 263; Suh and Han 2002: 248; Shih and Fang 2004). TPB was employed to explain the factors affecting consumer behaviour in e-commerce specifically in the context of online purchasing (George 2004). TPB was also used to explain the factors affecting internet banking adoption (Jaruwachirathanakul and Fink 2005).

However, TRA and TPB are seen as abstract, because they did not extend the main constructs into explanatory factors. Both theories are criticized for their inability to explain attitudes in all situations (Taylor and Todd 1995). Similarly, Davis *et al.* (1989: 984) viewed TRA as unable to explain behaviour in a particular setting, and commented:

> *"TRA is a general model as it does not specify the beliefs that are operative for a particular behavior"*

To overcome the deficiency of both TRA and TPB, Theory of decomposed Planned Behavior (TDPB) was introduced where each construct was broken down into detailed explanatory factors. Attitudinal belief was decomposed into three factors: relative advantage, compatibility and complexity. The control belief was explained by two factors: self efficacy and facilitating conditions which encourage performance of a particular action such as time and money (Shih and Fang 2004). By this detailed explanation of beliefs, TDPB provided a better explanation of the attitudes and behavioural intentions mentioned in previous theories (Taylor and Todd 1995). TDPB succeeded in explaining the e-services continuance intention, by replacing the construct of attitudinal behavior with attitude towards e-services usage in Hsu and Chiu (2004). The constructs of TRA, TPB and TDPB are presented in **Figure 3.2**

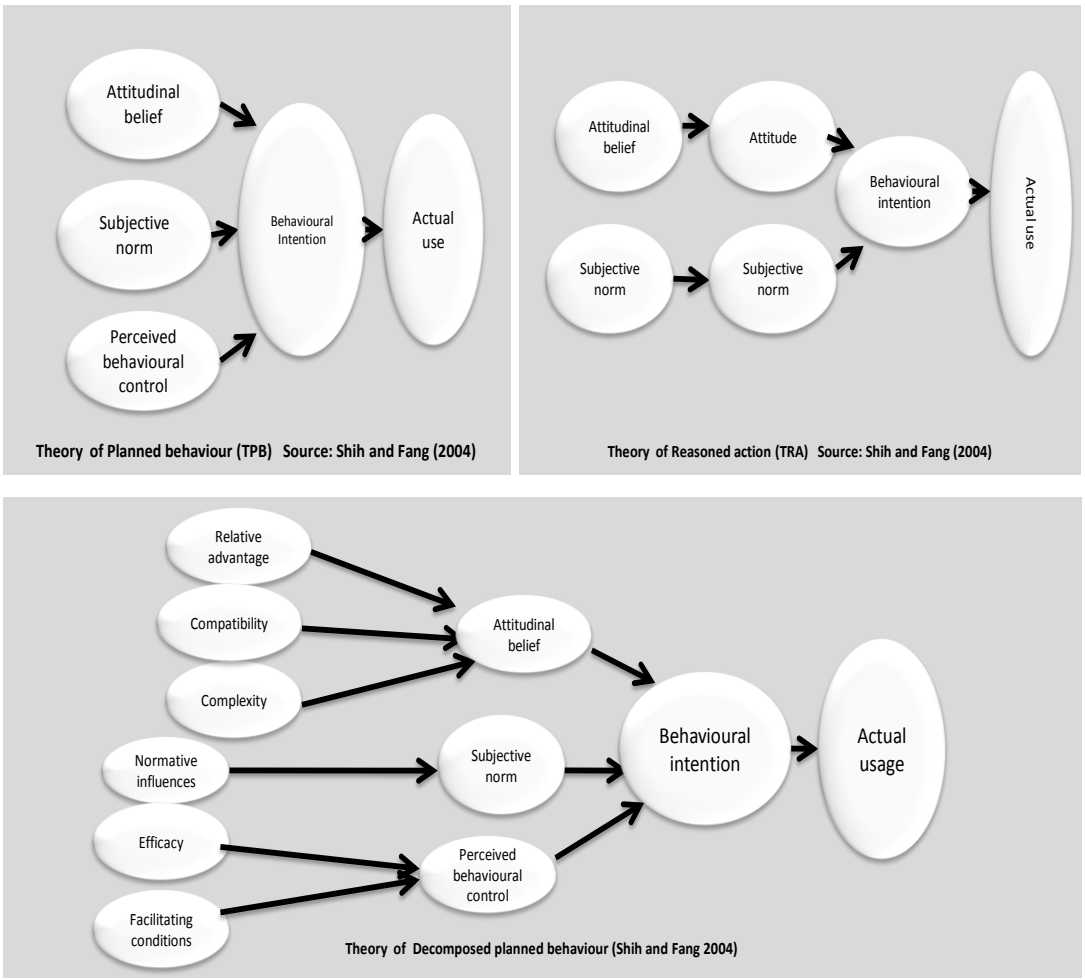

Figure 3.2: Basic attitudinal theories

Although, TRA is viewed as an abstract theory, it provides the basis for models explaining IT utilization. The Technology Acceptance Model (TAM) presented in **figure 3.3,** is an extension to the TRA (Hernandez and Mazzon 2007: 74). TAM aimed at providing an explanation for accepting and adopting end user computing technologies

(Davis *et al*. 1989: 985). TAM considers attitudes as a function of two constructs: Perceived usefulness (PU) and perceived ease of use (PEOU) (Kolodinsky *et al*. 2004; Hernandez and Mazzon 2007: 74). Davis (1989; 320)defined perceived usefulness, as:

> *"the degree to which a person believes that using a particular system would enhance his or her job performance".*

Davis (1989; 320) defined perceived ease of use as:

> *"the degree to which a person believes that using a particular system would be free of effort".*

TAM considers both constructs to have a direct effect on behavioural intention (Taylor and Todd, 1995). Although, TAM meant to explain IT acceptance in the context of work, it showed considerable contribution in explaining attitudes towards adopting information technology, or technology-based products and services, self-service technology and e-banking services (Gefen *et al*. 2003). For example, Al-Gahtani (2001) asserted that the TAM model offers a promising theoretical contribution for explaining the factors affecting IT acceptance. Pikkarainen *et al*. (2004) employed TAM to explain those factors affecting consumers' acceptance of online banking. Further, Lai and Li (2005) employed TAM to explain the acceptance of internet banking.

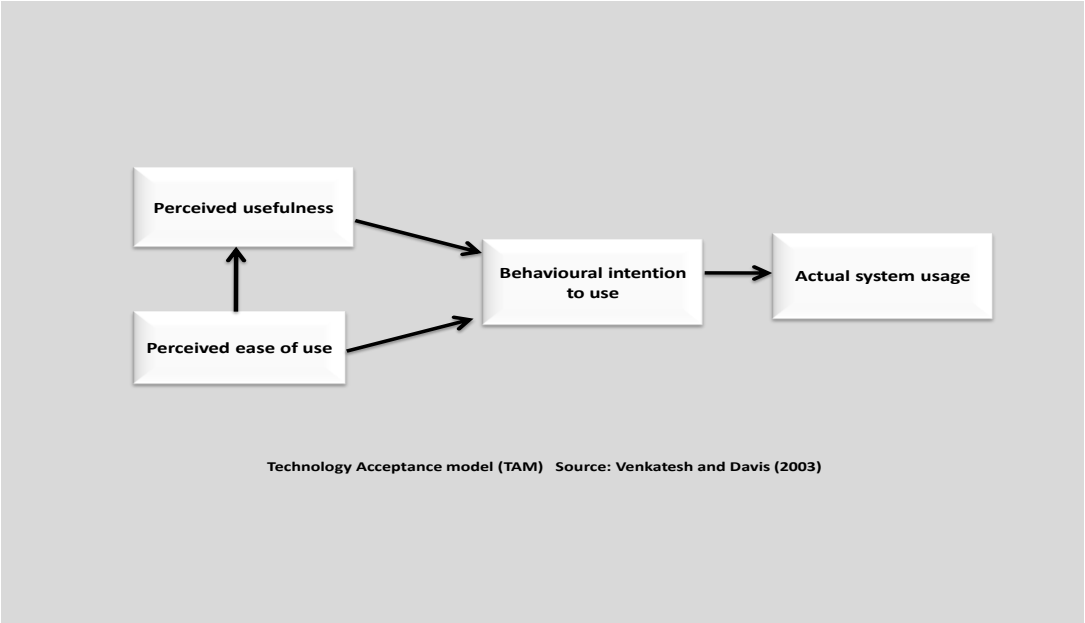

Figure 3.3: Technology Acceptance Model

However, TAM is criticized for considering only the relationship between the customer and the service in a usage context. It has been argued that TAM ignores other factors explaining consumer behaviour in e-service context (Dennis *et al.* 2009). So that, EOU and PU failed to consider other variables that might be of importance to some customers in using the information technology (Mathieson 1991). Similarly, Suh and Han (2002) argued that TAM needs to be reviewed and expanded to reflect the users' related environment and the service features more explicitly. This might assist suppliers to review current policies and tactics to increase user acceptance. The more variables reflecting the relationship between the user and the service or the product within an environmental context are included in attitudinal theories, the more robustly attitudes are explained.

Further, the task-technology fit (TTF) model, **figure 3.4**, overcomes some of the deficiencies of TAM by explicitly incorporating the effect of task characteristics, individual abilities and the characteristics of technology as antecedents for intention to utilize the technology (Dishaw and Strong 1999; Goodhue and Thompson 1995: 218). Task-technology fit refers to the degree in which technology meets the requirements of the task or the needs of users (Goodhue and Thompson 1995: 216).

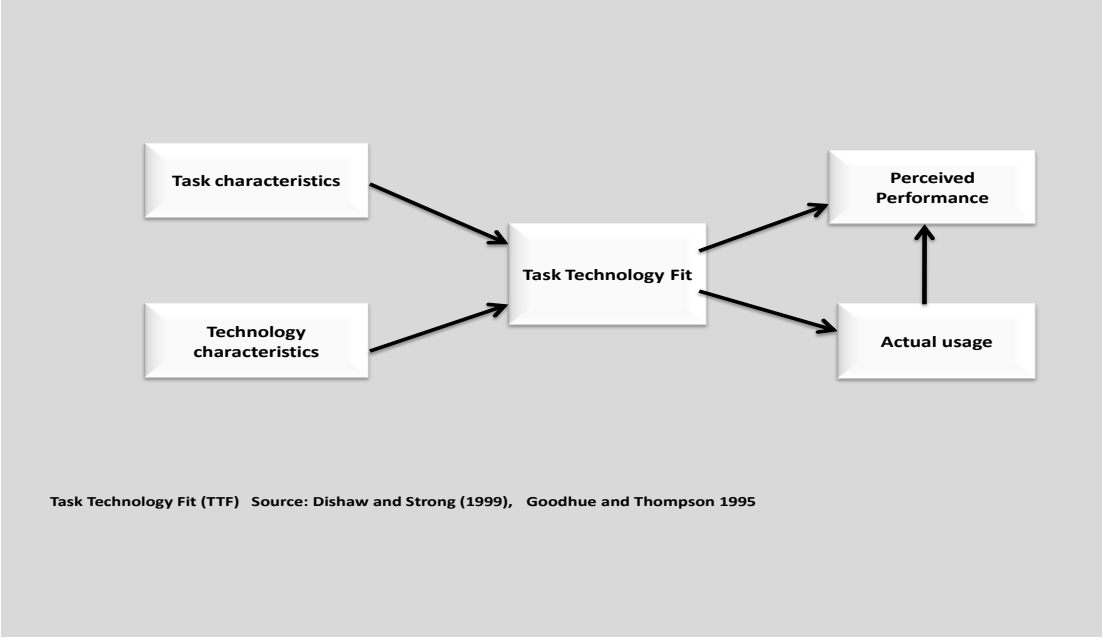

Figure 3.4: Task-Technology Fit Model

Although, task-technology fit (TTF) model recognizes the importance of users' needs under the title of *task*, it explains consumer behaviour towards IT usage apart from its supplier. This places limitations on using TTF to explain e-banking services usage behaviour in general. This is because; attitudes towards e-banking services cannot be isolated from their suppliers, due to e-banking services characteristics.

The Theory of Innovation Diffusion developed by Rogers (1962) made a considerable contribution to the attitudinal theories. It gained acceptance among researchers. It relates the acceptance, hence, the diffusion of innovation to five main product characteristics which are evaluated by their end users (Kolodinsky *et al*. 2004). These characteristics include relative advantage, compatibility, simplicity/complexity, observability and trialability. However, innovation diffusion theory was criticized for concentrating on the demand side more than the service or product suppliers who affect the adoption decision (Attewell 1992). Similarly, Frambach *et al*. (1998: 161) criticized the diffusion theory for neglecting the role of the supplier in diffusion of innovation, stating:

> *"Adoption models have almost exclusively focused on adopter side variables in explaining individual adoption behaviour".*

To sum up, previously mentioned theories contributed significantly in explaining consumer behaviour in e-commerce and e-banking services, they suffer a deficiency which requires to be addressed in this study.

This gap arises from overlooking the role of service supplier in affecting the intention behaviour. However, e-banking services are not only technological innovation, self-service technology but facilitate the accessibility of financial services from banks. This requires extending the relationship between customer and service to involve service supplier in the adoption decision by considering Relationship marketing concepts.

Further, the need to extend theories explaining e-banking services adoption to include relationship marketing (RM) concepts stems from the argument claiming that having a favourable attitude towards a service might not necessarily mean loyalty to the service provider (Dick and Basu 1994). This introduces the importance of involving Relationship Marketing (RM) theory which focuses on customer, service offering and service supplier in explaining usage behaviour in e-banking services context. However, this does not undermine the importance of previously mentioned theories in explaining a viewpoint of the consumer buying behaviour in e-banking services adoption context.

3.4 Characteristics of E-Banking Services

E-banking services share the financial services the characteristics of intangibility, inseparability and shared ownership. Services in general are distinguished by intangibility (Laroche *et al*. 2004; Beaven and Scotti 1990; Lovelock 1983). ***Intangibility*** is related to the ability of the product to be seen or touched (Laroche *et al*. 2004). It arises from the lack of physical evidence in the service production or/and delivery stages (Bebko 2000:9). The degree of intangibility might differ among services along the stages of pre-purchase, delivery, consumption and output (Lovelock and Gummesson 2004: 27). E-banking services are characterized by intangibility in the delivery stage and output stage. This makes the service difficult for consumers to grasp mentally and to evaluate it relative to other suppliers, or to face-to-face services in the case of e-banking services (McKechnie 1992). Financial services are information based services directed at people's intangible assets, especially after the use of computer and information systems in processing customer related information (Lovelock 1983: 10; Lovelock and Wirtz 2007: 37). This makes e-banking services a mix between intangible products and services.

Inseparability is one of the services most identifiable characteristics, which refers to the inability of the service to be separated from its producer, meaning that the service offering and consumption is a simultaneous operation (Gronroos 1978: 591; Beaven and Scotti 1990; Gabbott and Hogg 1994).

In financial services, the ***ownership*** of the product is shared between the supplier and the customer, in which customers purchase the right to use this service (Harness and Harness 2004; Gronroos 1978). For example, in the case of e-banking services, unless the customer is a member of the bank, he/she will not be able to use the ATM service or even internet banking service.

The nature of e-banking services implies that characteristics of adoption or decision or attitude towards a service cannot be discussed without the inclusion of service supplier. The characteristics of services highlight the role of relationship marketing (RM) theory in explaining consumer behaviour especially in the services context.

3.5 Relationship Marketing Theory and Consumer Behaviour

In response to the severe competition in the financial sector, e-banking services were launched with the aim of retaining existing customers or attracting new ones interested in using them. Thus, banks offering e-banking services in the Egyptian environment are more concerned with improving the contribution of e-banking services in retaining customers. This raises the question of '***how can e-banking services contribute to the consumer loyalty to banks***'. This necessitates involving Relationship Marketing (RM) theory in to understand how a service offering can retain customers (Mitussis *et al*. 2006: 581).

RM postulates that ***trust or perceived value or both*** are key drivers to *customer loyalty* (commitment or retention) (Morgan and Hunt 1994; Garbarino and Johnson 1999; Henning-Thurau 2000; Sirdeshmukh *et al*. 2002; Henning-Thurau and Klee 1997; Venetis and Ghauri 2004; Wong and Sohal 2002; Park and Kim 2003; Selnes 1998 Ravald and Gronroos 1996). Both trust and perceived value are multi-dimensional constructs.

Customer characteristics, service and service supplier interact to identify these antecedentss. The established role of perceived value and trust in driving customer loyalty (commitment), calls for discussing these three concepts.

3.5.1 Customer commitment (loyalty)

Commitment is considered one of the key variable in measuring the strength of relationship and a practical (empirical) measure in estimating customers' loyalty as well (Garbarino and Johnson 1999; Wong and Sohal 2002; Gustafsson *et al*. 2005). Commitment refers to the desire to continue and maintain future relationship with the other party (Morgan and Hunt 1994: 23; Fullerton 2003: 334; Verhoef 2003).

Gustafsson *et al*. (2005) addressed two types of commitments, calculative and affective commitment. Both express commitment in terms of future behavioural intentions. Calculative commitment refers to the mutual relationship which is based on rationality and economic basis which entails costs versus benefits (Gustafsson *et al*. 2005; Doney and Cannon 1997: 37; Venetis and Ghauri 2004). Calculative or cognitive based commitment emphasizes the role of switching costs (Hansen *et al*. 2003; Gustafsson *et*

al. 2005). Cognitive or calculative commitment can be enhanced through improving the economic value and psychological value of what is delivered to the customer (Park and Kim 2003). While, affective commitment expresses more emotional ties between the supplier and the customer (Gustafsson *et al*. 2005; Fullerton 2003). Fullerton (2003) found that it is more indicative for loyalty.

Although, it is argued that both types of commitment, calculative or affective are indicators of relationship strength between suppliers and their customers (Gustafsson *et al*. 2005), commitment was operationalized in RM theory as 'affective commitment'. Affective commitment measured by loyalty attitude statements proved to predict retention in Verhoef (2003).

However, *loyalty*, *commitment* and *retention* are sometimes interchanged in consumer behavior literature when measured from the customers' perspective. Bloemer and Kasper (1995) argued that committed consumers express brand loyalty when they show repeated purchase behavior. Customer retention was measured by behavioural intentions from customers' perspective (Gounaris 2005). Customer willingness to invest more is regarded as a manifestation for commitment (Gounaris 2005; Qin *et al*. 2009).

Oliver (1999: 34) defined loyalty as:

> *"A deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same-brand set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior".*

While, Albinsson & Hansemark (2004: 43) provided a brief and concise definition of customer retention, stating:

> *"Retention is defined as repurchase intentions and is obtained by good service and good relationships".*

The above discussion justifies using loyalty indicators to measure the role of e-banking services in strengthening the relationship between the bank and its customers.

3.5.2 Trust

Trust plays a key role in transactional exchanges, especially those involving high risks, such as financial services and e-banking services (Gefen *et al*. 2003). Trust refers to the tendency to rely on that partner or supplier who is reliable and expected to provide the required quality (Oliver *et al*. 2000; Hunt and Morgan 1994; Garbarino and Johnson 1999; Moorman *et al*. 1992). Sirdeshmukh *et al*. (2002: 17) defined trust as:

"Consumer trust as the expectations held by the consumer that the service provider is dependable and can be relied on to deliver on its promises".

Trust plays a considerable role in fostering customer relationship commitment or loyalty (Harris and Goode 2004; Venetis and Ghauri 2004; Morgan and Hunt 1994; Garbarino and Johnson 1999; Moorman *et al*. 1992). Similarly, Hansen *et al*. (2003) proved that trust affects affective commitment (which is sometimes interchanged for loyalty) towards the service supplier. However, the relative importance of trust on relationship commitment and customer loyalty depends on the industry sector (Falvian *et al*. 2005). It is seen of more importance in e-commerce context due to the uncertainty involved in the e-banking services because of the technology, inseparability and intangibility involved in their usage (Hoffman *et al.* 1999; Pavlou 2003; Liu and Wei 2003; Flavian *et al*. 2005).

Trust proved to be an antecedent for participation in e-commerce (Corbitt *et al*. 2003). Trust had a direct considerable contribution in affecting customer commitment to e-banking services (Suh and Han 2002; Rexha *et al*. 2003; Mukherjee and Nath 2003; Yap *et al*. 2010; Kassim and Abdulla 2006). Also, it showed an indirect effect in explaining consumer adoption of e-commerce through its effect on TAM constructs (Pavlou 2003; Gefen *et al*. 2003).

Antecedentss of trust in e-banking services emerged in the literature from a combination of service supplier, services quality, consumer ability and situational factors (Devlin and Ennew 1997; Corbitt *et al*. 2003; Yousafzai *et al.* 2003; Mukherjee and Nath 2003; Kassim and Abdulla 2006; Yap *et al*. 2010; Flavian *et al*. 2005).

However, the relative importance of trust antecedents might differ among users, because of difference in culture and context of interaction (Palmer 1995; Mitchell 1999; Halliday 2003; Zhao *et al.* 2010). Bart *et al.* (2005) proved that drivers or antecedents of trust and the role of trust in driving loyalty differ among customers and website services categories.

Although, the role of trust in affecting behavioural intentions is well established in literature, it was proved that trust affects loyalty through the mediating role of perceived value (Sirdeshmukh *et al.* 2002). The recognition for perceived value as a basis for decision-making is rooted in the goal and action identification theory. According to this theory individual's actions to attain an established goal is bounded by perception of reality (Vallacher and Wegner 1987).The reality shaped by experiences from situations or contexts and the person's memory, forms the perceived positives and negatives on

which the decision to proceed with the action is made (Craver and Scheier 1990). This introduces the concept of perceived value, a realistic and a rational concept in explaining the consumer buying behaviour.

Next section will focus on the concept of value and the factors shaping the perceived value of e-banking services.

3.5.3 Perceived value (PV)

The concept of perceived value has gained much attention in services marketing. Its importance has increased especially after the evolution of Relationship Marketing theory. It is of significant importance for both service supplier and users. From the supplier perspective, delivering an output with the required perceived value is the way to achieve competitive advantage and the basis of retaining market share, especially in those business environments experiencing severe competition (Woodruff 1997; Wang *et al*. 2004). In consumer buying behaviour, perceived value has shown considerable importance in shaping consumer decision-making in the initial phase or the repurchase intention decision (loyalty) (Cronin *et al*. 1997). The importance of perceived value for both parties, call for defining the concept of perceived value, explaining its antecedents and expected consequence.

I. Defining perceived value

Researchers approached value from different perspectives (Khalika 2004). The first perspective considers mainly the benefits gained from the product/service. This approach overlooks the role of cost, whether monetary or psychological in the form of sacrifices, as a dimension on which the product utility is assessed. Further, it overlooked the role of the service supplier in the development of such value. In contrast, the second approach considers perceived value as a trade-off between the benefits and costs of a product or using a service. However, the cost-benefit model explains consumer choice from an economic goal perspective (Ratchford 1982). Evaluating cost in monetary terms overlooks the psychological cost, which cannot be valued in monetary terms, but affects the customer's attitude towards intention to use the service. Psychological cost is one of main components of perceived value.

Thus, perceived value is a trade-off between '*get versus give'* or 'benefits ***versus costs and expected risks'*** (Bolton and Drew 1991; Ravald and Gronroos 1996; Gronroos

1997; Payne and Holt 2001; Luran and Lin 2003; Zineldin 2005). Similarly, Zeithaml (1988:14) considered both dimensions in defining perceived value, stating:

> *"Perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given"*

II. Perceived Benefits (the get dimension)

Perceived benefits were recognized first by the TDPB under the construct of relative advantage. TAM consolidated the benefits from using technology related systems in two main dimensions; perceived usefulness and ease of use.

Perceived benefits are viewed as resulting from the interaction among product attributes and usage context in which customer is also involved (Snoj *et al*. 2004: 158). So that both constructs (PU and PEOU) depend on individual subjective assessment for the utility and effort exerted in using this IT innovation (Gefen *et al*. 2003).

Perceived usefulness is of more importance in services in general and e-banking services in particular because of their intangible nature and inseparability (Berry *et al*. 2002). Perceived usefulness is believed to be a multidimensional construct, resulting from perceived convenience. Similarly, it was found that perceived convenience found to affect the perceived usefulness in TAM positively and significantly in LAN services (Yoon & Kim 2007). However, sources of convenience might differ among customers depending upon their expectations from the product or service they are using (Berry *et al*. 2002: 4; Brown 1990). These expectations are shaped by the interaction among service features, supplier characteristics, and customer characteristics. For example, convenience represented in time and effort savings is a function of technological robustness and the design of the e-banking services, enabling the access of financial needs anywhere and anytime (Joseph *et al.* 1999; Gerrard and Cunningham 2003; Liao and Cheung 2002; Wan *et al*. 2005). Time saving is viewed as a critical factor that affected the adoption of electronic banking services in Malaysia (Sohail and Sanmugham 2003).

Also, the impact of PEOU on attitudes depends on the task the customer is undertaking, which depends on the features or the design of the service and decides the extent to which the service satisfies the person's expected needs (Koufaris 2002: 206). It also, depends on the customer's skills and abilities to use the service, which depends on his/her prior experience (Taylor and Todd 1995).

III. Costs and Perceived Risks (the give dimension)

Cost is regarded as an element of perceived value which is compared against quality. Cost represented in prices or charges was found to affect the adoption of e-banking services (Sathye 1999). However, price or monetary charges should not be the only negative aspects that should be considered when calculating costs. Peter and Tarpey (1975) have pointed to the role of expected negative returns that will arise from consuming the product or using the product on the consumer decision behaviour. Similarly, Beaven and Scotti (1990) argued that considering monetary price as the only sacrifice made by the customers to obtain the services fails to reflect other sacrifices such as effort and time in designing the services which could reduce the perceived value of the services. Similarly, according to Gronroos (1997) costs are not just price; rather they could be any additional cost which arises from engaging in a relationship with another party, which could be classified into direct relationship costs, indirect relationship costs and psychological costs. Yang and Peterson (2004) argued that costs whether economic or psychological or emotional, act as a switching barrier that might affect the way customers perceive the product and affect their satisfaction as well.

Snoj *et al.* (2004) considered perceived sacrifices as a mix between monetary cost and all other costs incurred during product acquisition and usage.

The term 'risk' mathematically and statistically denotes known possible probabilities of outcome. However, in consumer behavior discipline, *Risk* is a term attached to those decisions characterized with uncertain outcomes from consuming the product or using a service (Mitchell 1999; Liu and Wei 2003). It is used when the decision maker lacks knowledge and probability of possible outcomes whether they are disappointing or favorable (Sitkin and Bablo 1992). Feartherman and Pavlou (2003: 453) also defined perceived risk in terms of expected unfavourable outcomes. Similarly, Yousafzai *et al*. (2003: 847) defined perceived risk as:

> *"Perceived risk is commonly thought of as an uncertainty regarding possible negative consequences of using a product or service".*

There is a consensus on including perceived risk as a determinant of perceived value. Sweeney *et al*. (1999) concluded in their study that perceived risk affects the customer's perceived value negatively. Woodruff (1997: 142) includes the risks or expected obstacles which could result in negative return in defining perceived value. Perceived risk plays a considerable role in explaining consumer behaviour in e-service context (Lim 2003). However, there is no consensus on types of risks explaining consumer

buying behaviour in e-service context. Lim (2003) identified four types of perceived risks associated with e-commerce adoption: technology risk, vendor risk, product risks and consumer risk. Aldas-Manzano *et al.* (2009) found that performance risks, security risks, social risks, time risks and privacy risks affected intention to use online banking in Spain. However, Featherman and Pavlou (2003) viewed that physical risk which means any expected threat to human life, is not significant to e-services adoption, while, Simon and Vector (1994) modified the definition of physical risk to include the act of being rubbed and injured, to fit the nature of e-service related products.

Thus, types of risks perceived could differ according to the type of e-banking services used and the frequency of their usage (Bobbitt and Dabholkar 2001: 440). Perceived risk is a multidimensional constructs depending on individual culture and context (Mitchell 1999; Lim 2003; Zhao *et al.* 2010).

For example, Markus and Soh (2002) believed that the location of customers between rural and urban areas introduces technology risk due to the difference in perceived ease of use resulting from differences in the IT infrastructure between the two areas. Also, Thatcher *et al*. (2005) believed that the physical abilities and educational capabilities of customers determine their perceived ease of use and affect their perceived risks from using ATMs. Thus, to reduce customer perceived risk from a service offering, it is more important to know the sources of risks (Lim 2003)

Previous discussion showed that there is no consensus in literature on the type and causes of *benefits* which represent the *get* dimension and the types or reasons for *sacrifices (risks)* which represents the *give* dimension. This is due to the difference among types and features of services, the characteristics of the users and the external environment which sets the boundaries in which the service users interact with their suppliers. Thus, it is more important to identify sources (antecedents) of risk from customers' perspective, to improve the value of e-banking services offering.

3.6 Antecedents of E-Banking Services PV

The economic benefit-sacrifice model viewing value as net benefits (benefits versus costs) is criticized for being unable to explain the sources of value and the causes of sacrifice, in terms of explicit dimensions serving as a guide for service producers (Heinonen 2004). Heinonen and Strandvick (2009) believed that identifying dimensions (requirements) of services value to be improved are more important than identifying risk

or benefit facets. Lin *et al.* (2005) also, criticized the uni-dimensional conceptualization of value, the *give-versus-get trade-off*, for being unable to reflect explicitly the sources of value from customers' perspectives. This calls for the adoption of a broader perspective, in which '*perceived value'* is seen as a process having inputs (sources) leading to output reflecting consequence. This wider perspective views *perceived value* as means to an end, highlighted in Woodruff (1997: 142) definition, stating:

> *"Customer value is a customer's perceived preference for and evaluation of those product attributes, attribute performances and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situations".*

Previous definition guide the process of building the concept of *customer value* by linking desired product and services attributes and performance (antecedents) to purposes and goals expected or experienced by customers in using the product or service in certain contexts (Payne and Holt 2001). This definition could be adopted from the organizational perspective by viewing value as having antecedents and consequence.

These antecedents might go beyond the product/service attributes to involve the supplier (Kalifa 2004). Maas and Graf (2008) asserted that value in financial services is a result of interaction among company strategies, product characteristics, service environment and customer characteristics.

This wider view is needed to guide organization practices to improve the contribution of services in retaining customers (Payne and Holt 2001). Cronin *et al*. (1997) concluded that value is best modelled as an additive function, where the uni-dimensional concept of value acts as a mediator between a set of antecedents and loyalty as a consequence. Lin *et al*. (2005) believed in the ability of multidimensional models, by defining value antecedents explicitly, in addressing the complex nature of customer perceived value.

This research focuses on the value of e-banking services in the Egyptian environment, from a wider perspective. This perspective enables service suppliers to improve the ability of e-banking services to act as a defensive marketing strategy and increases their ability in strengthening the relationship between bank and its customers. To improve the value (net benefits) of e-banking services and their role in strengthening relationship between banks and their customers, antecedents of e-banking services perceived value has to be identified.

However, literature disagrees on the exact number or nature of antecedents for service value in general and e-banking services perceived value in particular. This is because; antecedents of e-banking perceived value are the outcome of a set of interrelated factors. These factors are customer characteristics, product related characteristics, external environment, contextual and situational factors are service supplier factors. These factors are highlighted in **figure 3.5**

These factors were drawn from theories explained consumer behavior in general and e-banking services adoption context, previously discussed in the chapter. Each one of those factors is necessary but not enough to explain antecedents of perceived value on its own. The role of each factor in identifying the antecedents and contribute to explaining the perceived value of e-banking services are discussed in the next five sections. The interaction among these factors explains the antecedents of e-banking services perceived value and it also evaluates perceived value from a uni-dimensional perspective (benefits versus risks)..

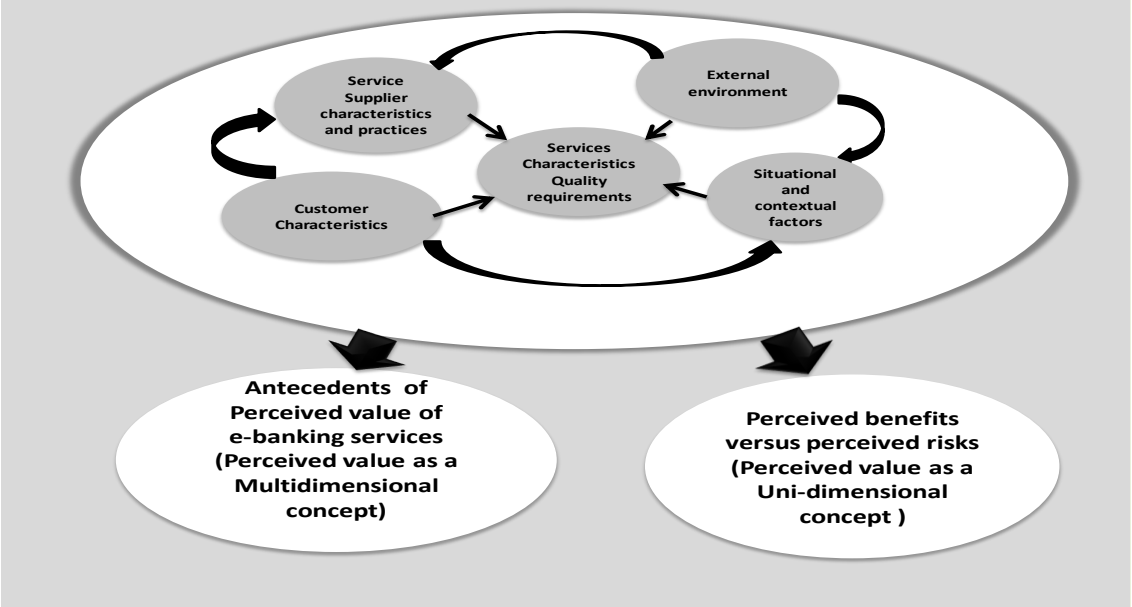

Figure 3.5: Sources of antecedents and benefit-versus-risks concept of perceived value in e-banking services

3.6.1 Customer characteristics

Perceived value should be judged (assessed) by customers, who are the users and the beneficiaries of the service offering (Khalifa 2004; Ulaga and Chacour 2001; Bolton and Drew 1991; Woodruff 1997; Devlin 1998). Similarly, Ajzen (2001) commented that the person's overall attitude toward an object is determined by the subjective view of that person to the relative importance of such attributes.

This means that the perceived value is ultimately subjective and differs among customers depending on their personal values, needs and preferences, as well as the financial resources of consumers (Ravald and Gronroos 1996; McDougall and Levesque 2000). Sanchez-Fernandez and Iniesta-Bonillo (2007) believed that attitudes are a reflection of subjective views of the perceived value based on an interaction between the customer and the utility received from the product.

The impact of customer characteristics and their way of living on shaping their needs and motivations was addressed in Maslow's hierarchy, which aimed to explain what drives people's needs at particular times (Kotler and Keller 2006). It demonstrates that consumer behaviour is derived by other forces, rather than, merely psychological force (Evans *et al*. 2009: 12). Maslow theory presented a basis for understanding what motivates consumers to take a purchasing intention decision, by discussing *problem or need recognition*. It provides a link between the demand on a particular type of product and lifestyle of customers (Kotler and Keller 2006: 185).

Customer socio-economic, personal characteristics and communicative behaviour differentiated adopter categories in the diffusion of innovation theory (Aldas-Manzano *et al*. 2009). The innovativeness characteristics of the bank customer decide the tendency towards internet banking adoption (Lassar *et al*. 2005).

The socio-economic characteristics of customers could affect their perceived usefulness of e-banking services through their lifestyles and shopping behavior and determines those whom bank customers deal with them in their daily lives such as shops and supermarkets. This might be consistent with the finding of Black *et al.* (2002) that the customer's lifestyle affects his/her choice of bank distribution channels or e-banking services as defined in the study.

For example, Jaruwachirathanakul and Fink (2005) believed that customer characteristics moderated the effect of perceived usefulness, risk or privacy on internet banking adoption. Similarly, consumer traits affected the relationship between ease of use as an independent factor and intentions to use technology-based self-service in Dabholkar and Bagozzi (2002). It is argued that, perceived risks of self-service technology depend on individual effort and users' performance, which is a reflection of socio-economic and demographic characteristics (Calisir and Gumussoy 2008).

However, researchers disagree on the effect of socio-demographic factors on the adoption of e-banking services. Age failed to provide a clear explanation for the

adoption of e-banking services. For example, Kolodinsky *et al.* (2004) proved in a quantitative study that age affects the adoption of both phone banking and internet banking. Mattila *et al.* (2003) found that mature customers are the latest to adopt internet banking for reasons relating to practical problems in using e-banking, security and lack of personal service. Zhu *et al.* (2002) concluded in their study that older customers preferred the traditional face-to-face services for their need to get personal attention, which will be lost if they use IT based services. In contrast, Lassar *et al.* (2005: 192) found that age has no effect on online banking adoption, while the only demographic variable that affected the adoption of online banking in their study was income.

Demographic characteristics alone fail to explain the adoption of self-service based technology (Dabholkar and Bagozzi 2002: 186). Thus, other customer characteristics should be considered as well.

It was found that those in high-level occupations financially well off and highly educated, or in professional occupation where technology is part of their jobs, are users of internet banking (Karjaluoto *et al.* 2002; Kaynak and Harcar 2001). Wan *et al.* (2005) found that the monthly household income affected the adoption of internet banking, while they failed to prove an effect on the use of ATM and call banking. It was also found that both income and internet experience are of most significant effect on internet banking adoption in a study conducted on office workers in large organizations in Thailand (Jaruwachirathanakul and Fink 2005). Education and occupation proved to have the strongest effect on the adoption of internet banking among university students in Greece (Gounaris and Koritos 2008). Black *et al*. (2002) found a positive relationship between education, income level and the use of e-banking services. Markus and Soh (2002) argued that place of living might affect the adoption of internet banking.

Linking the economic and social status of bank customers to their tendency towards internet usage might not be an accurate indicator of e-banking services and particularly internet banking service acceptance. Thus, factors such as self-efficacy should be included.

Lack in self-efficacy might be a source of expected risks from using technology, among a demographic category of bank customers. Self-efficacy was included in the TRA to explain the intentions towards a certain product. The effect of self-efficacy or self-confidence resulting from previous experience was explained from a risk-based perspective. It was found to affect the attitudes of customers towards internet banking or

technological based products or services in many studies whether confirmatory or exploratory (Taylor and Todd 1995; Black *et al*. 2002; Dabholkar and Bagozzi 2002; Karajaluoto *et al.* 2002; Hsu and Chiu 2004; Lassar *et al*. 2005; Laforet and Li 2005; Tan and Teo 2000). However, this might not necessarily extends to explain e-banking services usage in the Egyptian environment. This is because considering self-efficacy alone ignores the e-banking services quality.

Bauer and Hein (2006) proved that familiarity arising from self-efficacy reduces the risks associated with the initial adoption of internet banking. Other factor that was considered in the literature in explaining adoption to internet banking is the computer illiteracy. Mols (1999) referred to computer illiteracy as a barrier to adopting internet banking among bank customers. Daniel (1999) found a positive relationship between ease of accessing computers and internet banking adoption.

However, previous factors might not be generalized to the Egyptian environment due to several reasons. This might be due to the broad definition of social status which might differ among cultures. Some researchers might view that place of living whether rural or urban, might be an indicator of the social status; hence, the demand on certain types of e-banking services. Moreover, the definition of *highly educated* might differ from one country to another. Also, there are no clear sharp indicators that judge the social status of customers in the Egyptian environment, due to the lack of clear relationship between education, social status and income. The relationship between internet experience, education, income, place of living and social status might not be straight forward in the Egyptian environment. This means that, not every highly educated person is an internet expert or ranked as a highly or even middle income that enables him/her to be bank customers. Despite being in the 21st century, Egypt is considered among the top 10 countries in the world which suffers illiteracy. Illiteracy rate ranges from 30% to 35 % of the Egyptian population[20], with a high percentage being concentrated in Delta region and Upper Egypt. Further, Datt *et al*. (2001: 215) reported that around 50% of individuals aged 15 years and over did not complete their primary education.

[20] UN Office for the Coordination of Humanitarian Affairs, Tuesday 21 August 2007. Also another Source: Egyptian Central Agency for Statistics and Public Census. This is supported by Human development report in 2009, where adult illiteracy rate % aged 15 years and over is 33.6%

Although, Egypt ranks among top 10 countries for internet use in Africa, it is still considered one of the medium penetration countries, as the internet usage rate is only 15.9 % of the population[21]. The growth of internet users might not be reflected directly and proportionately on the acceptance of internet banking services in the Egyptian environment because of various factors. One of those factors is the use of internet. Sohail and Shanmugham (2003) argued that it is difficult to report use of the internet due to the dispersed nature of usage. Thus, it is more logical to think about computer literacy and internet usage among bank customers and not the population as a facilitator for using internet banking.

Further, other psychological forces that might explain customers' perceived value from using e-banking services could arise from the customers' willingness to trust either the technology or the service provider. Customers' willingness to trust influences their degree of perceived risk. Willingness to trust is an outcome of the psychological characteristics of the customer, which is part of his/her personality (Yousafzai *et al.* 2003: 848). However, it is shaped by the political and social power in their surrounding environment that imposes certain pattern of behaviour, in which distrust becomes the common attitude and trust is the exception (Slovic 1993). Doney *et al.* (1998) also argued that national culture affects tendency towards trusting others.

Although, Herzberg's motivator Hygiene theory was indented to explain what motivates people at work, it contributed to marketing theory and practices by drawing the attention for the relative importance of the indirect effect of certain quality dimensions in the buying decision (Kotler and Keller 2006).

This implies that, customer characteristics determine the demand on the range of banking products and services and consistent ways of distribution, within a given cultural contexts (Brown et al. 2004). Grouping the relative importance of quality dimensions and needs associated with the use of different e-banking services based on customer characteristics enhance the e-banking service perceived value (Wenninger 2000; Black *et al*. 2002; Ahmad and Buttle 2001; Beckett 2000; Dye *et al.* 2005). Thus, combining innovation, Maslow and Herzberg theories in explaining the determinants of e-banking perceived value could have significant implications for service providers.

[21] Internet world statistics 2009

Previous discussion showed no consensus on the effect of customer characteristics in explaining the relative advantage or perceived risks of e-banking services. This implies that bank customer or users characteristics alone are insufficient to explain the value of e-banking services. However, customers or users characteristics are important to emphasize certain quality requirements representing the antecedents for e-banking services perceived value. This means that quality dimensions emphasized might differ among customers. This dictates exploring the quality dimensions of importance in e-banking services adoption context, form a certain category of bank customers.

3.6.2 Situational and contextual Factors

Situational and contextual factors highlight the role of *facilitating conditions* in affecting *perceived behavioural control* in TDPB (Bobbitt and Dabholkar 2001). It is seen as important in explaining consumer behaviour in technology-based self-service (Bobbitt and Dabholkar 2001). Woodruff (1997: 142) referred to the effect of situation on the attributes required in the product, stating:

> *"The customer's use situation plays a critical role in evaluation as well as in desires. If the use situation changes, the linkages between product attributes, consequences and goals and purposes change as well"*

Situational and contextual factors introduce the effect of time and place into judging the value of the service (Heinonen 2004). Dick and Basu (1994: 106) defined situational factors as:

> *"Potential extraneous events that may produce inconsistency in an attitude-behaviour relationship"*

Contextual and situational factors introduce the effect of external environment and service context into emphasizing certain quality dimensions (Grewel *et al*. 2000). Contextual and situational factors are important in the process of trust building in e-banking services usage context (Lee and Turban 2001). Lee and Jun (2007) argued that the importance of considering the time and location of service delivery and consumption in explaining the perceived value emerges from its effect on perceived usefulness.

Researchers approached situational and contextual factors from various angles (Belk 1975; Quester and Smart 1998). Contextual factors emerges from the effect of external operating environment, which forms the usage context conceptualized (Lee and Turban 2001). Dabholkar and Bagozzi (2002) emphasized the role of situational factors defined

in terms of perceived waiting time on affecting service quality. Situational and contextual factors might introduce the concept of opportunity cost to the issue of utility and perceived value (Campo *et al*. 2000).

The role of culture (cultural dimensions)

Culture is a main constituent of contextual factors. This is because culture shapes attitudes and guidelines for actions (Swidler 1986: 281; Doney *et al*. 1998). According to Hofstede (1994:4), a famous writer in this area, culture is:

> *"Collective programming of the mind which distinguishes the members of one group or category of people from those of another"*

Hofstede (1994) described and rated cultures along five dimensions. The internal validity of Hofstede dimensions were subjected to criticisms because of the way of collecting data, the sample characteristics (Furrer et al. 2000). However, Hofstede's cultural dimensions have been widely used in service marketing literature and consumer buying behaviour.

Hofstede's cultural dimensions are power distance, uncertainty avoidance, individualism-collectivism, masculinity-femininity, and long-term orientation. Power distance refers to the degree of inequality experienced among people of the same country in terms of wealth and power (Hofstede 1994; Kanousi 2005). Uncertainty avoidance refers to the preference of structured versus unstructured situation. A society is highly uncertainty avoidance if it prefers structured situations (Hofstede 1994).

Individualism differs from collectivism on a set of dimensions (Triandis *et al*. 1988). First is the degree of strength in ties among individuals. Second is the degree of emphasis on people compared to task. Third is the equality of power in social relations. Fourth is the extent to which personal goals are subordinate to group goals. Fifth is the amount of skills possessed to enter and leave new social groups. In Individualistic societies, individuals enjoy more autonomy, freedom, and personal achievements, have more skills of leaving and entering new groups, relationships between people in the same social group is horizontal (Kanousi 2005). On the contrary, in collectivistic societies, individuals subordinate their goals to the goals of a stable group, relationships between people in the same group is vertical (Triandis *et al*. 1988).

Masculinity differs from feminine culture on two dimensions dominant values whether feminine or masculine and the division of roles between sexes in the society (Hofstede 1994). Culture of masculinity is that one which all values such as performance, success,

and competition are associated with men (Hofstede 1994). While in feminine cultures, both men and women share performance, success and shape the quality of life.

Long-term oriented culture differs from short-term oriented culture on values emphasizing future and time, perseverance, ordering relationship by status and a sense of shame (Veiga *et al*. 2001; Calhoun *et al*. 2002). A short oriented culture is concerned more with schedules and prefers to act on immediate time frame and follows sequential tasks through an analytic approach. Moreover, a short term oriented culture on a quick achievement of a resolution. However, a long term-oriented culture is less concerned with time constraint. Moreover, long term-oriented culture performs a set of tasks simultaneously using an intuitive approach.

Egypt was included in Hofested's studies in the mid 1970s as one example of the Arab countries. Egypt as an Arab country was rated as a highly power distance culture (scoring 80) compared to U.S.A. and Great Britain, examples of western culture (Hofstede 1994). It was also rated as highly uncertainty avoidance (scoring 68) compared to U.S.A. and Great Britain. In addition, Egypt was rated as a collectivist culture by achieving a very low score on individualism and masculinity compared to U.S.A and Great Britain. However, Egypt and all Arab countries were not among the 23 countries identified as long term- oriented cultures.

Several factors might have contributed to changing the Egyptian culture since Hofested's study in the mid 1970s until now. Time plays an important role in affecting national culture or some cultural dimensions (Doney *et al*. 1998). Economic development and social changes of society contribute to altering societies from collectivistic to individualism (Triandis *et al*. 1988). Time accompanied with changes in political and economic situations affected the structure of the social system in the Egyptian environment. This allows for the existence of different sub-cultures inside the same culture. The technological advancement and the internet might contribute in removing some cultural boundaries between countries.

Moreover, Egypt has a unique culture that might differ on some aspects from other Arab countries. Although Egypt might agree with other Arab countries on collectivism, individualist sub-cultures could exist within collectivistic cultures. Collective societies might differ on some dimensions they emphasize (Triandis *et al*. 1988). In addition, Egypt might score lower than the rest of Arab countries on masculinity due to several reasons. First, is the early contribution of the Egyptian women in the political reform. This could be evident from the role of queens ruled Egypt such as Hatshepsut, Nefertiti

and Cleopatra in the era of ancient Egyptians. Second, is the increasing involvement of Egyptian women in the education process at all levels, since the feminist movement led by Hoda Sharawi, an Egyptian woman who called for university education for Egyptian women in the late 1920s. Third, is the rapid development of rules and legislations supporting Egyptian women rights at all levels; at the personal level, the family, and the work life levels.

Previous discussion shows that Egyptian culture has unique culture that might stand, on some dimensions, in the half way between western culture and the rest of Arab Eastern culture. While on other cultural dimensions, the Egyptian culture might lag behind other Arab countries especially Arab Gulf countries. Culture shapes the context in which the service is delivered and used (Furrer *et al*. 2000; Birgelen *et al*. 2002; Wong 2004; Kanousi 2005). This implies that the Egyptian culture might bring new mix of e-banking services value antecedents.

However, there is no evidence in literature on the explicit involvement of cultural dimensions to explain the perceived value of e-banking services in general. Moreover, there is no agreement on the relevance of a specific cultural dimension in validating antecedents of e-banking services perceived value. Situational factors might emphasize the role of a particular cultural dimension in validating e-banking value antecedent(s) (Doney *et al*. 1998).

Previous discussion demonstrated that there is no consensus on a definite list of situational and contextual factors. Such factors have indirect or moderating role on emphasizing certain quality dimensions in a given environment as antecedents of e-banking services perceived value. Situational and contextual factors might also emphasize certain quality requirements in service supplier to explain the perceived value of e-banking services.

3.6.3 Product/service related factors

Product characteristics play a significant role in launching strategy, especially if the product represents a technological innovation. Accordingly, diffusion of innovation theory was used partially or totally to explain the adoption of e-banking (Lertsatwatana 2003; Polatoglu and Ekin 2001; Gerrard and Cunnigham 2003; Jaruwachirathanakul and Fink 2005; Frambach *et al*. 1998).

Product characteristics were recognized in innovation diffusion theory and quality literature. The diffusion of innovation theory postulated that certain product or service characteristics should be perceived by the users, to accelerate the adoption of any innovation. The first feature is *relative advantage*, reflects the degree to which consumers perceive a new product or service as different from and preferable to any other substitute. *Compatibility* is the extent to which a new product or service is perceived as consistent with consumers' beliefs, values, and habits (Frambach *et al.* 1998). *Complexity* refers to the degree to which an innovation is perceived to be difficult to understand, learn or operate. Relative advantage, compatibility and complexity are considered in the theory of decomposed behaviour as having a direct effect on attitudes which determines the behavioural intention (Shish and Fang 2004). *Observability* refers to the extent to which an innovation is visible and communicable to consumers. *Trialability* refers to the ability of consumers to experiment with a new innovation and evaluate its benefits.

Although, product or innovation characteristics affect the speed of diffusion, in financial services and e-banking services, adopters do not use technology alone, but rather, they use these services or related products that have specific benefits and meet quality requirements (Wind and Mahajan 1997; Maas and Graf 2008). Using technology as it fits the needs of the users was emphasized in the Task-Technology fit model.

Also, innovation characteristics do not act alone to guarantee rapid adoption, but rather, they are affected by users' characteristics. For example, triability is affected by efficacy and facilitating conditions represented in the availability of skills and resources needed to use the product or the service (Shih and Fang 2004). To improve the product or service contribution to perceived relative advantage and compatibility while reducing perceived complexity, certain product quality dimensions had to be emphasized.

Although, financial services are viewed as a mix of intangible products and services, services accompanying financial products are the clue to customer satisfaction in the financial services industry (Krishnan *et al*. 1999: 1197). ***Intangibility*** makes it difficult for customers to judge the core services, but rather they use alternative criteria to judge the quality of service (Bebko 2000: 12). This highlights the importance of service quality dimensions.

I. Quality and Perceived value (PV)

Researchers disagree on the nature of relationship between quality and perceived value. Some view that perceived value is a richer more comprehensive measure of customer overall evaluation of a service than service quality (Bolton and Drew 1991; Lappierre 1997). Others view that service quality represents the *get* (*benefit*) dimension of perceived value (Zeithaml 1988; Anderson and Sullivan 1993; Cronin *et al*. 1997; Brady and Robertson 1999; Varki and Colgate 2001; Sweeney and Soutar 2001; Baker *et al*. 2002). However, Heinonen and Strandvick (2009) believed that quality dimension could be a source of benefit or risk, from using the service.

However, there is a consensus on the role of quality in improving perceived value. Linking quality dimensions to perceived value assists in directing the service provider operational and long-term goals (Cronin *et al*. 2000: 209). Similarly, Kotler and Keller (2006: 47) believed that service quality dimensions are essential for creating value, stating:

> "*Total quality is the key to value creation and customer satisfaction*".

II. Absence of clear quality dimensions

Service quality models discussed in literature could be classified into two main categories; face-face service quality and E-service quality models. **Table 3.1** presents several models of service quality in both contexts.

Researchers disagree on the validity of a specific service quality model to all contexts in all cultures. Face-to-face service quality or e-service quality models differ on the number and title of dimensions (Asubonteng *et al*. 1996; Hernon *et al.* 1999; Brady and Cronin 2001). **Table 3.1** shows that the number of dimensions measuring face-to-face service quality ranges from 2 to 6, with different definitions for these dimensions. Moreover, **table 3.1** shows that dimensions of e-service quality presented in literature ranges from 2 to 11.

Table 3.1: Service quality models

Face-to-face service quality dimensions			E-service quality dimensions		
Authors	Number of dimensions	Detailed dimensions	Authors	Number of dimensions	Detailed dimensions
Brady and Cronin (2001)	3	Interaction quality / Physical environment quality /outcome quality	**Yang *et al*. (2005)**	2	Information quality / system quality
Parasuraman *et al.* (1988) **Zeithaml *et al*. (1988)** **SERVQUAL**	5	Reliability/ Responsiveness Assurance/Empathy/ Tangibles	**Parasuraman *et al*. (2005)** **E-S-QUAL**	11	Efficiency/ Fulfilment/ System availability/Privacy
Gronroos (1984)	3	Functional quality/ Technical quality / Image	**Barnesand Vidgen (2002)** **WebQual**	3	Usability, Information Quality, Service Interaction quality
Lehtinen and Lehtinen (1991)	3	physical quality/ Interactive quality/ Corporate quality	**Wolfinbarger and Gilly (2003)**	4	Website design, Fulfilment/reliability, security/privacy, and customer service.
Joseph *et al*. (1999) **service quality in the banking sector**	6	convenience/accuracy feedback/complaint management efficiency/ queue management/ accessibility and customisation	**Jun and Cai (2001)** **internet banking service quality**	3	Banking service quality, online service quality, customer service quality
Balnchrad and Galloway (1994) Retail banking Quality	2	Process/ Outcome	**Baur *et al*. (2005)** **quality of e-banking portals**	3	Core services/additional services/Problem solving services
Cronin and Taylor (1992) **SERVPERF**	2	Importance/ Performance	**Jayawardhena (2004)**	5	Access/trust/ web interface/ Attention/ Credibility
Holmlund and Kock (1996)	3	Functional/ Technical/ Economic	**Collier and Bienstock (2006)**	3	Process dimension: 5 factors/ Outcome dimension: 3 factors Recovery dimension: 3 factors
Sureshchandar *et al.* (2003	5	Core service or service product Human element of service delivery Systematization of service delivery Tangibles of service/ Social responsibility	**Herington and Weaven (2009)** **e-service quality for bank websites**	4	Personal needs/ Site organization User-Friendliness/ Efficiency of website
			Santos (2003) **E-service quality (websites)**	2	***Incubative dimension***: proper design of website it includes ease of use, appearance, linkage, structure and content ***Active dimension:*** Reliability, efficiency, support, communication, security, incentive
			Joseph *et al.* (1999)	6	***Convenience/Accuracy*** ***Feedback/complaint management/ Efficiency/no waiting time*** ***Queue management*** ***Accessibility/ Customisation***

SERVQUAL scale developed by Prasuraman *et al*. (1988) is widely used in measuring quality of the face-to-face service (Buttle 1996; Patricio *et al*. 2003). SERVQUAL comprises five dimensions of 22 items. These dimensions are tangibles, reliability, responsiveness, assurance, and empathy. Tangibles reflect the physical facilities, equipments, and appearance of personnel. Reliability refers to the dependability and accuracy of service. Responsiveness, assurance, and empathy mostly related to the performance of customer service. Parasuraman *et al.* (1988:6) viewed SERVQUAL as a robust instrument, stating:

> *"The SERVQUAL instrument is designed for use in broad set of service businesses and provides a basic skeleton through its expectations /perceptions format encompassing statements for each of the five service quality dimensions. This skeleton, when necessary, can be adapted or supplemented to fit the characteristics or specific research needs of a specific organization".*

However, SERVQUAL was criticized for several reasons. It is argued that expectation-performance gap, the basis of SERVQUAL, has little theoretical support in marketing (Cronin and Taylor 1992; Buttle 1996). Moreover, Blanchard and Galloway (1994) commented that SERVQUAL lacks clear-cut parameters on which quality gaps could be minimized. The dimensionality of factors in the SERVQUAL scale proved to be invalid in different contexts (Babkus and Boller 1992; Buttle 1996). Babkus and Boller (1992) commented that items representing empathy and responsiveness loaded on one factor, not two as in SERVQUAL. Further, Buttle (1996) claimed that SERVQUAL focused only on process of delivery, overlooking service encounter outcome. Kang *et al*. (2004) added that SERVQUAL addressed only the functional aspect of quality, overlooking the technical aspect that might be important in some services.

The disagreement extends to e-service quality models. Herington and Weaven (2007) claimed that there is no explicit validation for e-service quality scales.

Several reasons justify the disagreement on one specific quality model for all contexts. First, the differences in the specific features of services, or the service mix, might lead to emphasizing some dimensions, while de-emphasizing others (Janda *et al*. 2002; Kotler and Keller 2006: 404). The relative importance of quality dimensions might differ between face-to-face and e-commerce service (Cox and Dale 2001). Moreover, the level of technology involved in the service affect the quality dimensions emphasized by customers (Joseph *et al.* 1999: 190). Accordingly, the dimensions measuring the quality of e-banking services might differ among researchers depending on the technology involved in e-banking services and the range of services they include.

Second, quality is related to use-value, which depends on the relationship between the beneficiary and the usage context (Vargo *et al*. 2008). This implies that not all quality attributes are perceived of the same degree of effect on the satisfaction of customers of the same product or service in different cultures (Johnston 1995; Mattila 1999). Nilsson-Witell and Fundin (2005) added that, perceived value is related not only to attributes, but also, to the ability of these attributes to fulfil certain goals of the customers.

Third, quality dimensions might vary among bank customers according to their experience and degree of involvement with using e-banking services (Nilsson-Witell and Fundin 2005). Those quality dimensions reflecting antecedents of perceived value depend mostly on the preference of bank customers for the way of getting the service (Dabholkar and Bagozzi 2002; Vargo *et al*. 2008). O'Neill and Palmer (2003: 190) justified the difference in perceived quality dimensions among customers, stating;

> *"Perceived differences do not depend on intrinsic qualities, consumers evaluate products or services against a background of their experiences, expectations, and associations".*

Fourth, the use of Exploratory Factor Analysis (EFA) could be responsible for the disagreement on the number and nature of quality dimensions extracted from the data (Buttle 1996). Quality dimensions in the models presented in **table 3.1** are developed using exploratory factor analysis (EFA). EFA is criticized for being a subjective technique, in which factors (dimensions) retained and their detailed items are left to the researchers' judgement and interpretation (Henson and Roberts 2006). This justifies the difference in the number and titles of quality dimensions among researchers. It also implies that dimensions of e-service quality models originated from western studies might change in number and titles to reflect the quality of e-banking services in the Egyptian context.

Previous discussion demonstrated that adding value or improving the value of services, requires deciding on those quality dimensions that should be emphasized, how they are emphasized and what their outcome might be. However, the relative importance of quality dimensions and their effect on perceived value depend on the interaction between the customer, usage context and situation, the nature of service and the service provider. This creates difficulty of importing a specific quality model as an antecedent of e-banking services value in the Egyptian context. Consequently, this calls for exploring quality dimensions explaining the antecedents of perceived value of e-banking services from bank customers in the Egyptian environment.

3.6.4 External environment

E-banking services could be viewed as innovation that is used in cultural context. Thus, culture values, technological pace, regulations governing relationships among people in this culture could intervene to form antecedents and explain risks versus benefits of e-banking services. The relative importance of factors affecting internet banking adoption differ across users in different countries (Brown *et al.* 2004).

Roy and Dutta (2003) viewed the diffusion of internet technologies in any culture as a socio-technical phenomenon. Information technology infrastructure in different cultures might mediate the relationship between e-banking users' socio-economic status and the perceived risk from these services (Brown *et al.* 2004; Jaruwachirathanakul and Fink 2005; Veiga *et al*. 2001).Thus, it is important to understand the socio-cultural environment in which this innovation is used (Wind and Mahajan 1997).

The degree of social system homogeneity versus heterogeneity is believed to affect the diffusion of a new technology-related product (Gatingnon and Robertson 1985; Antonides *et al.* 1999). The effect of such factors was emphasized by Gurau (2002: 290), stating:

> *"the successful introduction and functioning of e-banking services proves to be a complex operation which requires a harmonization among all the interacting elements of the economic and financial system".*

Lowe and Corkindale (1998) argued that the value system embedded in the national culture could explain customer behaviour and shape customer attitude towards new innovation. Previous researchers view social pressure an outcome of the effect of subjective norm and interpersonal networks. Subjective norm is included explicitly in both the theory of reasoned action TRA and theory of planned behaviour TPB as a factor affecting behavioural intention. However, there is a disagreement on the effect of subjective norm on the behavioural intention.

The interaction between members of a social system formed through network participation acting as reference group could affect the adoption and diffusion process of any innovation (Frambach *et al.* 1998). Karjaluoto *et al*. (2002) found that the reference group has a significant impact on internet banking adoption. Sathye (1999) viewed that the resistance to change as a factor associated with the culture of societies can hinder the diffusion of innovation. However, Shih and Fang (2006) found that subjective norm has no significant effect on behavioral intention towards internet

banking because of the users' experience with the internet. Also, Jaruwachirathanakul and Fink (2005) found that culture factor represented by the subjective norm had no significant impact on the adoption of internet banking among Thai consumers. Similarly, Laforet and Li (2005) findings showed that reference group influence had no impact on the adoption of mobile and online banking in China. Featherman and Pavlou (2003) concluded that social risk resulting from the effect of subjective norm or social pressure is not a significant part of the perceived risk affecting the intention to adopt e-services.

However, experience might minimize the effect of social norm on the individual's behavioural intentions (Venkatesh and Davis 2000: 189). In this respect, Hsh and Chiu (2004) found that the effect of subjective norm is limited to those who are initial users of technology. While, Howcroft *et al.* (2002) pointed out the role of customers' degree of trust in his/her service provider, supplier's reputation on their response to social pressure to adopt technological related service.

The effect of external environment in introducing specific risks might be apparent in case of e-banking services, due to their intangibility and inseparability. Yousafzai *et al.* (2003: 852) pointed up the role of intangibility in creating risks to online banking users, stating:

> *"The distant and impersonal nature of the online environment and the implicit uncertainty of using a global open infrastructure for transactions can bring about several risks that are caused by functional defects or security problems in information and communication technical systems".*

For example, channel risk refers to the extent to which the data transfer is secured, which might affect consumer choice of the electronic channel (Black *et al*. 2002). It happens due to technological risk during operation, resulting from the failure of software or/and hardware causing customers inconvenience (Wenninger 2000). This type of risk might be higher in the developing countries, where technological advancement might affect the perceived reliability of e-banking services. This could be of more importance to customers in the case of internet and telephone banking which introduces security and privacy risks (Ghosh and Swaminatha 2001).

Further, existence of clear and explicit legislations which can arrange and organize exchange relations among internet banking users, found to affect the adoption of internet banking (Rotchanakitumnual and Speece 2003: 316). These legislations extended to justify the adoption of visa/credit cards and affect customers' degree of perceive risk in (Markus and Soh 2002).

Previous discussion demonstrated that external environment could act independently to shape e-banking services perceived value, or it could act indirectly through emphasizing certain quality dimensions as antecedents to e-banking perceived value.

3.6.5 Supplier characteristics and Practices

Launching new product such as e-banking services involves financial and non-financial risks. This calls for effective planning and implementation to guarantee product success in meeting users' needs and gaining their acceptance (Guiltinan 1999). In this regard, Gatignon and Robertson (1985) argued that the adoption rate of an innovation could be accelerated through the marketing mix designed by the service or product supplier.

The importance of including service supplier role in the decision to use e-banking services increases due to several factors. One is the technological aspect involved in the adoption of e-banking services. Other factors might be related to the characteristics of services in general and those of the financial services in particular. The nature of e-banking services, being of technological and financial in nature, places more burdens on service suppliers, due to the uncertainty associated with service offerings (Lovelock 1983: 10), especially if they are technological based services. This has its implications for both service supplier and service current or potential users. Bitner (1990: 72) pointed out the need for clues to improve customers' perception of services offered, stating:

> *"Because services are intangible and usually cannot be tried prior to purchase, customers look for tangible evidence of what they are about to experience in a given service encounter".*

This makes it logic and rational to relate the attitudes towards e-banking services with those towards the service supplier (Dabhalkar 1996). As a result, customers might depend on functional quality which is related to the delivery process, perceived through previous experience with service provider, to assess the technical quality which is related to ***dimensions*** of the electronic service (Kang and James 2004).

Similarly, Garbarino and Johnson (1999: 72) pointed out the effect of service intangibility on the formation of prediction clues, stating:

> *"Because of the intangibility of services, some consumers may use physical environment cues to assist them in forming global impressions"*

This might lead financial services customers to depend on tangible clues, such as face-to-face eservice encounter, to evaluate the service provider and build their expectations

about the electronic services provided (Bitner 1990:72; Gronroos 2001; Rexha *et al*. 2003; 58; Liu and Wei 2003).

Transforming services to concrete tangible attributes facilitates their comparison and positioning relative to those of other service providers (Gronroos 1978: 591; Beaven and Scotti 1990). Similarly, Kotler and Keller (2006 :495) stated that:

> *"Service marketers must be able to transform intangible services into concrete beliefs".*

The effect of service supplier characteristics on the adoption of e-banking services has been addressed in more than one study. Service supplier was one of those factors affecting the satisfaction towards online services in an interpretive study by Massad *et al*. (2006). Daniel (1999) identified organizational related factors as one of two main factors that she argued can affect the diffusion of electronic banking in the United Kingdom and the Republic of Ireland. Such internal factors include the organizational culture of innovation. Black *et al*. (2002) in their qualitative study found that organization characteristics are involved in the process of selecting among e-banking services. Also, it was argued that financial institution' practices affects customers' perceived security from e-banking services hence expected risks, through establishing security awareness guidelines announced to e-banking users (Yousafzai *et al.* 2005). Johnson and Grayson (2005: 502) pointed to the effect of supplier's reputation on building trustworthiness in the buyer mind, stating:

> *"A buyer's assessment of the reputation of a firm will positively impact his/her assessment of the trustworthiness of a service provider or a salesperson through a process of transference"*

Supplier reputation is defined by Doney & Cannon (1997: 37) as:

> *"the extent to which firms and people in the industry believe a supplier is honest and concerned about its customers."*

Service supplier image, a wider concept than reputation, proved to affect the initial decision to use internet banking (Flavian *et al*. 2005; Jaruwachirathanakul and Fink 2005). However, non-adoption of e-banking services might not mean that bank customers distrust their banks. This is because, trust and distrust should not be always considered as two opposites (Lewicki, *et al*. 1998), but rather, this might result of e-banking services inability to satisfy the needs of this customer segment. Or it might be inability of service supplier to add value to the relationship between customer and supplier (Ravald and Gronroos 1996). This brings the issue of relationship quality and value of services offered in consideration.

Previous discussion showed that service supplier involvement in shaping the antecedents of value is necessary in e-banking services. Service supplier characteristics could act independently in shaping the value of e-banking services. However, there is no consensus on the way service supplier is involved in shaping the value of service offing in general, and e-banking services in particular. Also, there is no consensus on a list of characteristics or determinants reflecting the involvement of service supplier in shaping e-banking services perceived value.

3.7 Consequence of Perceived Value (PV)

While, the previous section presents factors shaping perceived value (antecedents of perceived value), this section presents the expected consequence of perceived value.

This will be done by presenting an overview of competing relationships between satisfaction, perceived value, or both and behavioural intentions. Then, the relationship between perceived value and behavioural intention will be emphasized supported by theoretical justifications.

3.7.1 Competing relationships

Literature presents three types of competing antecedents to loyalty. Their importance in explaining loyalty arises from the role of confirmation/disconfirmation paradigm and relationship marketing theory in explaining consumer buying behaviour. **Figure 3.6** displays the three competing relationships.

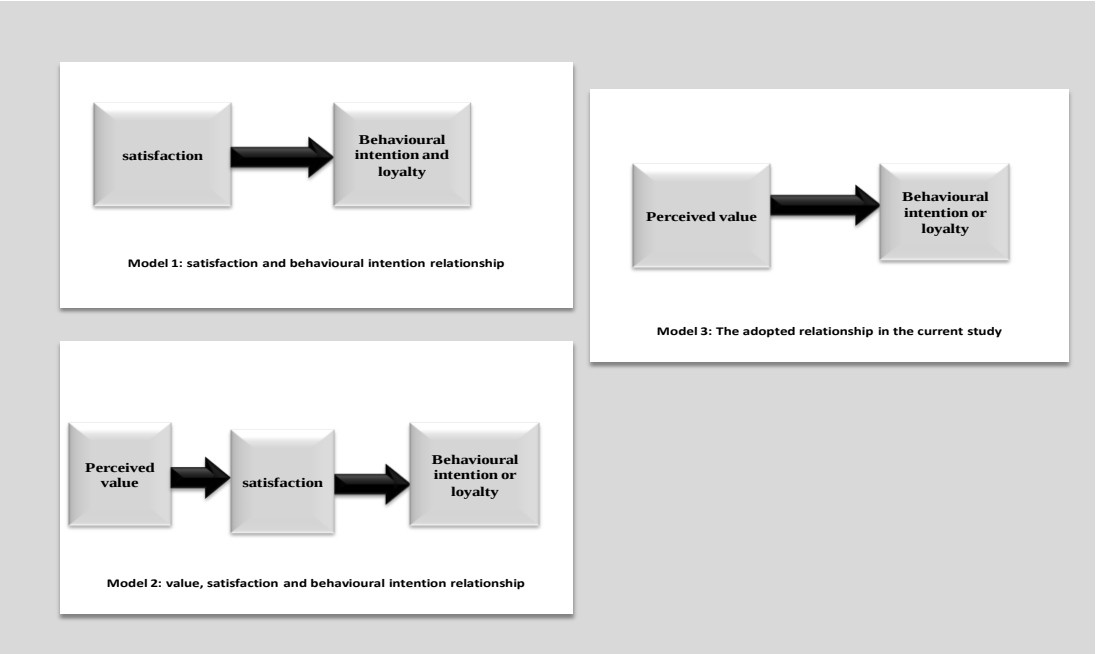

Figure 3.6: Competing relationships and the adopted relationship

The three competing relationships are well established in the literature. **Table 3.2** presents those studies supporting each model.

Table 3.2: Previous studies addressing competing relationships

	1st relationship	2nd relationship	3rd relationship The adopted relationship
Relationships	from satisfaction to behavioural intention	From value to satisfaction to behavioural intention	From value to behavioural intention
Studies supporting	Anderson and Mittal 2000; Cronin *et al.* 2000; Hallowell 1996, Keiningham and Munn 2003; Anderassen and Lindestad 1998; Varki and Colgate 2001; Gustafsson *et al.* 2005	Lin *et al.* 2005; Patterson and Spreng 1997; Eggert and Ulaga 2002; Caruana *et al.* 2000: 1349; Hallowell 1996; Hsu and Chiu 2004	Cronin *et al.* 1997; Sweeney *et al.* 1999; Chang and Wildt 1994; Chen and Dubinsky 2003, Yang and Peterson 2004; Sweeney and Soutar 2001; Bolton and Drew 1991; Pura 2005; Harris and Goode 2004; Brady and Robertson 1999; Oliver 1999; Patterson and Spreng 1997; Ravald and Gronroos 1996; Baker *et al.* 2002; Sirdeshmukh *et al.* 2002

Although, the three relationships exist in literature, this research is examining the direct relationship between ***perceived value*** and loyalty as a logical consequence for perceived value.

3.7.2 Rational for adopting the PV-Loyalty Relationship

The importance of perceived value in affecting loyalty is emphasized with those arguments criticizing the role of satisfaction in explaining loyalty. Literature showed that satisfaction significantly explains behavioural intentions. However, some arguments claimed that satisfaction is not enough to capture the relationship between suppliers and customers, or even it fails set a well established ground on which performance could be improved. These claims set a solid basis justifying adopting the third model.

Ahmad and Buttle (2001) argued that the time span of measuring satisfaction is insufficient to capture the effect of the supplier acts on customer relationship in some industries. Also, it is argued that considering average satisfaction rate to be an indicator for repurchase intention failed to consider the individual variance among customers (Winsted 1997; Mittal and Komakura 2001). Moreover, Eggert and Ulaga (2002) added that customer satisfaction models might not be an indicator for loyalty, because it neglects the potential customers, the state of the competition within the industry to which the service provider belongs.

In a business environment of severe competition, customers are becoming more rationale by calculating net benefit from the relationship or the buying decision. Accordingly, perceived value is seen as the best predictor or indicator of loyalty, especially in services industry (Cronin *et al*. 1997; Sweeney *et al*. 1999; Chang and Wildt 1994; Chen and Dubinsky 2003, Yang and Peterson 2004; Sweeney and Soutar 2001; Bolton and Drew 1991; Pura 2005; Harris and Goode 2004). Also, it is believed that perceived risk, a constituent of perceived value, explains consumer behaviour better than perceived benefit especially in services because to their intangibility and inseparability (Mitchell 1999: 163; Laroche *et al.* 2004).

Similarly, Smith *et al.* (1999: 360) claimed that customers give more consideration to losses incurred as a result of service failures than revealed benefits. Liu and Wei (2003) proved that perceived risks is a factor affecting intention to adopt e-commerce, similarly to perceived usefulness and perceived ease of use addressed by the TAM. Also, Featherman and Pavlou (2003) asserted that perceived risk could act as a barrier to customer adoption and acceptance of an e-service.

Since, the objective is improving the value of e-banking services; hence, perceived value is the best indicator for improving the performance of e-banking services.

Satisfaction is viewed as a post-purchase evaluation from a transactional perspective (Churchill and Surprenant 1982: 493). Similarly, Gustafsson *et al*. 2005 viewed as a *backward looking dimension* as it concerns only about the evaluation of performance.

Attitudes have two dimensions. The cognitive dimension reflects customer thoughts about the attitude object, while the affective component reflects customer feelings towards the attitude object (Verplanken *et al.* 1998). It has been argued that affective nature of satisfaction does not provide clear guidelines on which improvements could be planned at the organizational level (Oliver 1999; Eggert and Ulaga 2002; Yang and Peterson 2004). Similarly, Wiele *et al.* (2002) argued that satisfaction measurements lack guidance for management to pinpoint areas of weaknesses. On the other hand, the role of perceived value in evaluating performance is highlighted by being able to capture the discrepancy between expectations and perceived performance (Patterson and Spreng 1997; Chang and Cheung 2001; Yang and Peterson 2004; Lee and Jun 2007). Sanchez-Fernandez and Iniesta-Bonillo (2007) argued that perceived value is cognitive-affective in nature. This implies that perceived value performs in the same dynamics as satisfaction does, and could predict loyalty. Thus, perceived value captures both the overall performance and the basis of improvements, due to being a long term concept which sets the direction on which resources should be employed (Eggert and Ulaga 2002). Defining perceived value requirements (antecedentss) directs the organization and its resources (Woodruff and Garial 1996; Woodruff 1997).

In sum the differences between satisfaction and perceived value are in favor of adopting perceived value as an indicator for loyalty (commitment). **Table 3.3** summarizes the main differences between perceived value and satisfaction.

Table 3.3: Difference between Perceived value and Satisfaction*

Perceived value	Satisfaction
Pre and post purchase evaluation	Post purchase evaluation
Cognitive and affective in nature	Affective in nature
Guide the organization and its resources. Thus, it is considered as a long term concept	Evaluate the performance of the resource allocation. Thus, it is short term concept
Considers present offering in comparison of competitors.	Neglects competitor offerings.

*Source: adapted from Sweeney and Soutar (2001); Eggert and Ulaga (2002); Woodruff and Garial (1996); Yang and Peterson (2004)

Although, perceived value proved to be an indicator for loyalty in the area of product and services, e-banking perceived value might not necessarily be result in loyalty to the service provider (banks). Sirdeshmukh *et al.* (2002) argued that perceived risks from e-banking services might not necessarily be interpreted as a relational risk or distrust,

threatening the bank's market share and its relationship with its customers. This relationship might depend on the customers' characteristics, their interest in using e-banking service. This dictated exploring the relationship between the perceived of e-banking services and their impact on bank loyalty.

3.8 Summary and the Conceptual Model

This chapter discussed main theories and models mostly employed in the literature to understand and predict consumer behavior in e-banking services adoption. The discussion highlighted the importance of integrating Relationship Marketing theory to enhance the understanding of consumer buying behavior in the area of financial services in general and e-banking services in particular.

Then, the chapter flowed to focus on the role *value* in explaining and predicting consumers' behavior in e-banking services adoption context. Due to the considerable role of value in creating competitive advantage and its expected role in explaining loyalty, it was necessary to discuss the sources (antecedents) and consequence (result) of perceived value. **Figure 3.7** displays the conceptual e-banking services value added model. In this model, the value mediates the relationship between a set of antecedents resulting from the interaction of a set of factors and loyalty to banks (consequence).

The discussion revealed that factors explaining the antecedents of value arise from the interaction among the characteristics of customers who are the current or potential users of services, services and their related products characteristics, the surrounding external environment, situational and contextual circumstances and service supplier practices. In discussing those factors, certain gaps in literature were highlighted:

- The relative importance of certain quality dimensions in shaping the perceived value of e-banking services in the Egyptian environment depends on the interaction between the customer, usage context and situation, the nature of service and the service provider. Situational and contextual factors could have an indirect or moderating role on emphasizing relative importance of certain quality dimensions in a given environment, to act as antecedents of e-banking services perceived value. Moreover, the difference between the definition and the range of e-banking services employed in this study and in researches originating from developed high-tech countries, makes importing a list of e-banking services quality dimensions inappropriate. This necessitates exploring quality dimensions

explaining the antecedents of perceived value of e-banking services from bank customers in the Egyptian environment.

- The external environment could act independently to affect e-banking services perceived value, or it could act indirectly through emphasizing certain quality dimensions shaping e-banking perceived value.
- Service supplier characteristics could act independently as an antecedent for the value of e-banking services, or it could emphasize certain quality requirements. However, there is no consensus on how they are involved. Moreover, there is no consensus on a list of characteristics or determinants reflecting the involvement of service supplier shaping e-banking services perceived value.

Previous mentioned gaps make it inappropriate to depend on the antecedents of value originating in western culture to explain the value of e-banking services in the Egyptian environment. This necessitated exploring the antecedents of e-banking services perceived value from bank customers, who could be current or potential users of these services in the Egyptian environment. Further, although, perceived value explained loyalty in brands and services, there is no consensus on the effect of e-banking services perceived value on strengthening customer loyalty towards banks. This dictated exploring the extent to which e-banking services can strengthen the relationship between customers and their banks.

However, improving the value of e-banking services is a dynamic process between both the demand and the supply sides of the service. While, this chapter addressed the role of perceived value in explaining customers' attitudes towards e-banking services, and discussed the factors explaining the antecedents of perceived value from customers' perspectives. The next chapter focuses on the supply side of e-banking services. It focuses on the requirements of creating and delivering value of e-banking services.

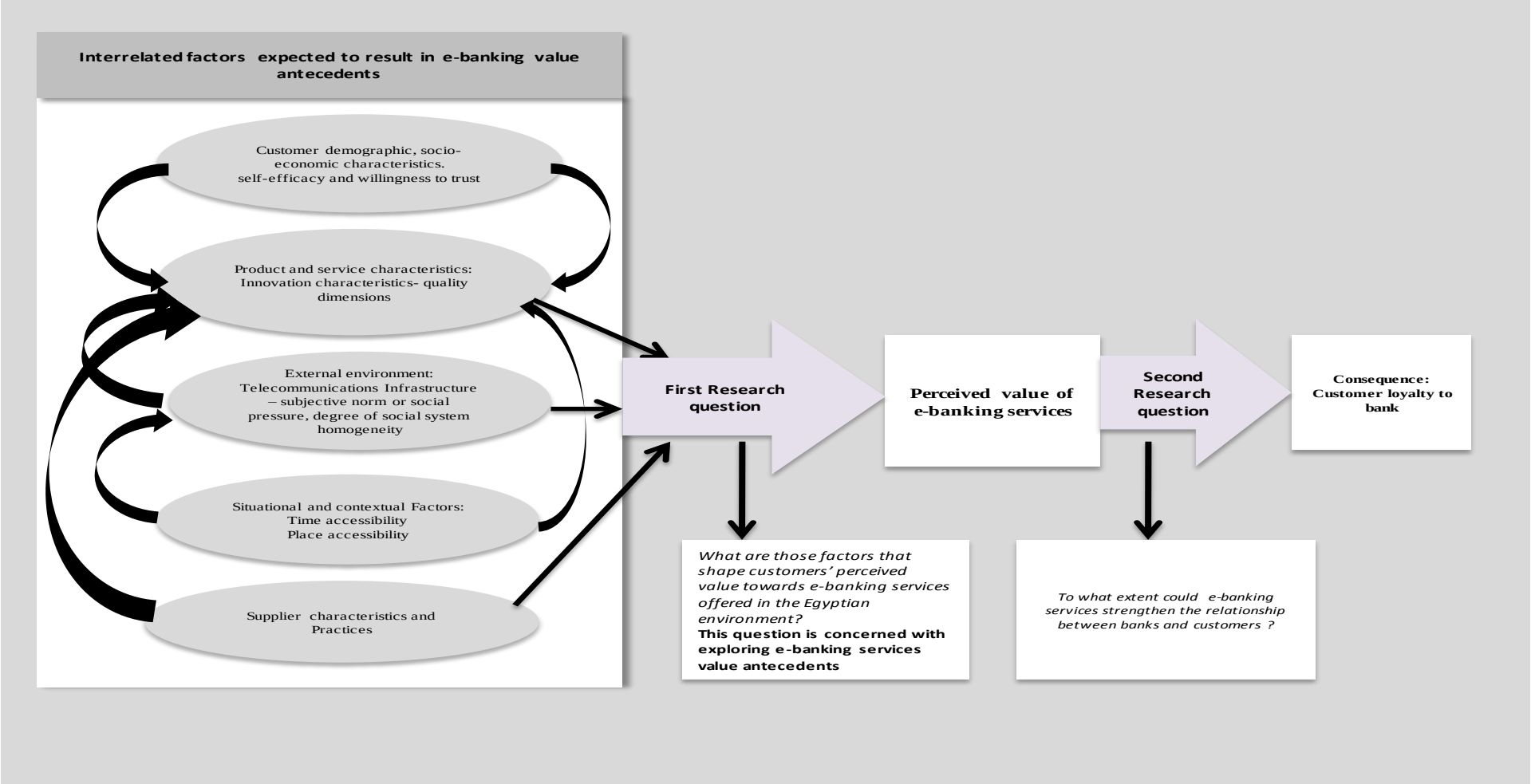

Figure 3.7: Conceptual e-banking services value-adding model

Chapter 4

Role of Customer Relationship Management (CRM) in Value Creation and Delivery

4.1 Introduction

Previous chapter was concerned with understanding what drives e-banking perceived value from consumer side perspective. This chapter is concerned with identifying requirements guiding suppliers towards creating and adding value to e-banking services. This is achieved through reviewing and investigating customer relationship management (CRM) literature, for being the practical interpretation of Relationship Marketing (RM) theory. Reviewing and investigating CRM literature is done for two main purposes. **First** is to establish the conceptual framework highlighting the main requirements for creating and delivery of value in e-banking services context. **Second** is to identify the knowledge gaps required to be addressed by the third research question. The third research question is concerned with exploring factors shaping the ability of banks to create and deliver the required value to e-banking services in the Egyptian environment. **Figure 4.1** summarizes areas included in the chapter.

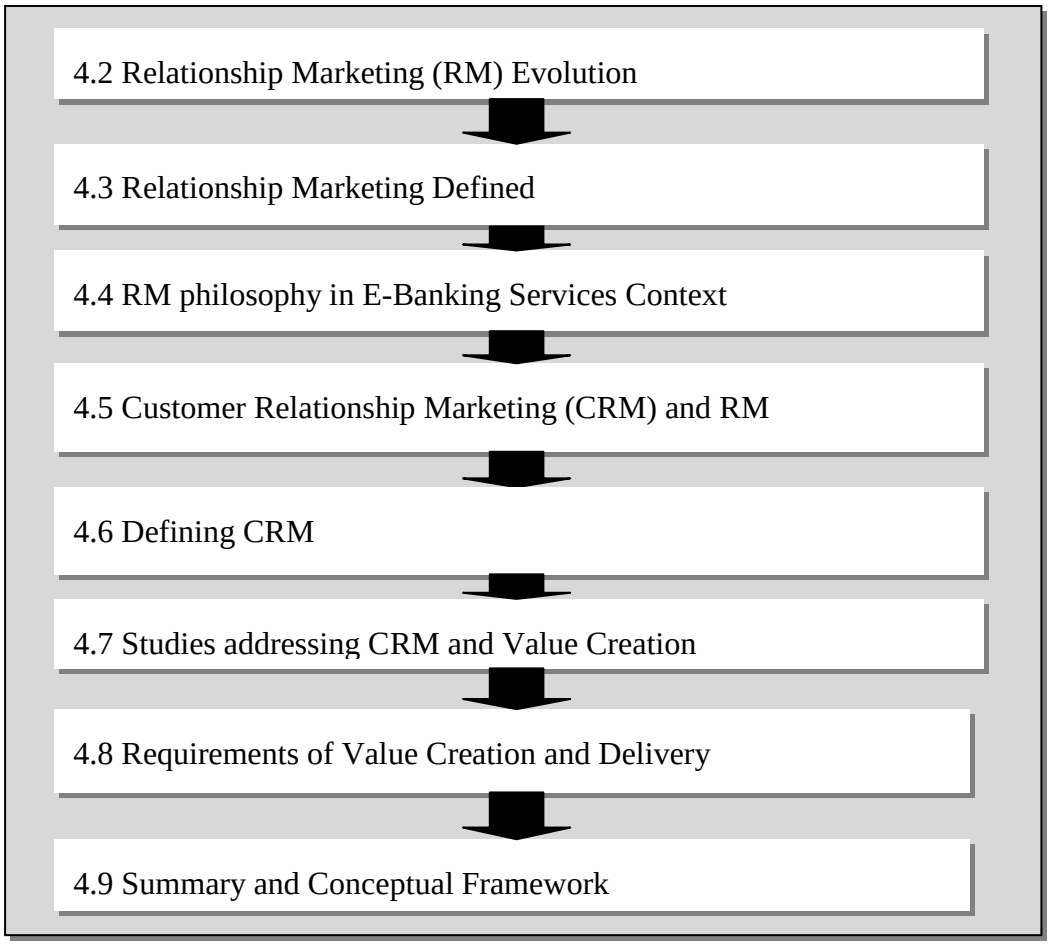

Figure 4.1: Structure of chapter 4

4.2 Relationship Marketing Evolution

This section overviews the forces driving the evolution of Relationship Marketing in business environment.

Relationship marketing (RM) emerged from a stream of research that proved retaining existing customers is more cost effective than acquiring new ones (Gronroos 1990: 5; Sheth and Parvatiyar 1995; Albinsson and Hansemark 2004; Brown 2000:61). Kale (2004) asserted that long term relationships that results in customers' loyalty are more profitable than short term relationships. Also, Wang *et al*. (2004: 174) emphasized the importance of building relationships with customers with the aim of increasing their loyalty, stating:

> *"Loyal customers contribute to the financial performance of the firm, as they emphasize a close relationship with a firm with lower price elasticity".*

The transfer from transactional marketing to relational marketing is driven by changes in business environment and technology advancements (O'Mally and Mitussis 2002). The need for applying relationship marketing philosophy increased for three main reasons. ***First*** is the expansion of markets by which the interaction and the emotional bonds between producers and their customers become fragile. Accordingly, relationship building based on personal knowledge and face-to-face contact becomes more difficult (Palmer 1997). Moreover, the usefulness of the 4Ps representing the core of the marketing theory, developed under the influence of microeconomic theory prevailed in the existence of monopolistic competition of the 1930s; need to be revisited under the emergence of new forces (Gronroos 1994).

Second is the increasing competition in all industries, particularly; financial services industry (Leal and Pereira 2003). A highly competitive environment facilitates copying of financial services features (Durkin and Howcroft 2003; Bick *et al*. 2004). This raises the need to retain existing customers by financial services industry, but does not undermine the importance of attracting new customers.

Third is the invasion of technology in the business. Technology changed the way business organizations manage relationships with their customers directly or indirectly. Technology had affected the internal operations of business, the features of services offered and the way they are offered to customers. It has resulted in the emergence of new forms of business such as 'e-commerce' and its applications in the financial

services industry known by ‘e-banking services’. E-banking services have been employed by most of financial services industry to hedge against severe competition and to strengthen relationship with their customers or to attract new customers.

This calls for applying relationship marketing philosophy and concepts to transfer the role of e-banking services from transactional-based services to relationship-based services strengthening the relationship between customers and banks in the Egyptian environment (Varki and Wong 2003).

However, applying RM in e-banking services context to retain bank customers requires suppliers to review and reallocate their resources, which is challenging. Success in overcoming these challenges depends on the suppliers’ internal operations and external environments.

4.3 Relationship Marketing Defined

Table 4.1 presents most popular definitions of Relationship Marketing in literature.

Table 4.1: Definitions of Relationship Marketing (RM)

Author	Relationship Marketing (RM) Definition
Gummesson (1997: 267)	“RM is marketing seen as relationships, networks and interaction, recognizing that marketing is embedded in the total management of the networks of the selling organization, the market and society”
Morgan and Hunt (1994:22)	“Those marketing activities directed toward establishing developing and maintaining successful relational exchanges”
Gronroos (1994: 9)	“ is to establish and maintain and enhance relationships with customers and other partners at a profit, so that the objectives of the parties involved are met. This is achieved by a mutual exchange and fulfilment of promises”.
Berry (1995: 236)	“Attracting, maintaining and in multi-service organizations enhancing customer relationships”
Christopher *et al.* (1991; 4)	“Relationship marketing is bringing together customer service, quality and marketing with a dual focus of getting and keeping customers”.
Ravald and Gronroos (1996: 19)	“The core of Relationship marketing is relations, a maintenance of relations between the company and the actors in its micro-environment .The idea is first and foremost to create customer loyalty, so that a stable mutually profitable and long term relationship is enhanced “
Ryals and Payne (2001:13)	“Relationship Marketing is a philosophy of strategically managing relationships with stakeholders and a strong focus on customer retention”
Camarero (2007: 409)	“In the context of customer relationships, relationship orientation could be defined as an organization engaged in proactively creating, developing and maintaining committed, interactive and profitable exchanges with selected customers over time”

Table 4.1 indicates that there is no single definition for relationship marketing, due to several reasons. ***First*** is the effect of culture on the way RM is defined and implemented Palmer (1997).

Second is due to the number of parties involved in the definition of RM. Berry (1995) viewed that RM involves merely relationship between customers and their organizations. However, Gummesson (1997) viewed that RM includes classic market relationships between the suppliers, customers, competitors or mega relationships to represent the relationship of the supplier at the macro level such as those with the government and mass media. While, nano relationships revolve around strengthening the relationships among different departments within the organization. Rosen and Surprenant (1998: 105) claimed that to achieve relationship marketing objectives, external marketing with its well known 4Ps, internal marketing and interactive marketing should be integrated. Also, Moller and Halinen (2000) argued that to enhance buyer-seller relationships, other parties should be included in the relationship.

The third reason is the scope of strategies, activities involved in RM. Although, RM focuses on retaining customers and work with different concepts than that of transactional marketing, some researchers argued that Relationship Marketing is an extension to transactional marketing and not completely separated from it (Brodie *et al*. 1997; Kandampully 1998; Christopher *et al.* 1991). Berry (1995) argued that strengthening the relationship and the bonds between customers and suppliers could be done through employing more than one marketing strategy. These strategies are mix between transactional marketing and relational marketing.

Fourth is the type of customer to whom relationship marketing concepts are directed. Moreover, it has been argued that relationship marketing should be directed at the most profitable customer segments (Leverin and Liljander 2006).

However, the criteria on which profitable customers are defined might differ among western and Egyptian banks and among Egyptian banks themselves. This could be due to the difference in economic and cultural environment in which the bank operates the objective and the risk attitude adopted by each bank.

For example, borrowers who were regarded as profitable customers might now turn to be unprofitable after the recent economic crisis and the restrictions placed on lending by many banks. Although, the definitions and the scope of RM differ among researchers, they agree on that attracting and retaining customers is the main goal of RM.

This study adopts a holistic definition of RM, provided by Ryals and Payne (2001: 13), stating:

> *"Relationship Marketing is a philosophy of strategically managing relationships with stakeholders and a strong focus on customer retention"*

This definition does not limit the implementation of relationship marketing to certain business functions. This implies the necessity of adopting relationship marketing philosophy or concepts in any business regardless of its size. Also this definition pointed to other relationships which have to be strengthening because it affects directly or indirectly relationship with customers.

While this section presented controversial issues in defining RM, next section is more concerned with the way RM concepts contribute to the value of e-banking services.

4.4 Applying RM in E-Banking Services Context

In the supplier and customer relationship context, continuing relationship should start from suppliers through their efforts showed to customers in the form of strategies and activities. These actions and strategies are reflected on the reputation and image and perceived quality on which new customers select their service supplier, while existing customers decide whether to remain or to switch.

It is argued that organizations should adopt the concept of commitment in their relationship with customers. By adopting long term commitment with their customers, as the main aim, service suppliers should review their strategies and rearrange their priorities and resources. Similarly, Gustafsson *et al*. (2005) argued that adopting commitment as a goal enables looking backward to organization resources, past actions and their consequences and accordingly develops a forward intention to improve the way resources are allocated to deliver higher valued services.

The extent to which e-banking services strengthen bank-customer relationship depends on the ability of the service provider to foster trust and show commitment to providing the required value attached to the use of these services. Benamati and Serva (2007: 165) argued that to get bank users switch to electronic banking services, the bank has to build a bridge of confidence (trust) in the mind of its customers. However, it is claimed that establishing trust required to supply the maximum possible value to e-banking services is more difficult, compared to face-to-face services (Durkin and Howcroft 2003).

This is because, the relational approach to marketing a transactional product requires complete commitment from the organization to reallocate and reorganize its resources to add value to this product or service (Gronroos 1997). This requires the bank to build a comprehensive strategy to integrate resources whether employees, technology or money, to attract customers and retain them in contact with e-banking channels.

Value creation requires reviewing the way resources are allocated and integrated, to reflect customers' needs (Simpson *et al*. 2001; Vargo *et al*. 2008). Gronroos (1997: 416) pointed to the role of service provider in adding value to services offering, stating:

> *"Customer-perceived value follows from a successful and customer oriented management of resources relative to the customer sacrifice".*

Improving the perceived value of the service offering, could be done by reviewing present strategies and employing those which increase bank customers' trust in the service provider and the new technological service offered. Value creation depends on efficiency and the effectiveness by which supplier uses the resource capabilities to improve delivery, relational process and all other internal activities that forms the value chain (Doney and Cannon 1997; Moller and Torronen 2003).

However, strategies of building trust, enforcing commitment and adding value to e-banking services might differ according to the customer's length of relationship with the bank (Doney and Cannon 1997). They might also differ according to the customers' degree of trust versus distrust to the technology. Similarly, Benamati and Serva (2007: 173) recommend putting the customer's level in trusting technology into consideration, when establishing strategy for building trust by stating;

> *"Banks should build trust but not ignore the powerful synergy of customer distrust. Distrust must be acknowledged and embraced".*

While, this section showed the importance of trust, commitment and perceive value to improve the role of e-banking services in strengthening the relationship between banks and their customers. The remainder of the chapter addresses the relationship between CRM and RM, and it establishes a working definition for CRM in e-banking services context. Moreover, the chapter identifies the challenges facing CRM implementation of to improve the value of e-banking services.

4.5 Customer Relationship Management (CRM) and RM

Although, RM differs from CRM, they are practically and empirically integrated. RM differs from CRM on the level of thinking. RM is philosophical and holistic in nature (Mitussis *et al*. 2006). Sin *et al*. (2005: 1266) pointed to the difference of level of thinking between RM and CRM, stating:

> *"Both CRM and relationship marketing concept can be viewed as a distinct organizational culture/value that puts the buyer-seller relationship at the centre of the firm's strategic or operational thinking"*

Moreover, Ryals and Payne (2001: 13) pointed to the difference between RM and CRM, stating:

> *"If relationship marketing is a philosophy and marketing orientation emphasizing customer retention, CRM involves management of the customer retention process"*

Also, RM differs from CRM on the scope of implementation. RM is viewed to involve more than a buyer and supplier relationship. Morgan and Hunt (1994) proposed four main partnerships in applying relationship marketing. They are: internal, buyer, lateral and supplier relationships. While, Moller and Halinen (2000) argued that RM involves network relationship and supplier-customer relationship. However, by definition and name, CRM is only concerned with maintaining and managing the relationship between suppliers and their customers, where other parties that might be considered important in implementing CRM are not involved explicitly (Gummesson 2004; Tuominen *et al*. 2004, Sin *et al*. 2005).

However, RM and CRM are integrated empirically. While, RM theory sets the concepts of building relationship between customer and supplier, CRM decides on the appropriate way to operationalize such concepts in the form of strategies and resources (Ryals and Payne 2001; Bull 2003; Sin *et al*. 2005; Mitussis *et al*. 2006). Gummeson (2002: 3) pointed to the roots of RM embedded in defining and implementing CRM, stating;

> *"It is the values and strategies of relationship marketing with particular emphasis on customer relationships-turned into practical application"*

Translating RM into meaningful tangible output recognized by customers, provides a foundation for a more realistic and applicable approach to translate concepts into recognizable activities and actions (Gummesson 1997; Fournier *et al*. 1998). To put RM philosophy into action, the service provider must translate concepts of trust,

commitment and value into actions realized by customers in the form of value added services to drive customer loyalty (Mitussis *et al*. 2006). However, such strategies and actions could differ according to the type of product and service, the characteristics of service provider and the characteristics of customers to whom the service is directed.

4.6 CRM Defined

There is no consensus on a single definition of CRM. It is argued that CRM might mean different things to different people because; CRM is involved in and cannot be separated from almost all functions in the organization (Winer 2001). CRM is defined according to the way it is practiced in the organization (Reinartz *et al*. 2004). The involvement of CRM in multiple research areas makes reaching a single definition for CRM, more difficult. Kevork and Verchopoulos (2009) argued that CRM is involved in multiple research areas (disciplines). Such areas include: e-CRM, e-business, information systems, supply-chain management, total quality management, customer loyalty, technology and database marketing.

However, extant CRM definitions could be classified in two main categories: IT-based definition and a strategy and approach for managing the whole organization. **Table 4.2** presents the definitions of CRM falling in two categories.

The first category considers CRM merely as technology (Ryals and Payne 2001; Zablah *et al*. 2004; Bull 2003). IT based definition viewed CRM at an operational level, and is concerned with the use of IT in business activities (Buttle 2009: 6).

While, the second group of definitions reflect the holistic nature of CRM. These definitions are broader in defining CRM. These set of definitions consider CRM as a business strategy, utilizing organization inputs (resources) to fulfill an output which is customer loyalty (Parvatiyar and Sheth 2001; Chen and Popovich 2003; Stefanou *et al*. 2003; Payne and Frow 2005; Richards and Jones 2008). Considering CRM as a business strategy links organizational resources to customer needs (Ngai 2005).

The broader view of CRM might be consistent with the nature of financial services. The nature of financial services in general and e-banking services in particular dictates involving employees, technology in the process of delivering value across all service encounters. Although, technology is essential in e-banking services applications, the need for people emphasizes the role of services supplier in building trust and showing commitment to customers through the bank branch.

Similarly, Carson *et al*. (2004) argued that managing relationship with customers with the aim of their retention requires organizations to focus on two dimensions of quality; technical and functional quality. The technical quality emphasizes the role of technology and functional quality focuses on people. Accordingly, for the purpose of this study, CRM is considered[22] as:

> **CRM is the strategy of managing and integrating people and technology to improve the process of creating and delivering the best possible accepted value of e-banking services, to improve their role in strengthening the relationship between bank and their customers**

The above definition considers the main aim of CRM strategy which is customer strengthening relationship with customers, agrees with other studies (see Yim *et al*. 2004; Wang *et al*. 2004; Eid 2007). The above definition views CRM as a holistic approach to manage value which agrees with that of Payne and Frow (2005).

The above definition emphasizes two key elements in services marketing; technology and people to the creation and delivery of value. The above adopted and adapted definition emphasizes the two dimensions of service quality; technical quality and functional quality in creating value. Porter (1985: 38) emphasized the role of technology and people in value creation and delivery, stating:

> *"Each value activity employs employees, management and technology to perform its activities"*

Technology is a key creator for value in all organizations (Porter 1985: 166). Technology affects customer experience in service encounters (Bitner *et al.* 2000). Mitussis *et al*. (2006: 581) emphasized the role of technology in affecting relationship continuity, stating:

> *"When technology facilitates interaction it can play a role in relationship building and maintenance"*

On the other hand, the role of people has been emphasized in CRM and services marketing literature (Bitner *et al*. 2000; Parasuraman and Grewal 2000; Bull 2003; Payne and Frow 2005; Sin *et al*. 2005; Osarekhoe and Bennani 2007; Becker *et al*. 2009). Employees are the corner stone of face-to-face service quality in banking sectors. They represent the front office from which customers' perceptions about the quality of service delivery is formed.

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[22] Developed by the researcher adapted from definition by Parvatiyar and Sheth (2001: 5) and Richards and Jones (2008: 121)

Table 4.2: Two main perspectives for defining CRM

Defining CRM	
IT-based definition	A strategy and way of managing the whole organization based definition
An ongoing Process that involves the development and leveraging of market intelligence for the purpose of building and maintaining a profit-maximizing portfolio of customer relationships . **Zablah *et al.* (2004: 281)** *CRM systems can be viewed as information systems aimed at enabling organizations to realize a customer focus.* ***Bull* (2003: 592)** *CRM seeks to provide a strategic bridge between IT and marketing strategies aimed at building long-term relationships and profitability.* **Ryals and Payne (2001: 3)**. *CRM systems are regarded as front-office systems since they are concerned with the relationship of the organization with its sources of revenue-its customers.* **Corner and Hinton (2002: 239)**	*CRM is the management approach that involves identifying, attracting, developing and maintaining successful customer relationships over time in order to increase retention of profitable customers.* **Stefanou *et al.* (2003: 618)** *The overall process of building and maintaining profitable customer relationships by delivering superior customer value and satisfaction.* **Kotler and Armstrong (2004: 16)** *CRM is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments .CRM unites the potential of relationship marketing strategies and IT to create a profitable, long relationship with customers and other key shareholders. CRM provides enhanced opportunities to use data and information to both understand customers and cocreate value with them. This requires a cross functional integration of processes, people, operations and marketing capabilities that is enabled through information technology and application.* **Payne and Frow (2005: 168)** *CRM implementations usually involve four specific ongoing activities: focusing on key customers, organizing around CRM, managing knowledge and incorporating CRM-based technology.* **Yim *et al.* (2004: 264-265)** *Customer relationship management is a comprehensive strategy and process of acquiring , retaining and partnering with selective customers to create superior value for the company and the customer. It involves the integration of marketing, sales, customer service and the supply chain functions of the organization to achieve greater efficiencies and effectiveness in delivering customer value.* **Parvatiyar and Seth (2001:5)** *CRM will be defined as a set of business activities supported by both technology and processes that is directed by strategy and is designed to improve business performance in an area of customer management.* **Richards and Jones (2008: 121-122)** *A comprehensive strategy and process that enables an organization to identify , acquire, retain and nurture profitable customers by building and maintaining long-term relationships with them.* **Sin *et al.* (2005: 1266)** *Using technology and human resources to understand the behaviour, values and attitudes of customers is the basis idea of CRM.* **Eid (2007: 1021)** *CRM goes beyond a customer focus. Not only does CRM build relationships and use systems to collect and analyze data but it also includes the integration of all these activities across the firm linking these activities to both and customer value extending this integration along the value chain and developing the capability of integrating these activities across the network of firms that collaborate to generate customer value, while creating shareholder value for the firm.* **Boulding *et al.* (2005:157)** *CRM can be defined as managerial efforts to manage business interactions with customers by combining business processes and technologies that seek to understand a company's customers.* **Kim *et al.* *(2003; 6)*** *CRM is the core business strategy that integrates process and functions and external networks to create and deliver value to targeted customers at a profit. It is grounded on high quality customer related data ad enables by information technology.* ***Buttle (2009: 15)***

4.7 Studies addressing CRM and Value

Figure 4.2 presents a pictorial classification of studies addressed *CRM* and those addressed the concept of *value*. By examining the literature related to *value* and *CRM*, the following knowledge gaps are identified:

- Although a considerable number of studies addressed CRM from an input (requirements) perspectives. There is no consensus among these studies on a list of success factors for CRM. This might be due to the difference in culture in which studies were initiated, and the difference in CRM definition adopted among scholars. Also, it could be due to the difference in methodology applied affected the way success factors were drawn.
- Although, researchers emphasized the role of CRM in adding value to services offering, none of extant researches addressed the factors facilitating the implementation of CRM to e-banking services in general and in the Egyptian environment in particular.
- Although, CRM proved to provide many economic benefits in developed countries (Buttle 2004:16). However, it is argued that, the success of CRM in improving the value of services offered to customers, depend to a large extent on the organizational internal operating environment (Plakoyiannaki and Tzokas 2002; Chen and Popovich 2003; Zablah *et al*. 2004; Becker *et al*. 2009). Moreover, Eid (2007:1021) claimed that the organization internal and external environment affects the extent to which CRM could be implemented to attain its objectives.
- Further, culture in developed countries that contributed in facilitating the successful implementation for CRM might differ from that in developing countries in general and from that prevailing in the Egypt in particular. Successful CRM implementation might be challangeable in developing countries, because of difference in the state of economic, social and technological development among countries, and the characteristics of organizations (Palmer 1995). Culture is defined as those values and norms shared by a group of people and are reflected on their way of living (Doney *et al*. 1998). Kogut and Singh (1988) argued that differences in national cultures are reflected on organizational and administrative practices, and hence, organizational ability to implement CRM successfully.

Thus, the successful implementation of CRM to create and deliver the value of e-banking services depends on the organization internal operating and external environments. This necessitated exploring factors reflecting internal operating and external environments and explaining the way they contribute to the process of e-banking services value creation and delivery. This was achieved by employing data triangulation through initiating semi-structured interviews and secondary data analysis.

Next section presents the requirements for creating and delivery of value in e-banking services, derived from CRM literature. The ability to meet these requirements shapes the value of e-banking services perceived by potential or current users.

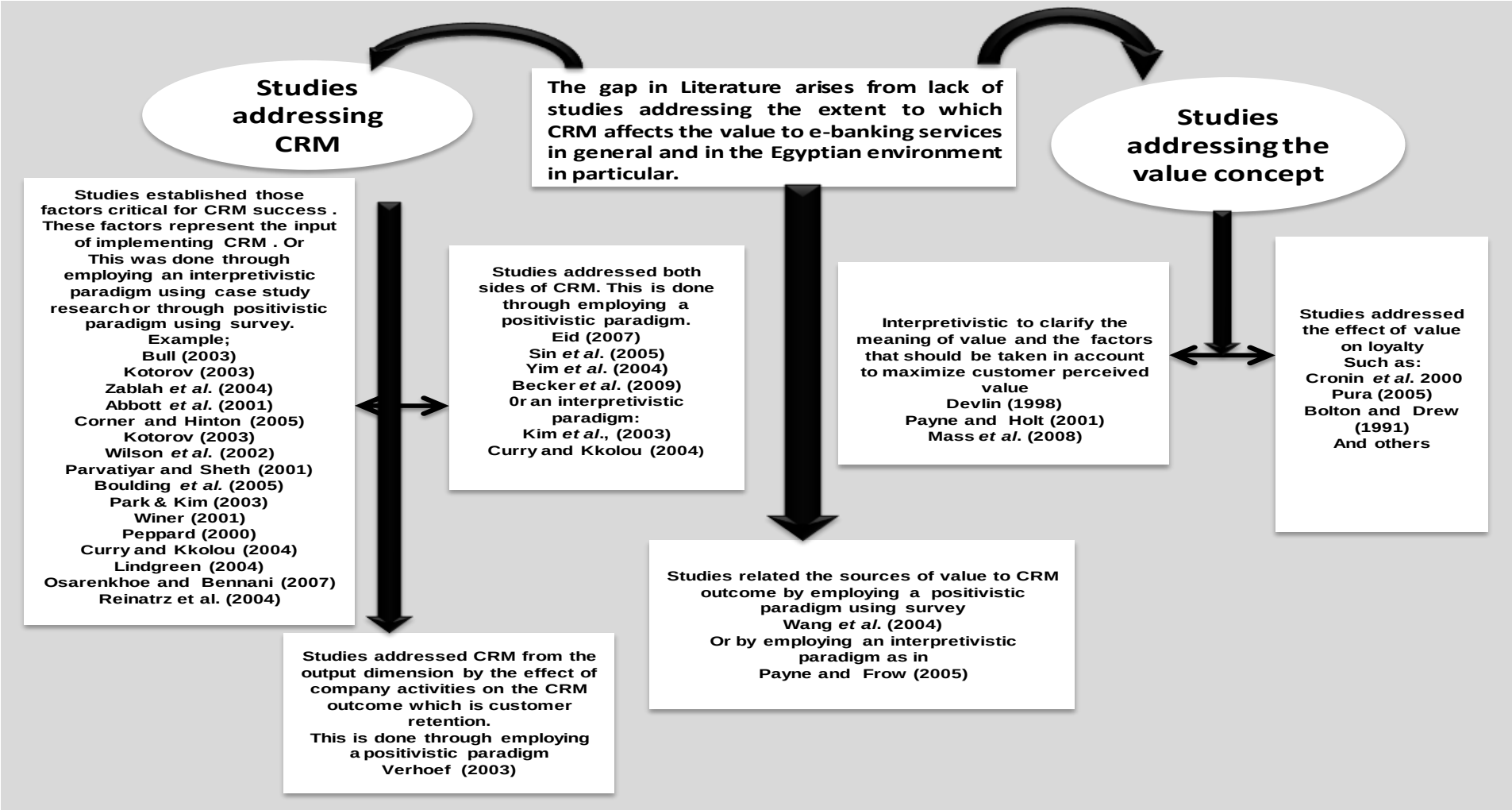


Figure 4.2: studies addressing CRM and value

4.8 Requirements of Value Creation and Delivery

Developing trust in both the bank and its e-banking services is achieved through improving the perceived value of e-banking services. However, e-banking services are not simply adding product in the portfolio of services offered by the bank to its customers. This is because; these services change the value of strategic resources inside the organization (Clemons and Row 1991). Adopting e-banking services resulted in the transformation of internal processes inside banks (Shah *et al*. 2007). Similarly, Zhu *et al*. (2004: 28) pointed to the changes brought by introducing e-business, stating:

> *"To improve profitability through e-business, financial firms need to offer hybrid (i.e., cross-boundary), personalized, and integrated financial services that are different from traditional services. This may require radical change in firms' business strategies, organization structure, and daily operations, which might be retarded by the structural inertia associated with firm size".*

Delivering the possible and acceptable value of e-banking services requires implementing a strategy to manage people and technology (CRM). As the range of e-banking services go beyond offering basic financial needs for customers, more commitment is placed on the bank's resources to deliver e-banking of acceptable value (Sullivan 2000). Payne and Frow (2005: 172) pointed to the role of CRM in value creation process, stating:

> *"The value creation process is a crucial component of CRM because it translates business and customer strategies into specific value proposition statements that demonstrate what value is to be delivered to customers, and thus, it explains what value is to be received by the organization, including the potential for cocreation."*

Successful CRM implementation shapes the value through value creation and delivery process. This is reflected on the tangible and intangible benefits customer gain from the relationship with the service provider or from using the service offering (Kim *et al*. 2003). The next section presents requirements for creating and delivery of value in e-banking services. They are: the extent of using technology, ability to manage changes, customer oriented culture, interdepartmental coordination and teamwork culture. The ability to manage these requirements shapes the value of e-banking services perceived by customers.

4.8.1 The extent of using information technology

In e-banking services context, information technology (IT) is a key player in shaping the value of e-banking services (Bitner *et al*. 2000; Shah *et al*. 2007; Parasuraman and Grewal 2000). Managing integrated channels depends on the bank's ability to deliver the same level of quality across those service encounters available (Payne and Frow 2005). Technology affects the quality of e-banking services through supporting ATMs or point of sale (POS) terminals, call centers and websites. Zhu *et al*. (2004: 27) emphasized the role of technology in maximizing the value of e-business, stating:

> *"Offering integrated services requires frictionless connections among heterogeneous databases and technologies serving various business processes"*

Also, information technology assists in handling customers' data and relating back offices with front offices where customers judge the quality of service encounter (Bitner *et al*. 2000; Chen and Popovich 2003). Analyzing customer data help in building complete customer profiles and matching these profiles with the type of e-banking services offered (Peppard 2000; Ryals and Payne 2001; Karimi *et al*. 2001; Xu *et al.* 2002; Mulligan and Gordon 2002; Park and Kim 2003; Chen and Popovich 2003; Yim et al. 2004; Zineldin 2005). Information technology could enable front office customers to supply up-to-date information that flows from back offices to customers about financial products (Berkley and Gupta 1995). It also improves the speed by which front line customers in call centers and bank branches could manage customer complaints.

However, the ability of banks to use IT to create and deliver the value of e-banking services, depend on the internal capabilities of the bank and the external environment in which the bank operates (Gima 1996; Veiga *et al*. 2001; Karimi *et al*. 2001; Kimber 2001; O'Malley and Mitusssis 2002; Zhu *et al*. 2004; Lippert and Volkmar 2007). This calls for exploring factors affecting the ability of banks to manage IT in the Egyptian environment.

4.8.2 Ability to manage changes

Adoption of an IT innovation tends to be associated with structural changes which affect areas of responsibility in the organization, as well as jobs description, in addition to work flow (Waldersee and Grifiths 2004). Accordingly, Becker *et al*. (2009) raised the issue of change management in integrating people and technology together, stating:

> *"Organizational implementations are necessary as they provide whatever changes are necessary to the organizational structure".*

Literature presented two main approaches for implementing change in organizations; the unilateral methods and the shared methods (Waldersee and Griffiths 2004). Advocates of the *unilateral approach* view that gaining people acceptance to change is not necessary at the beginning of introducing changes, justifying their opinion by that people always resist new situations. Accordingly, uncertainty avoidance accompanying structural changes could be minimized by clear procedures, well known strategies and well rules that flow from top to the bottom of organizational levels (Newman and Nollen 1996). However, organizational rules and procedures might hinder the progression of required changes through their negative effect on the relationship between employees and customers, hence affecting the quality of face-to-face service environment.

Those adopting the *shared approach* for introducing changes, view that changes should be motivated from values, attitudes and behavior of people. They argued that technical change rarely happens without social changes that affect relationships among employees in organizational settings. Reinartz *et al*. (2004) commented that introducing changes should be accepted by organizational members through the development of appropriate compensation schemes. While, Zablah *et al*. (2004: 290) viewed that the changes could be accelerated by announcing a voluntary employee involvement policy.

Thus, there is no one best approach for implementing change. The appropriate change strategy depends on the corporate dominating culture and the characteristics of employees, the context in which employees work, organizational related characteristics and external factors that might accelerate or hinder the change process. For example, Zhu *et al*. (2004: 28) pointed to the effect of financial institutions size on facilitating restructuring or change efforts. Desai and Sahu (2008) pointed out the effect of contextual factors on the successful alignment of people and technology, when

introducing the necessary changes. Pries and Stone (2004:354) emphasized the role of employees in change management. Mayer and Smith (2007) believed that employees' attitudes, emotions and organizational changes cannot be separated, but rather, they are one unit. While Zablah *et al*. (2004) believed in the role of employees' characteristics, such as education and age, in facilitating change. The disagreement on the factors affecting the successful initiatives of introducing changes, calls for exploring those factors from the Egyptian banks perspectives and explain their impact on the value of e-banking services.

4.8.3 Customer oriented culture

Customer centric (oriented) culture has been addressed as a prerequisite for promoting relationship marketing concepts and implementing CRM strategy (Gronroos 1990; Plakoyiannaki 2000; Tapp and Hughes 2004; Rashid *et al*. 2004; Sin *et al*. 2005; Fid 2007). It is a set of beliefs that places customers' interests in the first priority, while satisfying all other stakeholders simultaneously (Deshpande *et al*. 1993; Zablah *et al*. 2004; Camarero 2007).

There is a consensus on the relevancy of customer orientation culture for creating the necessary behavior, attitude and actions required for generating and delivering value to customers (Narver and Slater 1990; Jaworski and Kohli, 1993; Woodruff 1997; Avlonitis and Gounaris 1999; Conduit and Mavondo 2001; Burton 2010). Osarenkhoe and Bennani (2007: 148) asserted that customer centric philosophy is a core component for delivering value to customers, stating:

> *"Customer-centric philosophy implies that for long term profitability and survival, firms must be customer-focused, market-driven, global in scope, and flexible in their ability to deliver superior value to customers".*

Customer orientation culture should be translated to a set of acceptable behavior and code of values to be adopted by each organizational member (Plakoyiannaki 2002; Plakoyiannaki and Tzokas 2002). In e-banking services context, customer oriented culture is of considerable importance to minimize the risks and maximizes the benefits attached to the use of e-banking services. It is required in the behaviour of employees towards customers in the bank branch where trust and commitment are transferred to customers. Customer oriented culture should be emphasized by securing integrated reliable e-banking services which triggers maximum usefulness to their users. Customer

oriented culture could affect the range of e-banking services offered to customers, through shaping company's attitude towards risk (Avlonitis and Gounaris 1999).

Thus, customer oriented culture emphasises the role of technology, people and process designed in providing maximum support to customers in general and e-banking users in particular. However, it is argued that external business environment represented in the industry in which the firm operates facilitates customer oriented culture (Avlonitis and Gounaris 1999; Liu *et al.* 2002; Burton 2010).

While, other argued that customer oriented culture is affected by internal marketing (Gronroos 1990; Conduit and Mavondo 2001; Lanjananda and Patterson 2009). Internal marketing refers to the use of marketing philosophy and concepts to promote the value of customer centric culture among employees, by treating employees as customers and jobs as internal products (Naude *et al*. 2002; Ueno 2010; Ahmed *et al*. 2003). Ballantyne *et al*. (1995: 15) defined internal marketing as:

> *"It is any form of marketing within an organization which focuses staff attention on the internal activities that need to be changed in order to enhance external marketplace performance"*

Tansuhaj *et al*. (1988) argued that successful internal marketing impacts positively on customer satisfaction, loyalty and customers' perception of quality through its effect on employee behavior and external marketing activities. Similarly, Opoku *et al*. (2009) proved that internal marketing affects customer satisfaction through its effect on face-to- face service quality in the bank.

Internal marketing shapes the value of e-banking services through the behaviour of employees in service encounters, and its effect on promoting trust in mind of customers. However, the ability of the organization to promote internal marketing, hence customer orientation might depend on employees' demographic characteristics, employees' values, and the context in which they perform their jobs (Naude *et al*. 2003). Moreover, Zablah *et al*. (2004: 287) believed in the effect of compensation and reward systems on employees' behavior in building relationship with customers, an outcome of customer oriented culture. While others pointed to the role of employees' abilities, skills and overall service environment in the organization on promoting customer oriented culture (Tansuhaj *et al*. 1988; Hartline and Ferrel 1996; Henning-Thurau and Thurau 2003; Lanjananda and Patterson 2009).

This calls for exploring factors from the internal operating and external environments of banks that shape the internal marketing and customer oriented culture.

4.8.4 Interdepartmental coordination and teamwork culture

The role of cross functional coordination among the organizational departments is seen as a key requirement for successful CRM (O'Malley and Mitussis 2002; Bull 2003). Interdepartmental coordination and teamwork culture is seen as essential key players in high contact customer service environments (Yavas *et al.* 2003). Although, not explicitly highlighted in service quality models, teamwork culture and interdepartmental coordination intervenes implicitly to speed up the service recovery process, where front line employees need to contact each other, and to contact back office employees in other departments to get the problem solved. Moreover, the interdepartmental coordination could affect the quality and time of information reached to customers through the front office employees. Thus, teamwork culture and interdepartmental coordination facilitated by technology affects trust in the service provider, through the perceived quality at service encounters.

However, the ability to foster and promote teamwork culture and interdepartmental coordination depends on several factors. Some are related to the skills and attitudes of employees (Leana and Buren 1999). The quality of relationships among employees within the organization is considered as one of the main drivers for trustworthiness environment which encourages coordination and teamwork spirit (Bolino *et al*. 2002). Moreover, Jones and George (1998) pointed out the effect of the life experience of employee on his values and attitudes towards engaging in teamwork. While, Sin *et al.* (2005) argued that structural design of organization affects the inter-functional coordination and facilitates the teamwork culture.

The disagreement on factors shaping teamwork culture and interdepartmental coordination calls for exploring these factors from bank practitioners in the Egyptian environment.

Finally, although, CRM strategy is necessary for creating and delivery for the required value of e-banking services, the ability of banks to meet the CRM requirements for value creation and delivery, is bounded by the internal operating and external surrounding environments. This calls for exploring factors existing in those environments and understand how they shape the ability of banks to create and deliver the required value of e-banking services.

4.9 Summary and Conceptual Framework

This chapter examined CRM literature. Examining CRM literature was done for two main purposes. **The first** is to establish the conceptual framework highlighting the main requirements of e-banking services value creation. **The second** is to identify the gaps required to be addressed, by answering the third research question. **The third research question** is concerned with exploring the factors shaping the ability of banks to create and deliver the value of e-banking services in the Egyptian environment.

Figure 4.3 presents the conceptual requirements for creating and delivering the value of e-banking services. They are: the extent of using information technology, ability to manage changes, customer oriented culture, interdepartmental coordination and teamwork culture. Successful implementation for these requirements enhances CRM performance. However, the ability to meet these requirements depends on two main factors:

- The organizational internal operating environment (context)
- The external environment in which the organization operates.

Exploring those factors and explaining the extent to which they shape the creation and delivery of required value of e-banking services necessitates conducting semi-structured interviews with the practitioners in public and non-public banks in the Egyptian environment.

While this chapter contributed to addressing knowledge gaps required to be addressed by answering the third research question, the next chapter identifies the research paradigm and the research methods most appropriate to answer the three research questions.

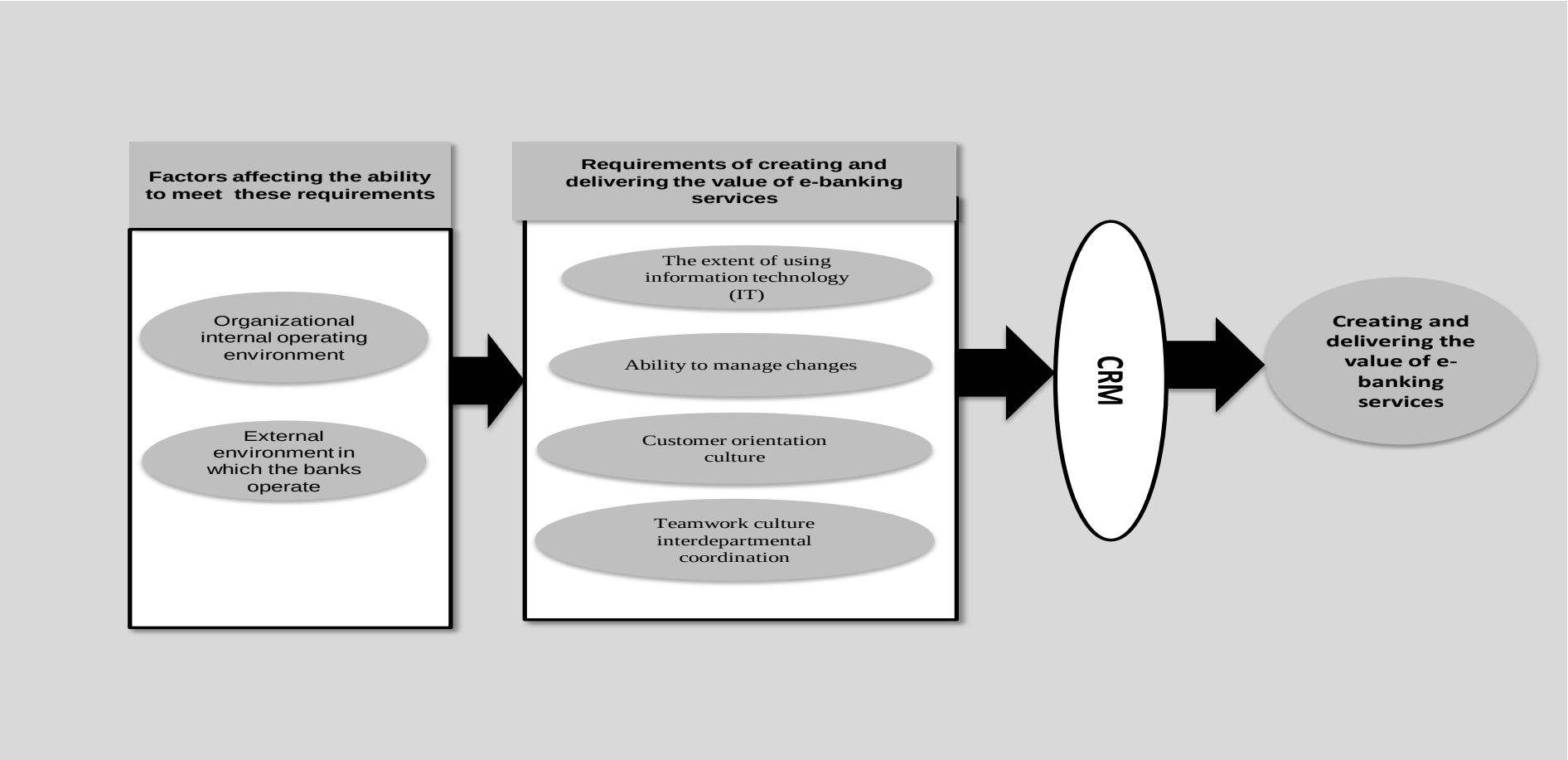
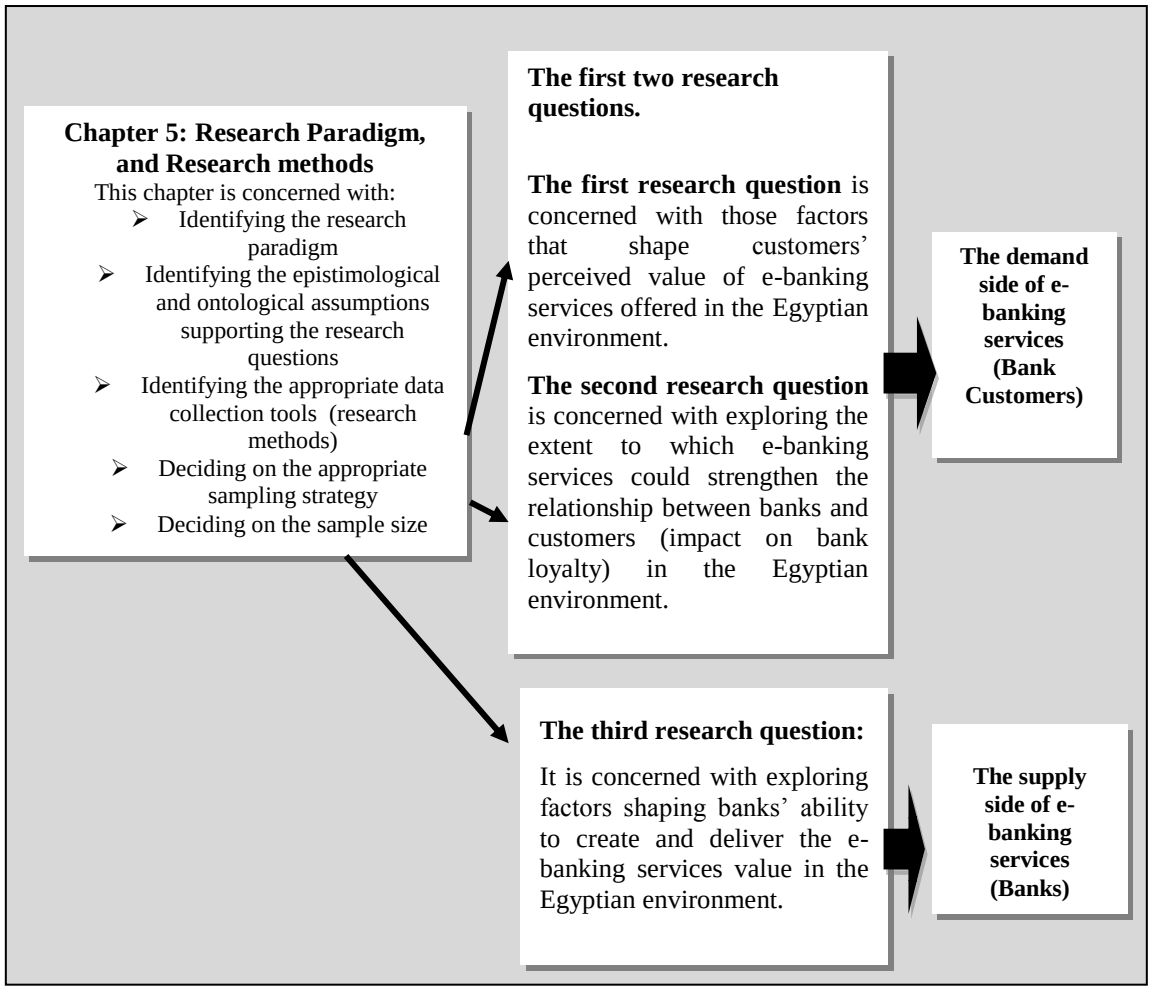


Figure 4.3: Conceptual requirements for creating and delivering the value of e-banking services

Part 2: Overview of Research Paradigm and Research Methods Employed

Part 2 is concerned with identifying the overall means by which the research questions will be answered. It determines the research paradigm. Also, it is concerned with identifying the research methods (data collection tools) employed to address the research gaps and to answer the first, second and third research questions. **Part 2** includes chapter 5. **Chapter 5** is concerned with determining the research paradigm most appropriate to address the research gaps. The chapter also highlighted the research methods adopted to answer the three research questions. This is done by discussing issues related to the data collection techniques employed, the sampling strategies implemented, and sample size.



Structure of Part 2

Chapter 5

Research Paradigm and Research Methods

5.1 Introduction

The objective of this chapter is to overview the methodology development and data collection methods employed to answer the research questions.

In this chapter, the research paradigm and research methods employed are derived from the theory informing the research questions, the literature, and the cultural context surrounding the research sample and the environment the research investigated. The main areas discussed in this chapter are highlighted in **Figure 5.1**

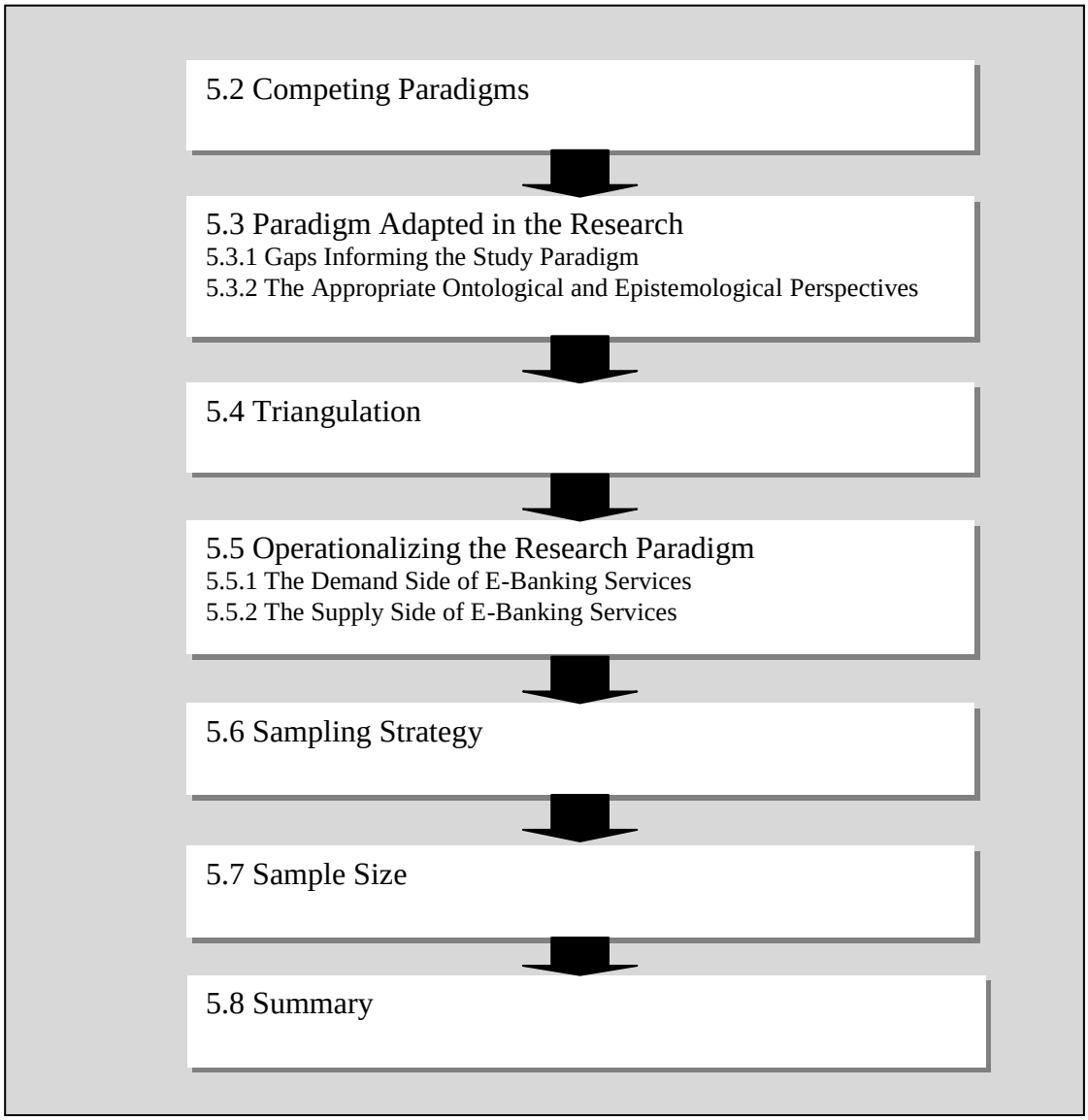


Figure 5.1: Structure of the methodology chapter

5.2 Competing Paradigms

Research methodology provides a general orientation adopted to address the research gaps and to answer the research questions (Collis and Hussey 2003). The research methodology involves deciding on the research paradigm and the way this paradigm is opertionalized. The research methodology conveys implications about the accepted nature of knowledge and the nature of reality through identifying the research paradigm (Karami *et al*. 2006).

Paradigm, a term which is interchanged sometimes with the term 'philosophy', demonstrates the assumptions and guides the way of approaching the required information (Creswell 2003: 6). Neuman (2006) refers to the paradigm as formed of basic assumptions informing the means employed to answer the research questions. Bryman and Bell (2003: 23) extended the definition of ***paradigm*** to include its effect on affect the research stages, stating: that it is:

> *"a cluster of beliefs and dictates which for the scientists in a particular discipline influence what should be studied, how research should be done and how results should be interpreted".*

Maxwell (2005:37) provided a clear definition for ***paradigm*** as:

> *"a set of very general philosophical assumptions about the nature of the world (ontology) and how we can understand it (epistemology)"*

Researchers distinguish between two extreme paradigms: the positivistic, usually associated with quantitative research, and the phenomenologist or interpretivism associated with qualitative research (Bryman and Bell 2003; Flick 2002; Collis and Hussey 2003; Remenyi *et al.* 1998). Qualitative research differs from quantitative research in two main aspects; the ontological and the epistemological stand of the researcher (Bryman and Bell 2003; Collis and Hussey 2003).

The ontological stand is concerned with the way reality is viewed (Morgan and Smircich 1980; Saunders *et al*. 2009:112). A research epistemological position is concerned with the relationship between the researcher and both the research objects and the world (Collis and Hussey 2003; Creswell and Clark 2007). The epistemological stance is of relative importance to the researcher because it decides whether the world being investigated is viewed as an open or closed system (Morgan and Smircich 1980).

However, both ontological and epistemological considerations are integrated together and reflected on the detection of gaps in literature supporting research questions, and the way these questions are worded (Bryman and Bell 2003: 21).

Within the positivist paradigm, the researcher adopts an objective stand, detached from those being researched so that he/she is not influenced by the phenomenon, nor influencing it (Remenyi *et al*. 1998:33). To achieve such objectivity, researchers employ tools that are believed to control extraneous variables from those variables under investigation. Under this paradigm, tools such as quantitative and survey methods are employed to represent the phenomenon under study in a set of reduced variables (Sale and Brazil 2004). Through controlling variables and employing representative and probability sampling strategy, reliability, which reflects the degree to which the study could be replicated, is expected to be achieved (Bryman 1984).

Despite the valuable role of positivistic researchers in the study of natural science, their role has been criticized in the area of social science due to their claimed objectivity. Collis and Hussey (2003: 52) argued that positivism does not differentiate between the study of human behaviour in social science and studying the effect of some variables on others in natural sciences. Viewing variables under study as completely isolated from their surrounding environment is believed to be inappropriate in social studies, where a deep insight is needed to understand the context surrounding the phenomenon under study (Remenyi *et al*. 1998: 33).

Qualitative researchers adopt a subjective view of those researched. Accordingly, they view people and organizations as social entities not just objects. They recognize that, controlling variables that affect individual behaviour or even group behaviour could be difficult in social settings (Remenyi *et al.* 1998: 99). From an epistemological perspective, unlike quantitative research, qualitative research depends on the quality of the researcher's communication with the field and its members as the basis for producing knowledge through the reflexivity of researchers on their actions and observations in the field, which affect the way data is interpreted (Flick 2002: 6; Miles and Huberman 1994: 8). Similarly, Gharui and Gronhaug (2005: 109) reported the difference between the two extreme paradigms, stating:

> *"The difference between qualitative and quantitative methods and approach is not just the question of quantification, but also a reflection of different perspectives on knowledge and research objectives".*

Mason (1996:36) asserted that qualitative researchers cannot be neutral, objective or detached from the knowledge and evidence they are generating, instead they should seek to understand their role in that process. Also, Flick (2002: 245) pointed to the reflexivity arising from the ontological and epistemological position of the qualitative researcher enabling in-depth involvement in the research. Similarly, Darlington and Scott (2002: 18) maintained the same opinion by stating:

> *"In qualitative inquiry, the researcher cannot be and should not be written out of the text, this relates to the development of the research question and it permeates all parts of the qualitative research process".*

Qualitative research use different research tools that depend mainly on the researcher partial or complete involvement or interaction with the world or the group being researched, by which internal validity could be achieved in the qualitative inquiry (Gerson and Horowitz 2002 : 199). Internal validity or credibility is what distinguishes qualitative research and increases its ability to provide in-depth answers to questions explaining human behaviour in social settings (Bryman and Bell 2003: 288). In this research, internal validity is maintained by justifying the reasons of sample selection, the basis of interview questions and finally reflecting on the context and the Egyptian environment to emphasize the relative importance and justify factors emerged from the analysis.

Although quantitative, positivistic research is accused of rigidity and failure to consider the context of the research, qualitative research is also criticized for subjectivity, and difficulty of tracing its transparency (Bryman and Bell 2003: 301).

While, positivistic and interpretivistic paradigms are the extremes, critical realism paradigm stands between those two opposing paradigms. Critical realism is an anti-positivist movement in the social science (Denzin and Lincoln 2000). Although, critical realists agree with positivists about the existence of reality out there independent of human perceptions, they hold the notion of contextual reality (Guba 1990; Sobh and Perry 2006). Thus, the context in which the phenomenon is investigated assists in validating the selected theories in explaining reality (Modell 2009). This means that critical realists focus on theory explanation rather than testing the predictive power of theories (Mingers 2000). However, critical realists adopt the same epistemological stance as the interprevists (Guba 1990; Guba and Lincoln 1994; Modell 2009; Syed *et al.* 2009). To validate theoretical explanations, researchers usually engage in in-depth

interviews with those being researched to understand the role of context in which generating such explanations (Modell 2009). This implies that, critical realist researcher's values are integrated to affect inquiry outcomes (Guba 1990; Guba and Lincoln 1994; Syed *et al*. 2009; Modell 2009).

The appropriate research paradigm is a function of several factors: the research topic, availability of a theoretical foundation that guides the research questions, the research objectives, and the way reality is viewed (Deshpande 1983; Patton 1990; Remenyi *et al*., 1998; Silverman 1998; Silverman 2005; Karami *et al*. 2006; Saunders *et al*. 2003:83).

The study purpose and objectives in terms of being deduction or induction plays a role in deciding the paradigm adopted. Deduction involves testing a well defined theory through hypotheses, usually attached to positivist, while induction is concerned with formulating theory from the data collected, attached to interprevists (Saunders *et al*. 1009: 129). However, research purpose or objectives are not the only determinants of the research paradigm (Punch 2005:235). This is because; in some cases it is difficult to set clear boundaries between induction and deduction (Perry 1998: 788-789). Bryman and Bell (2003:12) pointed to the same issue, stating:

> *"Just as deduction entails an element of induction, the induction process is likely to entail a modicum of deduction"*

The research questions in this study are based on well known and established theories, supported by conceptual framework (see **figure 5.2**). However, the holistic nature of theories supporting the research questions makes this study a mix between deduction and induction. Although, theories do exist and provide the researcher with prior knowledge, the interpretation of concepts supporting these theories is left to the context and the environment which the research investigates. This implies that this research is neither deductive nor inductive, but rather abductive. Abduction refers to the validation of theoretical explanations based on empirical observations resulting from the contingent circumstances (Danemark et al. 2002; Easton 2002). Similarly, Modell (2009: 213) pointed to the role of theory and empirical data in critical realism researches stating:

> *"Knowledge formation in critical realism is typically a matter of combining in-depth empirical investigations, preserving an interpretive element with abstact theorizing"*

The next section justifies the critical realism paradigm adopted throughout the research from theoretical and empirical perspectives.

5.3 Paradigm Adopted in the Research

The critical realism paradigm dominated the whole study. The logic behind employing this paradigm emerges from the theoretical background informing the research gaps.

I. Gaps Informing the Study Paradigm

Chapters 3 and 4 set out the theoretical basis that guided the research questions, and hence the purpose and the appropriate paradigm directing the study. **Figure 5.2** presents the conceptual framework supporting the research questions.

Reviewing the literature informing consumer buying behaviour (chapter 3) and focusing on the role of value in shaping consumer behavior towards e-banking services, the following gaps were highlighted:

1. Factors that explain the antecedents of value arise from the interaction among the characteristics of customers who are the current or potential users of services, culture, services and their related products characteristics, the surrounding external environment, situational and contextual circumstances and service supplier practices. The interaction among these factors makes value antecedents dynamic and unstable (Schutt 1996; Woodruff 1997; Khalifa 2004).
2. The relative importance of quality dimensions in shaping the perceived value depends on the interaction between the customer, usage context and situation, the nature of service and the service provider.
3. The external environment could act independently to affect e-banking services' perceived value, or it could act indirectly through emphasizing certain quality dimensions as antecedents to e-banking perceived value.
4. Service supplier practices and characteristics could act independently as antecedents for the value of e-banking services, or it could emphasize certain quality requirements. However, there is no consensus on how they are involved to explain the antecedents of e-banking services perceived value.

The above-mentioned gaps make it inappropriate to depend on the antecedents of value originating in western culture to explain the antecedents (requirements) of value of e-banking services in the Egyptian environment. This necessitated exploring the antecedents of e-banking services' perceived value from the view point of bank customers, who could be current or potential users of these services in the Egyptian environment, by answering the first research question.

5. Although there is evidence on the effect of perceived value on loyalty, few studies have addressed the effect of e-banking services on strengthening customer relationship. Thus, there was a gap to be filled in this area. This necessitated exploring the effect of perceived value of e-banking services on customer loyalty to banks, to answer the second research question.

Chapter 4 showed that creating and delivering the best possible value of e-banking services requires implementing a customer relationship management (CRM) strategy to manage people and technology to improve customers' experience with service delivery encounters. However, it is argued that the extent to which CRM contributes to creating and delivering the required value depends to a large extent on the organization's internal operating and external environments. This called for exploring the factors reflecting those two environments that affect banks' ability to implement CRM, hence creating and delivering the value of e-banking services in the Egyptian environment. This was done by conducting semi-structured interviews. This required answering the third research question.

Previously mentioned gaps and the conceptual framework presented in figure 5.2 are evidence of dependence on prior established theories and concepts. However, such theories need to be validated and/or expanded in the Egyptian context. This enables adding new dimensions to the theory which might have been overlooked in other contexts or even validating existing dimensions in the Egyptian context. The way in which data and theory are interrelated emphasizes the abductive and exploratory nature of this research. It is argued that critical realism (anti-positivist) paradigm is the most appropriate for abductive researches (Modell 2009). Accordingly, critical realism paradigm was adopted in this study.

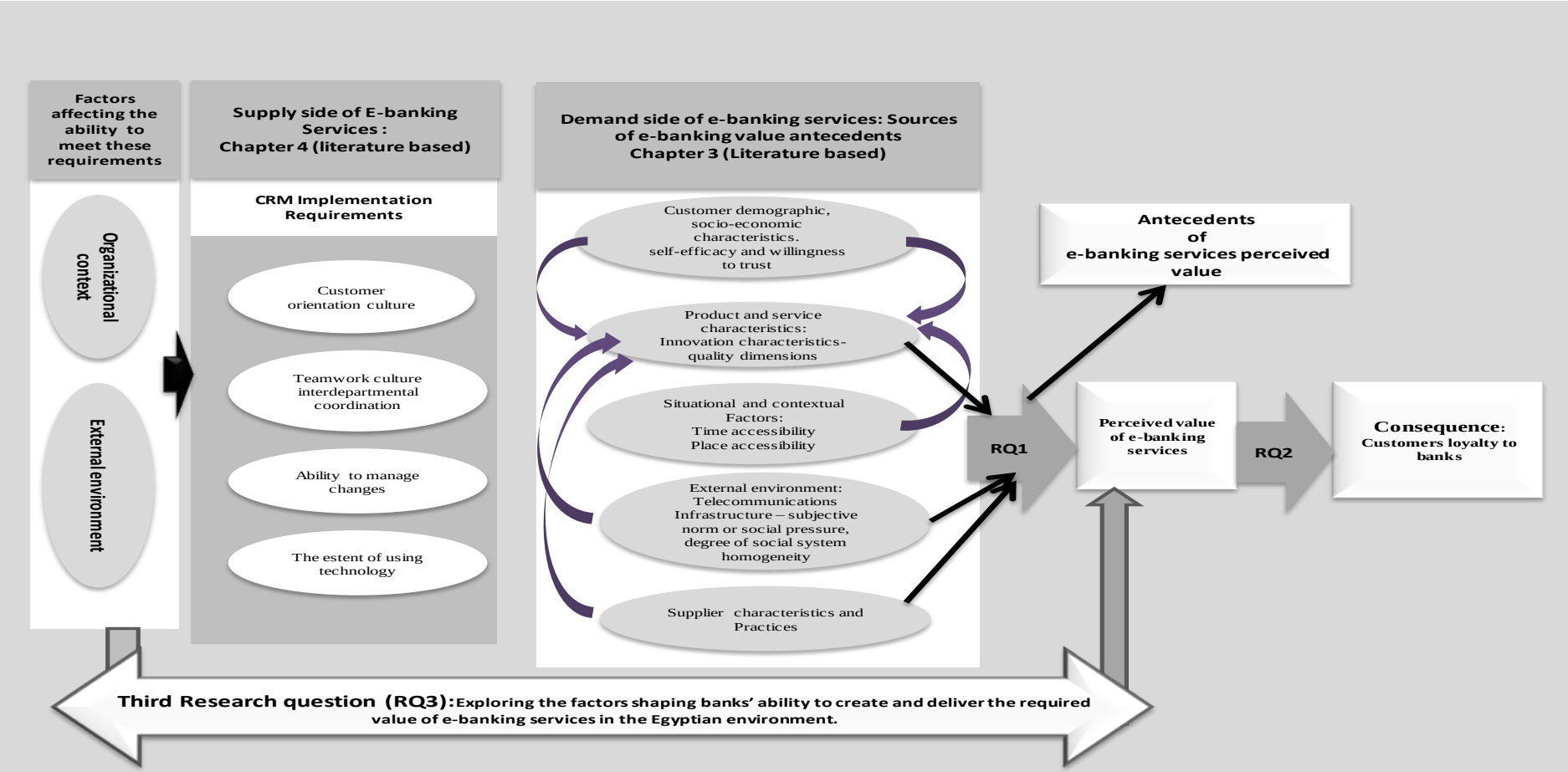


Figure 5.2: Conceptual framework and Research Questions

II. The Appropriate Ontological and Epistemological Perspectives

In business and management studies, it is mostly impossible to isolate customers from their environment or culture, and to isolate organizations from their external environment (Easton 2002). This argument is in the favor of employing **critical realism paradigm** to marketing studies, especially in those studies addressing the issue of perceived value, value creation and CRM. Accordingly, critical realism paradigm was adopted in this study.

This paradigm calls for considering social reality and contexts (Sobh and Perry 2006; Modell 2009). Under this paradigm, reality is always bounded by context. This implies that context could possibly affect research findings. It also dictates considering the supply and the demand sides of e-banking services as open systems, which means that human behaviour or social entities' (organizations') practices are always bounded by context. Researchers adopting this view of reality argue that the nature of relationships within the context is probabilistic. The nature of interaction between customers or organizations and the surrounding context creates and validates causal relationships. Hence, relationships are considered relative rather than fixed (Morgan and Smircich 1980: 496). This implies that context shapes study findings, making it difficult to generalize relationships and outcomes (Morgan and Smircich 1980; Easton 2002).

Critical realism paradigm suits this study because of the nature of perceived value, value creation and CRM. Customers' perceived value of e-banking services is affected by a set of interrelated factors. The relative importance of quality dimensions as antecedents of value depend on the context in which service is delivered and used. The way service supplier is involved in shaping the value of e-banking services depends on the context in which services are used.

This makes it difficult to generalize antecedents of e-banking services value from western culture to the Egyptian environment. Accordingly, an exploratory sequential strategy was the most appropriate to investigate the demand side of e-banking services and answering the first and second research questions. This was done by conducting in-depth interviews followed by survey. Thus, the researcher had to be involved through in-depth interviews ion and to explore those factors shaping the perceived value of e-

banking services in the Egyptian environment. The researcher's involvement in the research, contradicts with the epistemological view of the researcher in purely positivistic studies (Denzin 1978: 294).

Although, CRM goals are addressed in literature, the internal operating and external environments of banks form the context influencing CRM implementation, and shape value creation and delivery of e-banking services in the Egyptian environment. This justified the use of critical realism paradigm. Thus, to explore factors from both environments shaping banks' ability to create and deliver e-banking services value, the third research question was answered through employing data triangulation by conducting semi-structured interviews, and integrating secondary data into the analysis phase to support and validate the resulting factors.

5.4 Triangulation

Although researchers differ on how they implement triangulation, but they broadly agree on the definition of triangulation. Triangulation is interchanged with the terms *mixed methods* or *integration of methods.* Bryman and Bell (2003:291) defined triangulation as:

> *"Using more than one method or source of data in the study of social phenomena".*

Many researchers view triangulation as important to examine the same phenomenon from multiple perspectives, in order to enrich understanding by discovering new dimensions, or to overcome the weaknesses of using a single method to study a phenomenon (Patton 1990; Decrop 1999; Moran-Ellis *et al*. 2006; Bryman 2006). Denzin (1978) identified four types of triangulation; data triangulation involves using several data sources in a study. For example the researcher might depend on in-depth interviews as primary data and document analysis as a source of secondary data. Second, method triangulation is based on using a variety of methods such as combining in depth interviews as a qualitative technique and questionnaire as a quantitative technique. Third, investigator triangulation is achieved when many researchers interpret the same data to minimize bias (Decrop 1999). Fourth, theoretical triangulation is employed to prove the utility of data collected to the research questions, by utilizing multiple theories to interpret the data.

However, there is disagreement among writers on the validity of importing methods from different paradigms together under one paradigm (Moran-Ellis *et al*. 2006). In this respect, three main groups with different opinions could be considered.

The first group is against the idea of importing methods from different paradigms arguing that methods are linked to paradigms. This group views that the epistemological and ontological positions embedded in each paradigm cannot fit methods from other paradigm. Accordingly, it is difficult to use a research method, which is dominant in the interpretivistic paradigm to answer a question in a positivistic paradigm (Guba and Lincoln 1994: 105; Silverman 2005: 110). Similarly, Clark (1998: 1243) pointed to the difficulty of exchanging data collection methods between paradigms by stating:

> *"The philosophical aspect underpinning methods facilitate the categorization of research methods into paradigms"*.

The second group supports triangulation between methods or data under no clear ontological stance. This group is known by ***Pragmatists***. Pragmatists view no necessity to commit to a particular paradigm. Pragmatists do not see the world as an absolute unity; rather they encourage employing whatever research method is helpful; regardless to what paradigm it belongs to answer the research questions (Creswell 2003:12; Punch 1998). Pragmatists believe that questions about reality and laws informing the nature of the paradigm are not important, but rather, the contribution of the selected methods to answering the predetermined research questions should be given the first priority (Tashakori and Teddlie, 1998: 21; Marshall and Rossman 1999:138). Also, Miles and Huberman (1994:41) believed that the debate on the qualitative or quantitative paradigm is endless and it is more beneficial for the researcher to think about the mix of data collection tools that fits the research purpose. Punch (1998) maintained the same view, stating:

> *"There are many models for combining the two approaches and no one right way. How they are combined should be determined by the reasons for doing so, set against the circumstances, context, and practical aspects of the research"*.

The third group supports the use of triangulation in methods under a predetermined paradigm. This group take the view that research methods could move between paradigms. They call for thinking about a research paradigm, before deciding on the data collection methods (Bryman 1984: 87; Bryman and Bell 2003: 481; Morse 2003:196; Remenyi *et al.* 1998: 107).

In this study, research methods triangulation and data triangulation were employed under the critical realism paradigm.

Triangulation of data collection methods could be employed at different stages of the research process (Bryman 2006). Accordingly, Creswell (2003) established three strategies for triangulation, which are linked to the research purpose. **The first** is the sequential strategy, in which the methods of data collection are introduced one after the other, to either explain or to generalize and confirm the findings (Creswell and Clark 2007). If the qualitative methods follow the quantitative methods, in which the quantitative phase is emphasized, then the research adopts an explanatory sequential strategy. However, if the aim is to discover main themes, using qualitative data collection tools then generalizing them to a larger sample, then the research adopts an exploratory sequential strategy .**The second** is the concurrent strategy, in which both types of data collection methods are used simultaneously to understand the research problem. **The third** is the transformative strategy, which differs from the sequential strategy in the possibility of employing different data collection methods interchangeably and not necessarily sequentially (Creswell 2003:216).

In this exploratory abductive study, triangulation purpose and strategy and the way it was implemented to answer the research questions are discussed in the next section.

5.5 Operationalizing the Research Paradigm

This section discusses the logic behind employing triangulation on both the demand side and the supply side of e-banking services. **Figure 5.3** summarizes the research main paradigm and highlights the research methods (data collection tools) employed to answer the research question and fulfil the research objectives.

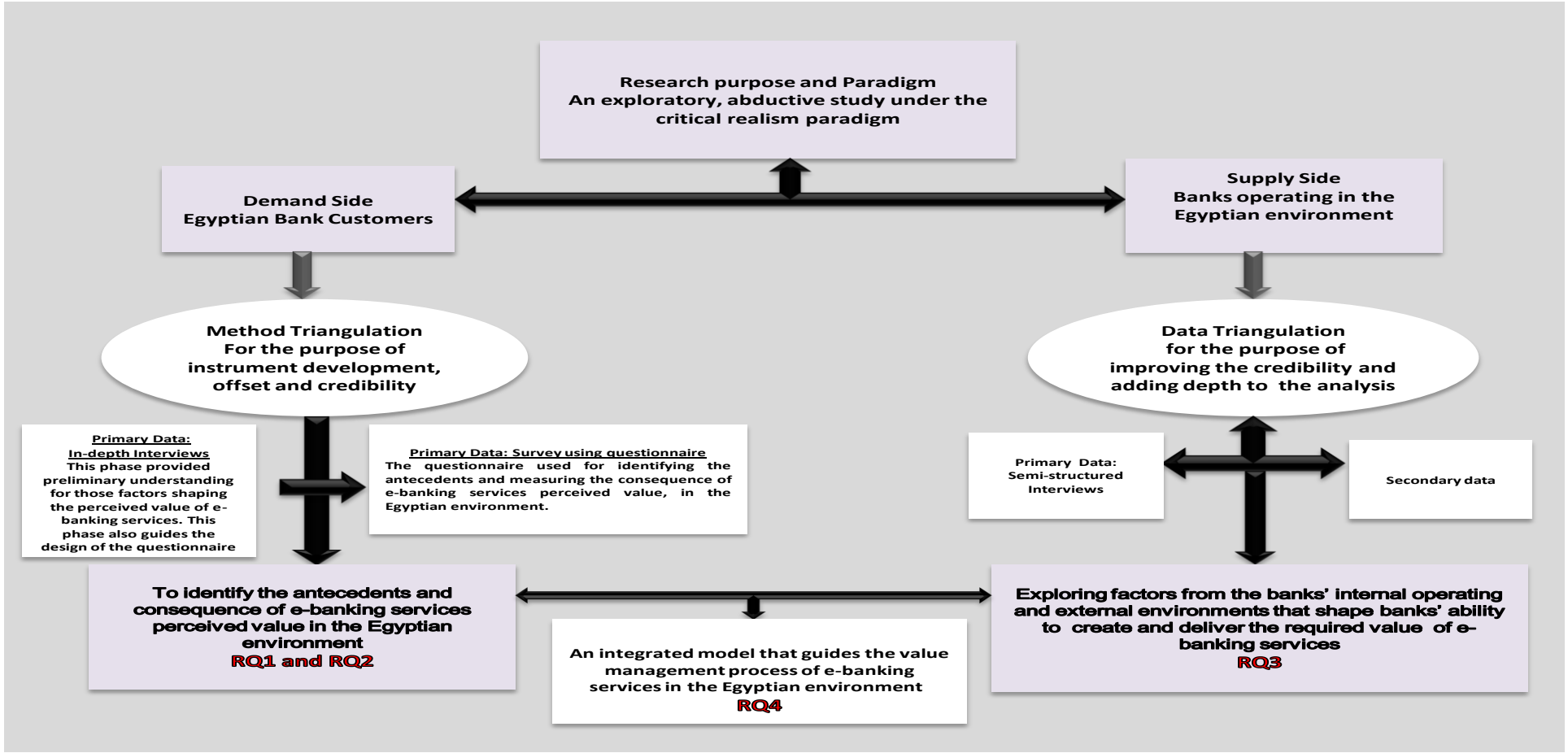


Figure 5.3: Research paradigm, data collection methods and research questions

5.5.1 The Demand Side of E-Banking Services

Customer value determination process starts with investigating the demand side, who are the users of the services (Woodruff and Gardial 1996; Woodruff 1997). To identify the antecedents and the consequences of e-banking services perceived value in the Egyptian environment, an exploratory sequential research was applied. This was achieved with interviews followed by a survey (questionnaire).

Advocates of employing the exploratory sequential strategy argue that the accurate description of any phenomenon depends on knowing its facts and dimensions through understanding how participants perceive those dimensions (Sandelowski 2000; Creswell *et al*. 2003: 227; Creswell and Clark 2007:75). Silverman (1998) argued that employing just quantitative research overlooks the cultural and social context that plays an important role in the emergence of new factors on which attitudes are measured.

Miles and Huberman (1994: 10) reported that the strength of qualitative data lies in its ability to convey rich and in-depth understanding of how people think or feel towards a specific action, object or situation in real life, stating:

> *"Qualitative data with their emphasis on people's lived experience are fundamentally well suited for locating the meanings people place on the events processes and structures of their lives".*

Others view that qualitative data collection should precede quantitative techniques when the aim is to design a measurement instrument reflecting clear constructs or items of special importance to the respondents, that might have been overlooked in the literature of other researchers (Caracelli and Greene 1993; Miles and Huberman 1994: 41; Black *et al* 2002). This improves the validity of the questionnaire. Also, this assists in reducing the non-sampling error resulting from non- response to some questions in the survey instrument and increases the content validity which could be achieved by searching for appropriate items to measure the concept placed in the questionnaire (Schutt 1996:96). It is argued that beliefs (cognitive dimension) forming attitudes should be discovered qualitatively using in depth interviews, while the intensity of the attitudes should be measured quantitatively using a questionnaire (Ajzen 1989: 243; Oppenheim 1992: 176-178).

To identify factors shaping the perceived value of e-banking services in the Egyptian environment, in-depth interviews followed by a questionnaire were conducted. This served two main purposes: **First,** was to gain an overall understanding of the factors affecting e-banking services perceived value in the Egyptian environment. **Second,** was to guide the questionnaire design in the subsequent quantitative phase. This questionnaire formed the basis for identifying the antecedents and measuring the consequences of e-banking services perceived value, in the Egyptian environment.

I. In-depth interviews (1st Phase)

Researching human beings and understanding their behaviour and how they act and react to various situations, what experiences they have gained and how this affects their attitudes, requires using specific qualitative research techniques which vary according to the extent of the researcher's involvement in the fieldwork of the research objects.

At one extreme, participant observation is characterized by the researcher's full immersion in the field of those being researched and it is most popular in organizational studies. Conversely, in-depth interviews allow the least degree of researcher involvement in the fieldwork, and are appropriate when the researcher seeks in-depth information on the interviewees' feelings, experiences and the meanings they attach to surrounding objects (Schutt 1996: 317). However, problems in managing in-depth interviews arise from the interviewer's epistemological and ontological position as a qualitative researcher, and the interviewer's communication skills. These problems affect the ability to manage the discussion, which results in variations in respondents' answers and amount of data revealed, affecting the richness and the validity of data revealed (Fielding and Thomas 2001:127).

Nevertheless, in-depth interview is seen as the most appropriate way to explore how an individual's needs and attitudes shape their behaviour or when it is required to understand how a decision concerning an issue is formed (Tull and Hawkins 1993: 443). Similarly, Woodruff (1997) asserted that in-depth interviews are well suited for discovering value dimensions through understanding the situational and contextual usage situations. Malhotra and Birks (2003: 183) viewed that one-to-one in depth interview is the best form of unstructured interview when the issue is related to the respondent's direct experience with a product, as this allows her/him to talk freely

without any social pressure resulting from the surrounding group, which might happen in the case of a focus group.

The term *in-depth interview* is used interchangeably with '*cognitive interviews*' (Willis 2005: 45; Tourangeau *et al.* 1988: 302). Cognitive interviews aim at providing information about how the respondents feel and think about the issue under study, without imposing any pre-determined set of factors to guide the interview questions (Punch 1998:178).

Beatty *et al*. (2004) suggested that cognitive in-depth interviews play a valuable role to validate the research, build a research problem and setting research questions. Moreover, Desimone and Le Floch (2004:6) pointed to the importance of cognitive interviews in exploring those concepts arising from a person's experiences by stating that:

> *"Cognitive interviews provide an excellent methodology for examining the extent to which tools of inquiry validly and reliably capture respondent's experiences".*

Based on the previous arguments, in-depth, one-to-one interview was the most appropriate research method to gain an overall understanding of the factors shaping e-banking services' perceived value in the Egyptian environment. The way these factors were interpreted and introduced to the readers was shaped by the researcher's set of values and background. This also assisted in linking factors together.

II. Survey (2nd Phase)

Although employing a questionnaire to measure attitudes within a survey strategy is categorized under the positivistic paradigm, it is argued that maintaining a detached position from those being researched does not guarantee objectivity (Patton 1990: 480). The role of the researcher in affecting the questionnaire is highlighted in exploratory sequential studies, where the dimensions and concepts measured in the questionnaire arise from the subjective analysis of interviews (Creswell and Clark 2007: 145). In investigating the demand side to stand on the antecedents of e-banking services, interviews affected the design of the questionnaire by determining the main codes (factors) on which scales were built.

In the survey phase, a transition was made from validating to generalizing factors shaping the value of e-banking services, derived from the interview phase. These factors are: face-to–face service quality, e-banking services' quality and the role of the external environment. These factors provided the basis for designing the questionnaire. The questionnaire was the basis for identifying the antecedents and measuring the consequence of e-banking services perceived value, in the Egyptian environment. In this way, it answered the first and second research questions.

5.5.2 The Supply Side of E-Banking Services

The financial institutions play an important role in the diffusion of e-banking services. In this study, investigating the supply side was a subsequent stage following the demand side. To gain insight into the banks internal operating and external environments and and explain how they support CRM implementation, hence ***the ability to create and deliver the value of e-banking value*** **(RQ3**), semi-structured interviews with practitioners in Egyptian banks, were conducted. To validate some of the factors revealed from interviews, secondary data was integrated at the stage of data analysis.

I. Semi-Structured Interviews

The interview method is well suited to those situations when it is difficult to observe the phenomenon under investigation (Denzin 1978:303). Interviews could be used in exploring phenomena and explaining their causes as well (Gillham 2005). Johnston *et al*. (1999) believed that the strength of interviews as a data collection tool lies in their focus on real settings and their ability to produce data by which causal inferences could be drawn.

Semi-structured interviews were the most appropriate to use in banks to explore those factors from the suppliers' internal operating and external environments, that shape the ability of banks to create and deliver the required value of e-banking services in the Egyptian environment. They were used for theoretical reasons and reasons related to the nature of the Egyptian banking industry.

Rational for employing semi-structured interviews

Relationship marketing theory (RM) and CRM literature highlighted the role of the supplier in creating and delivering value. However, to create and deliver the value of e-banking services, successful CRM implementation depends on both the internal operating and external environments of banks. To explore factors reflecting those environments and understand the extent to which these factors shape the creation and delivering of e-banking services value, semi-structured interviews were the most appropriate to use than questionnaire. This is because survey (questionnaire) limits the ability to probe participants for underlying explanations to explore context-specific factors (Sobh and Perry 2006; Modell 2009).

Another aspect that should be considered and might justify employing the use of semi-structured interviews is the number of banks operating in the Egyptian environment[23] which is less than 40, with two of them dominating approximately 50% to 60% of the market share. The limited number of banks and the low response rate associated with surveys, makes employing semi-structured interviews most appropriate to the exploratory nature of the study and the most appropriate to gain respondents' cooperation.

II. Secondary data (Documents and/or reports)

Cowton (1998: 424) defined secondary data as;

> *"data collected by others, not specifically for the research question at hand".*

Secondary data could take the form of organizational documents, reports which are prepared for the use inside the organization for a purpose other than that of the research. Despite the advantages associated with the use of such secondary data as being cost and time saving, the researcher should use it with caution because it suffers from drawbacks.

The problems associated with the use of organizational documents as one of the secondary sources, are related to the validity, reliability and credibility of such sources. Such problems are brought to the research, when the researcher is not involved in the preparation (writing and presentation) of the data in reports or archives.

[23] Central bank of Egypt 2009

The difference in the purpose of such data from the original purpose of the research questions raises the issue of its appropriateness to the theory development the researcher aims at (Cowton, 1998: 428). Nevertheless, although, secondary data suffers problems, it is considered as a valuable source of information in research (Johnston *et al*. 1999). The ability to provide information relevant to the research questions should be considered as a criterion on which the decision to use secondary data is made (Saunders *et al*. 2009: 273).

Secondary data on matters such as in the bank branch organizational structure, the number of cards offered by the banks, and number of branches restructures, were used to support and explain factors revealed by participants, to improve the depth of the analysis.

5.6 Sampling Strategy

Sampling could be based on probability or non-probability techniques. The selection of the appropriate technique depends on many factors. Some of these are related to the culture in which the researcher will initiate the research, the respondents, the time and the cost limitations (Faugier and Sargeant 1997). However, the most important factor could be the ontological and epistemological stance employed in the research and reflected in the research questions and the type of data sought (Ghauri and Gronhaug 2005: 155).

Researchers differ on the number of non-probability sampling strategies. For example, Miles and Huberman (1994: 28) identified 16 strategies, while Patton (1990: 171) identified 15 non-probability sampling strategies. However, purposive or sometimes known as criterion, convenience, snowball and theoretical sampling strategies are the most widely used.

To explore the factors shaping the perceived value of e-banking services in the Egyptian environment from the customers' perspectives, purposive/ criterion, convenience and snowball sampling were employed. Using a mix of non-probability sampling strategies enabled reaching a sufficient number of participants with the features that enabled them to provide the required data and who were willing to share their experiences with the researcher.

Moreover, Non-probability sampling could be modified within the data collection stage, allowing flexibility during the research process (Strauss and Corbin 1990).

5.6.1 The Interview Phase in the Demand Side

Generalizability was not the main goal in the exploratory phase, but rather, the main goal was to gain a preliminary understanding for those factors shaping the value of e-banking services in the Egyptian environment. It is argued that employing a purposive, criterion and convenience sampling enables understanding the phenomenon and gaining insights in exploratory (phases of) research (Remenyi *et al*. 1998: 194; Tam 2000: 112).

Due to the PhD time and fund limitations, convenience and purposive sampling was employed to ensure maximum cooperation with the researcher in the interview. Patten (2005:143) argued that *purposive/ criterion sampling* should be employed when there are a number of criteria on which the sample should be selected.

Criterion/purposive sampling involves selecting those key informants who are expected to possess some criteria to be included in the research to ensure quality of data (Miles and Huberman 1994: 28; Onwuegbuzie and Leech 2007: 114).

At the first phase (the interview phase), the selected sample was Egyptians, having bank accounts in Egypt and well educated. Further, they had to have been U.K. residents for one year, which enabled them to be U.K. bank account holders and users of some forms of e-banking services, while, simultaneously, not separated from the Egyptian environment, as a result of time effect.

Confronting relatively similar types of banking services in different cultures might help in developing a basis of comparison and reflecting on experiences related to issues such as satisfaction, perceived risk, relative advantage and others shaping customers' attitudes towards a service or product. Similarly, Mooy and Robben (2002) argued that direct experience with the product should increase customers' ability to process product related information. Similarly, Jamal and Naser (2002: 153) justified the idea of selecting multibank users in their exploratory study sample for enriching the analysis by providing new insights, stating;

> *"Holding accounts in more than one bank enables customers to make useful comparisons while evaluating bank service quality"*

5.6.2 The Survey Phase

Random sampling is preferred for those researchers aiming at generalizability (reliability), and reducing sampling error (Onwuegbuzie and Leech 2007: 110). However, employing random sampling might not guarantee removing bias totally from the selected sample (Bryman and Bell 2003: 93; Neuman 2006: 230). Bryman and Cramer (2005: 128) pointed to the effect of the low response rate associated with random sampling surveys on the sample bias, stating:

> *"However, when it is borne in mind that response rates to samples surveys are often quite low and are declining, the difference between research based on random samples and convenience samples in terms of their relative representativeness is not always as great as is sometimes implied"*

Further, employing probability sampling might not guarantee generalizing the results of the survey outside the Egyptian environment, for several reasons; the structure of the banking sector, the features and definition of e-banking services adopted in this study and the nature of the Egyptian environment and the profile of the sample.

In reality, achieving an acceptable response rate to perform the required statistical analysis is difficult in the case of probability sampling in the Egyptian culture. This implies that sampling strategy is affected by cultural context (Neuman 2006: 442). The absence of reliable data in developing countries justifies the use of non-probability sampling strategy (Malhotra *et al.* 1996: 26). Similarly, Bryman and Bell (2003: 94) pointed to the barriers preventing simple random sampling, stating:

> *"If the sampling frame is not comprehensive or is inaccurate or suffers from some other kind of similar deficiency, the sample that is derived cannot represent the population even if a random probability sampling method is employed"*

Bryman and Cramer (2005: 128) pointed to the dominance of non-probability sample among social scientists, stating:

> *"Although social scientists are well aware of the advantages of probability sampling procedures, a great deal of research does not drive from probability samples"*

Table 5.1 presents examples of those quantitative studies that employed non-probability sampling, for reasons related to the difficulty in developing a sampling frame, the need for securing acceptable response rate, and hence achieving reliability, or both.

Table 5.1: Reasons for employing non-probability sampling in previous studies

Reasons for employing Non-probability Sampling	Studies employed non-probability sampling
Securing high response rate	Dabholkar (1996); Dabholkar & Bagozzi (2002) Wan et al. (2005) Chen& Chang (2005) Patterson & Spreng (1997) George (2004) Suh & Han (2002) McDougall & Levesque (2000)
Due to the difficulty of obtaining a complete and accurate sampling frame for the target population	Parasuraman et al. (2005) Gounaris & Koritos (2008) Herington & Weaven (2007)
To ensure that the needed characteristics are there in the sample and to ensure high response rate	Ratten & Ratten (2007) Joseph et al. (1999) Swait & Sweeney (2000) Shemwell et al. (1998) Jaruwachirathanakul & Fink (2005) Cronin et al. (2000) Tam (2000: 167)

For issues related to ethical considerations, confidentiality, national security issues and the difficulty of accessing a reliable and complete sample frame on bank customers from which random sample could be drawn, and for the purpose of securing acceptable response rates, non-probability sampling was employed. Non-probability sampling was employed through a convenience, purposive and snowball strategy to access the target population. Snowball sampling involves reaching a great number of respondents, through an initial start with a small group of respondents who possess the required criteria to be included in the sample, then using them to reach others (Bryman and Bell 2003: 105). Sample members had to be Egyptian bank customers, aged 21 years and above, and university graduates as a minimum level of education.

5.6.3 The Supply Side

Punch (1998: 193) pointed out the possibility of purposeful selection for those to be interviewed because of convenient accessibility. However, Creswell (1998) added that there should be a logical justification of those to be interviewed. Similarly, Bryman (2004) commented that cases to be interviewed are selected because they are expected to explain sufficient context to help in answering the research questions. Perry (1998: 790) asserted that starting with prior literature supports and justifies the selection, by guiding the interview questions and identifying those key persons who should be interviewed.

Both, the conceptual framework and the antecedents of e-banking services value, justified the selection of persons to be interviewed. Interviewees at this stage were selected based on both purposive and logical basis based on conceptual framework, which are the core of theoretical sampling. Coyne (1997) claimed that theoretical sampling is a subset of purposive sampling. However, Neuman (2006: 224) considered theoretical sampling a separate strategy, stating that:

> *"In theoretical sampling, what is sampled (e.g., people, situations, events, time periods, etc.) comes from grounded theory".*

Interviewees were selected from both public and non-public multinational bank sectors to capture different viewpoints and present a realistic picture of those factors hindering or supporting e-banking services' value drivers. Interviewees selected from both types of banks represented front office (bank branch) and back office (head office) practitioners to answer interview questions concerning CRM implementation requirements.

5.7 Sample Size

There is no consensus on either the size of the sample, or the way the sample should be calculated. Neuman (2006: 241) argued that the size of the sample is a function of the type of analysis sought to be done with the data, the researcher's purpose and the degree of heterogeneity versus homogeneity of the population. Bryman and Bell (2003: 101) added that time and cost considerations are crucial determinants of sample size.

Thus, the next sections will present the basis on which sample size was identified, supported with different researchers' views, reliability and validity-related issues and finally, reality and ethical issues.

5.7.1 The Demand Side

I. The interview phase (1st Phase)

There is no consensus among researchers concerning the optimal sample size in qualitative research. Patton (1990: 184) commented that:

> *"There are no rules for sample size in qualitative inquiry".*

Guest *et al.* (2006) argued that the decision about the sample size depends on the saturation concept, meaning interviews stop when adding more interviewees will not add new information. Onwuegbuzie and Leech (2007: 116) claimed that in qualitative research, the sample size should not be too small to allow the researcher the opportunity to explore new ideas and perspectives, nor too large to prevent the researcher from conducting deep understanding. Thus, the main determinants of the appropriate sample size is the availability of time, funds, the objectives of conducting interviews and the quality of data obtained from the existing sample before deciding to increase it.

However, Guest *et al.* (2006) reported that in most cases saturation is achieved with the level of 12 interviews, after which adding any incremental interview will add little or nothing to data at hand. In their exploratory sequential study, Gerrard and Cunningham (2003) depended on a total of 16 customers, 8 of whom were using internet banking service while the rest were not using it yet.

Creswell (1998: 112) argued that in cases where a purposive/criterion sample is applied to collect in-depth data from those with experience of the phenomenon under investigation, 10 respondents are enough to reach theoretical saturation.

In an attempt to reach an appropriate sample size, it was intended to conduct 15 interviews. However, due to the researcher's relative inexperience with in-depth interviews as a data collection tool, which limited her ability to probe and get the participants involved in the discussion, the first 3-4 interviews were too short and shallow to provide the needed information. However, as the interviewing progressed, the duration of the interviews increased, so that the duration of the last 16 interviews was almost 40 minutes, which is viewed by Malhotra and Birks (2003:180) as an acceptable minimum time to conduct an in-depth interview.

Thus, to provide richness to the exploratory phase analysis and increase the validity of data revealed, by obtaining different views which might reveal new themes, the number of participants was increased gradually to 20. They were selected on two bases: possessing the required criteria to be included in the study and showing the willingness to cooperate and share their experience.

The sample size stopped at the 20th participant, because it was found that the issues raised were nearly the same in the last two or three interviews, which did not add new insights to the analysis. This was discovered after the immediate transcribing and the

reading of each interview. Hence, it was inferred that the incremental benefit from interviewing extra participants would not be worthwhile if compared to the time and effort spent during the interview.

II. The survey phase (2nd Phase)

In deciding on the appropriate sample size for conducting a survey, several factors such as non-response, which might result in insufficient data to perform the target data analysis, the data analysis employed, and the accessibility of the exact number of population have to be considered (Malhotra *et al.* 1996).

The target population were supposed to be those educated bank customers aged 21 and over. However, due to the absence of exact parameters required to employ mathematical calculations to determine the sample size, the rule of thumb was adopted in calculating the sample size.

To determine the appropriate sample size, two main sources were used. The first was built on an estimation of the percentage of population who were expected to have bank accounts. This expectation was drawn from the rate of poverty published in secondary sources[24] which is between 20% and 40%. This means that the proportion of the population who might be supposed to hold bank accounts (π) ranges from 50% to 40% of the whole Egyptian population (taking into consideration those 21 years old and above). By employing the sample size determination equation[25], taking into consideration a 95% confidence level, the level of desired precision d= ±0.05 and the z value equivalent to the confidence level= 1.96, the sample size (n) should range from 384 to 368.

$$n = \frac{\pi(1-\pi)z^2}{d^2}$$

Since, the exact number of the target population was unknown, and the exact number of bank customers was unknown as well, but estimated to be more than 10 million according to rough measures, the researcher employed the rule of thumb in calculating the sample size.

[24] http://www.icsw.org/copenhagen_implementation/copenhagen_papers/paper2/egypt.htm#poverty

[25] Guided by the equation provided by Malhotra and Birks (2003: 389)

Accordingly, the guidelines provided by Neuman (2006: 242), Sekaran (2000; 295) and Saunders *et al*. (2009: 219), were employed to estimate the sample size. Hence, the range of the sample size[26] should be between 1173 and 384 cases. However, Bryman and Bell (2003: 101) argued that a sample size above 1000 has no considerable effect on precision, stating that:

> *"After a certain point, often in the region of 1000, the sharp increases in precision become less pronounced"*

This means that incremental precision is increasing at decreasing rates above the level of 1000 sample size. Due to the low response rate associated with questionnaires in general and the self-administered questionnaire in particular (even if convenience sampling is employed), a sample size of 1000 was supposed to secure an acceptable response rate sufficient to run multivariate statistical techniques, with an acceptable level of precision.

Using a sample size of 1000 is consistent with previous studies in the same area or in related areas of research. For example, Kaynak and Harker (2001) used a sample size of 673 households in a Turkish city. In a study to measure the effect of bank service quality on customers' perceived risk, Chen and Chang (2005) used a sample size of 900 customers of 30 commercial banks' services in Taiwan. Hsu and Chiu (2004) used a sample size of 800 information systems managers in the top 100 companies in Taiwan.

Other researchers have used smaller samples. For example, Pikkarainen *et al.* (2004) employed a sample of 268 to represent the study population. Joseph *et al.* (1999) carried out a survey on a sample size of 440 as representative of the study target population. Also, to measure the factors affecting bank selection in the Swedish financial market, a sample size of 400 was employed to represent all banking customers in Zineldin (1996). Wang *et al.* (2003) conducted a survey with 154 respondents through the telephone to measure the factors affecting customer acceptance of internet banking, and with a response rate of 80%, a sophisticated multivariate statistical technique, was used to test the established conceptual model.

Although a large sample size might guarantee representativeness to some extent, and hence, reliability of results, it might not be enough to ensure the required response rate

[26] The maximum sample size according to Neuman (2006; 242) is 1173, and according to Sekaran (2000; 295) and Saunders *et al*. (2009) is 384.

to carry out the intended multivariate statistical technique. The response rate is a function of two interrelated factors. The first is the sampling strategy employed. The second is the way the questionnaire is designed and delivered to the target sample which is discussed in chapter 6.

5.7.2 The Supply Side

Patton (1990:185) argued that the richness of data resulting from interviewees determines the number of interviews to conduct. Two main factors determined the number of interviews with the bank: the amount of data required to answer the interview questions and answer the main research question, and the cooperation of interviewees. Based on those two factors a decision was made about either the need for accessing more interviewees or to stop for reasons of theoretical saturation.

To be able to capture different perspectives and build a relatively complete picture of the effect of internal operating and external surrounding environments on the ability of banks to create and deliver the value of e-banking services, semi-structured interviews were conducted with bank practitioners at different managerial levels, from two public and two non-public, multinational banks. Fifteen interviews were conducted with bank practitioners in both banks. Most of the interviews, eleven interviews, were done at the branch level, where the interactions between customer service and bank customers take place and the service environment is being judged (Berkley and Gupta 1995; Hartline and Ferrel 1996). Three interviews were conducted at higher managerial levels, with those working in the back-office involved in the decisions related to the range and design of e-banking services offered. However, one interview was conducted with a manager responsible for the development of branches in a public bank.

There was no need to increase the number of interviews at the branch level beyond eleven, as similar issues were raised among the interviewees, which was an indication of theoretical saturation. However, the number of interviews at higher managerial level was restricted by the time of respondents and their willingness to cooperate with the researcher.

5.8 Summary

This chapter presented an overview of the research methodology, beginning by presenting assumptions underlying the two opposing paradigms: the positivistic and the interpretivistic paradigms. Moreover, the chapter went on discussing the ontological and epistemological stance of the critical realism paradigm, which stands between the two opposing paradigms.

The chapter demonstrated that the critical realism paradigm was the most appropriate to address the research questions and fill in the knowledge gaps captured through the literature review. Under this paradigm both the supply and the demand sides of e-banking services were considered as open systems, whose actions and practices are bounded by contextual factors arising from the interaction between internal and external forces. These factors made it difficult to generalize the findings of other research to the demand and supply sides of e-banking services in the Egyptian environment.

The chapter demonstrated that method triangulation and data triangulation were the most appropriate to address the knowledge gaps and answer the research questions related to the demand and the supply sides of e-banking services, respectively. Then, the chapter provided the rational for using non-probability sampling strategy throughout the research to answer the research questions on both the demand and the supply sides of e-banking services.

Part 3 is concerned with presenting the methodology and the findings of searching the demand and the supply sides of e-banking services. The next chapter presents findings from the first phase of investigating the demand side of e-banking services.

Part 3: Data Analysis, Findings and Answers to the Research Questions

Part 3 is concerned with presenting the findings and the stages employed in data analysis to verify the research findings and validate answers to the research questions. Part 3 is composed of seven chapters.

Chapters 6, 7, 8, 9 and **10** are concerned with analysing, presenting and discussing findings revealed from searching the demand side of e-banking services. **Chapters 7** and **8** are concerned with discussing the methodology employed to answer the questions related to the demand side of e-banking services. **Chapter 6, 9 and 10** are concerned with presenting the findings of the two stages used to investigate the demand side of the e-banking services. **Chapter 11** is concerned with analyzing and presenting findings revealed from searching the supply side of e-banking services. **Chapter 12** is concerned with developing an integrated model by bringing findings from the supply and the demand sides together in one model. It is also concerned with identifying research limitations and area of further research.

Chapter 6: This chapter presents factors shaping the perceived value of e-banking services in the Egyptian environment. These factors results from analyzing and coding data revealed from in-depth interviews with Egyptian bank customers. These factors provide a preliminary understanding of consumer behaviour towards e-banking services in the Egyptian environment. Also, these factors provide the basis for designing the questionnaire in the subsequent quantitative phase.

Chapter 7: It overviews the stages employed in designing the questionnaire used to answer the first and second research questions, concerning the demand side of e-banking services.

Chapter 8: It is concerned with illustrating and justifying the statistical techniques employed to answer the first and second research questions concerned with the demand side of e-banking services.

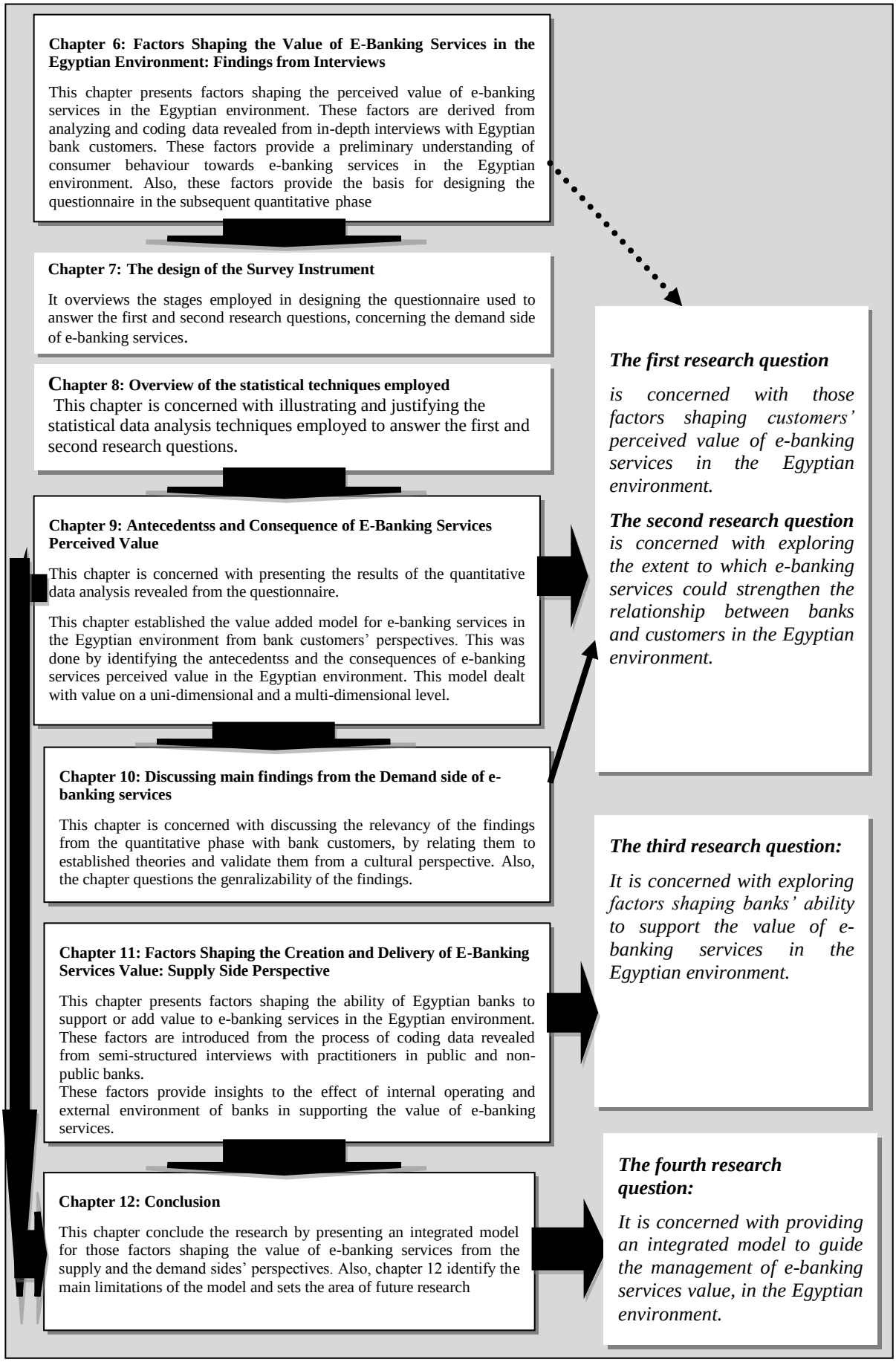
Chapter 9: This chapter is concerned with presenting the results of the quantitative data analysis revealed from the questionnaire. This chapter established the final value added model of e-banking services in the Egyptian environment from bank customers' perspectives. This was done by identifying the antecedentss and the consequences of e-banking services perceived value in the Egyptian environment. This model dealt with value on a uni-dimensional and a multi-dimensional level.

Chapter 10: This chapter is concerned with discussing the relevancy of the findings by relating them to established theories and validating them from a cultural perspective. Also, the chapter questions the generalizability of the findings and draws main implications from the findings.

Chapter 11: This chapter presents factors shaping the ability of Egyptian banks to support or add value to e-banking services in the Egyptian environment. These factors are introduced from the process of coding data revealed from semi-structured interviews with practitioners in public and non-public banks. These factors provide insights to the effect of internal operating and external environment of banks in supporting the value of e-banking services

Chapter 12: This chapter concludes the research by presenting an integrated model for managing the value of e-banking services in the Egyptian environment. Also, chapter 12 identifies the main limitations of the study and the model established and suggests areas of further research.

The following figure summarizes the main aim of the chapters in this part and the way each chapter contributes to answer research questions.



Structure of Part 3

Chapter 6

Factors Shaping the Value of E-Banking Services: Findings from Interviews with the Demand Side

6.1 Introduction

This chapter presents factors shaping the perceived value of e-banking services in the Egyptian environment. These factors are introduced from analyzing and coding data revealed from in-depth interviews with Egyptian bank customers.

These factors provide a preliminary understanding of consumer behaviour towards e-banking services in the Egyptian environment. Also, these factors provide the basis for designing the questionnaire in the subsequent quantitative phase. Main points to be discussed are depicted in **figure 6.1**.

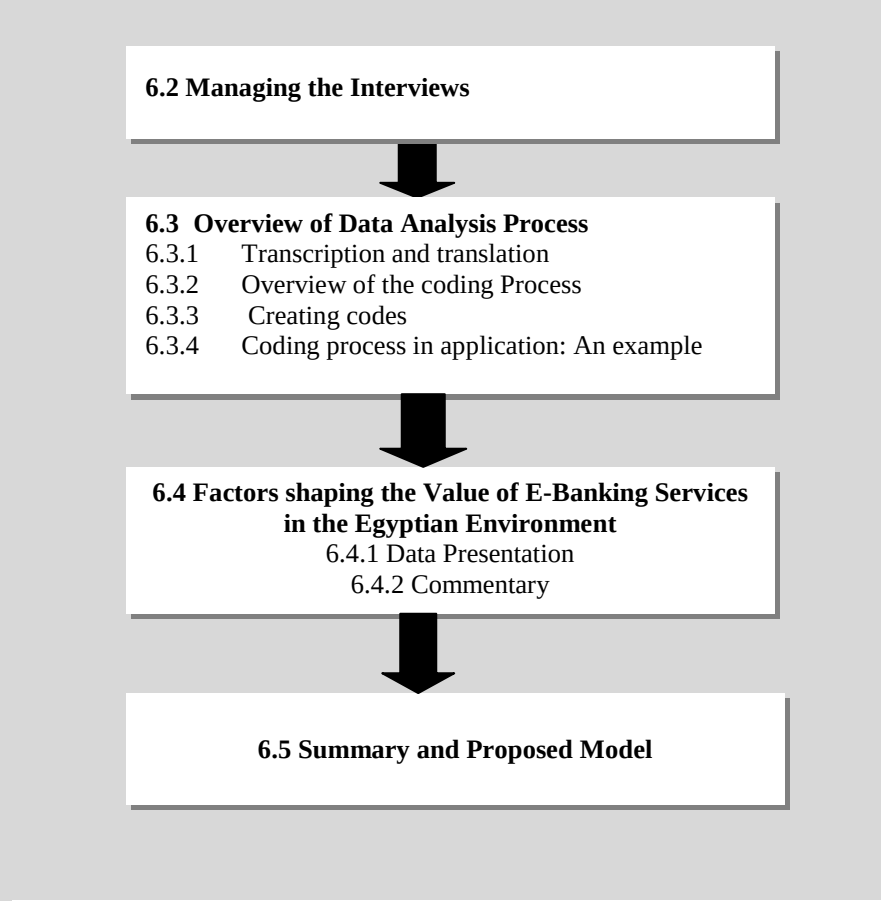


Figure 6.1: Structure of chapter 6

6.2 Managing the Interviews

This section overviews the context shaping the exploratory in-depth interviews. Interview context (setting) affects indirectly the amount of data revealed from participants (Neuman 2006: 309). It also shapes the researcher's ability to probe and the willingness of participants to cooperate (Neuman 2006). One of the main factors affected the context of interviews was the cultural background of the researcher. Sharing nearly the same cultural and socio-economic status as the participants, enabled the researcher to communicate freely with the participants and go in-depth to elicit those factors (cognitive part) affecting the participants attitudes towards the e-banking services in the Egyptian environment and how these factors affected their behaviour (affective part). Further, conducting the interviews in Arabic, the mother tongue of the respondents, enabled the respondents to express their experiences and opinions freely and to answer questions that arose promptly.

During the interview, there was no written list of questions to ask, but rather an outline which guided the interview. Laddering technique was employed to probe and encourage customers to elicit their experiences and opinions towards e-banking services offered in the Egyptian environment. This technique assists in understanding how consumers translate the attributes of the product or service which forms their attitudes into meaningful associations reflecting their perceived value (Jaratt 1996; Woodruff 1997). Laddering technique answers the questions of what attributes are of value to customers (Malhotra and Birks 2003:184). It was employed by Kuisma *et al.* (2007) to understand how consumers relate the internet banking attributes to consequences such as perceived value and satisfaction.

To employ this technique, interviewees are usually asked to compare between two similar products. Then probing is required to find out what these differences mean and to what extent and why they are of importance to interviewees (Durgee 1985:30).

To follow the laddering technique, respondents were notified about the purpose of the interview. Then, during the interview, the discussion started by asking general questions to make respondents interested in talking about their experiences. Then, the questions moved gradually to elicit the respondents' experiences in the U.K., from which they could raise points of comparison and discussion about their experiences with e-banking

services in the Egyptian environment. These questions are guided by the literature review, and the outline of those factors shaping the perceived value of e-banking services presented in the conceptual framework **figure 3.6**. The discussion sought to answer the following questions:

- What is their experience with e-banking services in the Egyptian environment?
- From their perspective, what are those factors that shape the attitudes towards using e-banking services in the Egyptian environment?
- To what extent these factors shape the value of e-banking services in terms of risks versus benefits?
- To what extent these factors are related to bank practices, e-banking services related features?
- To what extent do they see the external environment intervene to affect their attitudes towards e-banking services, in the Egyptian environment?

Next pages present the process followed to generate the factors shaping the perceived value of e-banking services in the Egyptian environment, from the data revealed. These stages are called *data analysis process*.

6.3 Overview of Data Analysis Process

Data analysis is a crucial step in the research process. It is the process that links the theory to the fieldwork. Data analysis aims at making sense out of the data collected (Creswell 2003: 190). Data analysis validates the research tool in relation to the research questions and objectives. This involves various steps. These steps begin with preparing the data for analysis through transcribing and translation, and then proceeds with understanding the data, representing and interpreting it (Creswell 2003: 190).

Analysis of data could hardly be separated from the process of its collection. This is because, making sense of data is an ongoing process which accompanies the stage of collecting data, and might alter the questions or the variables investigated (Punch 2005: 194). Similarly, Creswell (2003:190) defined the process of qualitative data analysis as:

> *"Ongoing process involving continual reflection about the data, asking analytic questions and writing memos throughout the study"*

This is apparent in qualitative research techniques, where the context informing the interviews and the participants' answers, guide the development of data and add depth

to existing information. In this study, responses from each in-depth interview held, stimulated new ideas and generated new questions for subsequent interviews.

Although, there are well established and systematic stages of data analysis, there is no consensus on one right technique to make sense out of qualitative data. Pope *et al.* (2006) identified three approaches for analysis; thematic analysis, grounded theory and the framework approach.

The three approaches differ in the extent to which a known and established theory affects the role of the generated data, which might be testing a theory or developing a new one. The selection among these approaches might depend on the objectives of the research and the amount of literature governing the topic under research. However, it is preferred in any case to depend on established theories to minimize biases and misinterpretation (Neuman 2006: 459). The established set of interrelated factors reflecting a range of consumer buying behaviour theories, expected to generate the antecedents of e-banking services perceived value (**discussed in chapter 3**), guided the process of coding and making sense out of transcripts.

Although, it is considered difficult to replicate findings of a qualitative research due to the absence of standardized procedures and the subjectivity involved in interpreting the data (Bryman and Bell 2003: 300). However, careful description of the data, which reflects transparency, might increase the possibility of research reblicability, whatever e method used for analysis (Punch 2005: 195). Appleton (1995: 995) also believed that data analysis could be a tool that controls the credibility of the research through presenting actual descriptions of individual experiences. Aiming at increasing the credibility and the validity of this qualitative study, the extracted factors were supported with respondents' quotations of respondents' talk (**Table 6.2**). The common cultural background shared by the researcher and the participants enabled the interpretation of what lay behind symbolic words used to express depression, anger or satisfaction. Further, reference was made from social, economic, and political contexts in the Egyptian environment to explain and justify the importance of the extracted codes (factors) in explaining the value of e-banking services.

Regardless of the data analysis technique employed the steps of analysis usually begins with transcription, then categorizing and coding, ending with logical interpretation to answers the research question (Punch 2005:194).

6.3.1 Transcription and Translation

Interviews were held in Arabic. Accordingly, interviews were translated to prepare the English version of transcripts.

Preparing transcripts is a crucial step in the data analysis phase. Transcripts are the basis from which the coding process of the real data starts. A transcript is a written version of what is communicated verbally and nonverbally (Wetherell *et al.* 2001:36).

Although, transcripts form the basis of data analysis and the coding process, they are useless without the researcher, who decides what to take and what to leave through a logical argument (Pope *et al.* 2006: 65). Much effort was exerted to arrive at the best transcription for the interviews. However, the ideal transcript including all verbal and nonverbal features is seen to be unattainable (Wetherell *et al.* 2001:37). Similarly, Oliver *et al.* (2005) claimed that no transcription system would cover every detail. Silverman (1993: 149) claimed that quality of transcripts depends on the researcher's judgement guided by the research questions, stating:

> *"Transcripts can always be improved and the search for perfection is illusory and time consuming. Rather the aim is to arrive at an agreed transcript, adequate for the task at hand".*

Preparing proper readable and understandable transcripts reflecting interviewees' ideas and experiences encountered problems aroused mainly from translation. Writers differ on the effect of translation on the interpretation of transcripts. Translation might affect the interpretation of interviews when the researcher is not the translator (Temple and Young 2004). Indeed, Twinn (1998: 657) claimed that the effect of translation extends beyond interpretation to affect the quality of data, irrespective of the role of the researcher in the translation.

Translation affected the quality of data in two ways. The first is through the difficulty that arose in finding an equivalent word to express the meaning of an utterance in English, especially as colloquial Arabic is the prevailing language in the Egyptian culture. Twinn (1998) added that the second effect of translation on quality of data arises from the grammatical difference between the two languages. These difficulties represented a challenge in reaching the best possible translation that would reflect meaning and context. However, to overcome these problems, it is recommended to emphasize meaning behind words more than the words themselves (Xian 2008: 240).

Reflecting contextual and cultural related meaning characterizes a skilled translator (Squires 2008). Similarly, Neuman (2006; 158) emphasized the importance of social context in adding meaning to social action in qualitative research. The ignorance of highlighting context results in the loss of meaning and significance of the social action, even if the grammatical considerations were there.

Accordingly, the main concern was to highlight interviewees' experiences with the e-banking services and /or the service supplier and show how they affect their perceived value of e-banking services. Several factors assisted in reaching the most proper transcription. **First**, the data collector and analyst was the translator. **Second**, both the interviewees and the interviewer share the same culture and language. This provided a better opportunity for close attention to cross-cultural meanings and making sense of the interviewees' quotations before translating them. Squires (2008) pointed to the importance of possessing sociolinguistic skills in integrating the cultural related expressions during translation.

Guided by Silverman (1993: 117), repeated listening of recordings and comparing them to the written translated transcripts, was undertaken to improve the transcripts.
While, translation and transcribing are the initial stages in the data analysis, coding is the core of the qualitative data analysis process.

6.3.2 Overview of the Coding Process

There is no consensus of naming and defining the process of coding. Miles and Huberman (1994) called it data reduction. Mason (1996: 111) called it '*cross sectional indexing*'. Strauss and Corbin (1990: 57) viewed coding as the operation by which data are broken down, conceptualized and put back together in new ways. Maxwell (2005) considered coding a tool by which the researcher categorizes the chunk of talk in the transcripts produced. Coding is seen as a process merging between data reduction and analytic categorization (Newman 2006). Coding involves organizing raw data into conceptual categories and creating themes and concepts (Newman 2006; Punch 2005).

However, there is a consensus of viewing coding as the essence of qualitative data analysis (Neuman 2006; Miles and Huberman 1994; Corbin and Strauss 2008). Coding process adds value to the research by emphasizing new concepts or altering the way of

viewing the same phenomenon, thus presenting new insights to the research (Miles and Huberman 1994).

However, developing concepts of value, out of data and relating them together depends largely on the creativity of the researcher. Qualitative researchers differ in how much detail they code, depending on the research questions, the richness of the data and the research purpose (Neuman 2003:442). The researcher's background knowledge and the frame of reference, is involved in the coding process by emphasizing concepts or clues in the data that might be disregarded in other researches.

While, the coding process is important in purely qualitative researches, its importance increases in this research. This is because, codes (factors) resulting serve two purposes. **The first** is obtaining an overall understanding of the factors affecting consumer buying behaviour in e-banking services context in the Egyptian environment. **The Second** is that, these factors or codes serve as the basis for designing the independent variables in the questionnaire. Thus, in exploratory studies, choices about what to code influence further stages (Darlington and Scott 2002).

6.3.3 Creating Codes

During coding, two issues were emphasized. The first was to support the resulting codes theoretically to validate their contribution in answering the first research question. The second was, to add new dimensions overlooked in previous researches and explaining the Egyptians buying behaviour in the context of e-banking services.

To extract relevant codes, transcripts were read clearly to pinpoint themes reflecting the role of service supplier, e-banking services related features and the role of external environment. The role of these three factors in shaping the perceived value of e-banking services was emphasized in the consumer buying behaviour literature chapter and the conceptualized e-banking services value-adding model (**provided in chapter 3**).

However, the relative importance of e-banking service related features and those reflecting the role of service supplier in shaping the value of e-banking services depend on the customers and the context experienced in dealing with the service supplier or using e-banking services. Also, the difference in the culture of the study and those in other studies might affect the number, type and definition of factors shaping customers' attitudes towards electronic banking services offered.

Moreover, the difference in the features and range of e-banking services among cultures might emphasize some quality dimensions in shaping the value of e-banking services for bank customers in the Egyptian environment.

Although the initial phase of coding was guided by literature, the researcher was looking for ***what*** dimensions (codes) reflecting the contribution of external environment, product and service characteristics and supplier practices. The researcher also, was looking for ***how*** these dimensions (codes) are emphasized, by reflecting the context and customer characteristics justified and validated these codes.

Thus, the researcher searched in the data for those dimensions (codes or factors) explaining the perceived value. Although, the conceptual model guided the coding process, it did not provide a complete answer to the first research question. For example, it was necessary to look behind the Technology Acceptance Model (TAM) to find out what leads to relative advantage, perceived ease of use and perceived usefulness in terms of e-banking services most important quality dimensions from Egyptian bank customers' perspectives. Corbin and Strauss (2008: 37) established the uses of literature in exploratory qualitative studies, stating:

> *"Concepts derived from the literature can provide a source for making comparisons with the data as long as the comparisons are made at the property and dimensional level, and are not used as data per se. If a concept emerges from the data that seems similar or opposite to one recalled from the literature, then the researcher can examine both concepts for similarities and differences."*

Through the coding process, interviews started as induction, and turns to be deduction during data analysis phase by relating the data emerging to a prior determined theory (Perry 1998: 791). Accordingly, resulting codes (factors) reflected a mix between theoretical and free coding. Theoretical codes are guided by the existence of literature derived from theories presenting dimensions on which data is coded (Maxwell 2005). While, free codes reflect what the data suggests. Both types are usually merged in the real coding process.

At the beginning of coding, data is left to suggest the initial (free) codes through an open coding process by which labels were attached to participants' talk (Neuman 2006: 462). Thus, open coding emerges to reflect real data. Codes resulting at this stage are named as descriptive codes (Miles and Huberman 1994). Punch (2005: 200) defined descriptive codes as:

"Early labels may be descriptive codes, requiring little or no inference beyond the piece of data itself".

Then, detailed descriptive codes were refined and clustered into few abstract conceptual codes through the process of axial coding. During the process of axial coding, related descriptive codes are linked together and grouped into conceptual theoretical codes (Neuman 2006: 462; Flick 2002: 182). Codes emerged at this stage are inferential (pattern), reflecting concepts rooted in the literature and going beyond actual data (Punch 2005:200).

To arrive at those inferential codes, descriptive codes were filtered and categorized in more abstract categories. Even, inferential codes were filtered to retain those having theoretical foundation and at the same time contribute highly to answering the research question. Thus, both stages and types of codes are important, because descriptive codes answers what factors are of relative importance to bank customer in the Egyptian environment, while inferential codes (factors) answers why such factors are important, by relating them to a well established theory to support their contribution to the research question.

During axial coding, factors should be linked together in a coherent logic to represent causes and consequences, conditions and interactions (Miles and Huberman 1994; Nueman 2006: 463). To relate descriptive codes and inferential codes together, the relationship between reasons and outcomes were drawn from the context. The real context reflecting customers' experiences in terms of risk perceived from the e-banking services, highlights descriptive codes. Moreover, in order to add depth to the analysis, sample characteristics were considered. Classifying respondents according to their previous experience with e-banking services in the Egyptian environment and the type of bank they are members in, added depth to the analysis. The researcher's previous experience with the Egyptian banking sector and the e-banking services, assisted also in pulling out descriptive codes out of the text and justifying the emergence of inferential codes.

Then inferential codes were established and refined to reflect a cause and consequence situation. So that, each higher-level inferential (pattern) code could be seen as a consequence for a set of causes. Inferential codes were grouped again into more abstract concepts to be used in the questionnaire as independent variables. This process highlighted those factors or dimensions of importance and shape the value of e-banking

services in the Egyptian environment. Accordingly, three major constructs emerged. They are *quality of face-to-face service environment* (or traditional service environment), *e-banking service quality* (especially the reliability and the security dimensions) and *external factors support*. The context inferred from respondents' talk assisted in the emergence of descriptive codes and their related inferential codes that are of relative importance for shaping the value of e-banking services in the Egyptian environment.

Those three previously mentioned factors provided new insight to understanding Egyptian consumers' behaviour in e-banking services, by involving the role of service supplier explicitly in the process of adding value from customers' perspective. Two of these constructs are deeply rooted in the Relationship Marketing theory. They reflect the role of trust, quality in shaping the value of e-banking services in the Egyptian environment. For example, some interviewees who were not users for e-banking services draw inferences from face-to-face service experience to judge the risks associated with and trust the use of electronic banking services offered. This is consistent with the arguments of some researchers that trust gained through face-to-face service encounter affects the adoption of electronic services offered. While, *the external forces* factor is rooted in the *diffusion of innovation* theory and the TAM.

Previously proposed factors aimed at answering the four dimensions of value: When, Where, What and How (Heinonen 2004). In other words, they assist in understanding Egyptians buying behaviour in e-banking services context by answering the following set of questions; what dimensions are of importance in shaping perceived value towards e-banking services, how value should be delivered, where it should be created and when it should be provided. ***Descriptive, inferential and the proposed factors of relative importance in shaping the value of e-banking services in the Egyptian environment are shown in table* 6.1.**

Table 6.1: Theoretical origin of codes

2nd order inferential code: Proposed constructs shaping the value of e-banking services	1st order Inferential or pattern Codes	Descriptive Codes (Detailed Codes)	Origin in Literature
Bank face-to-face service quality Or *traditional service quality*	Information Availability	-Message content -Message timing	Pikkarainen *et al*. 2004; Mukherjee and Nath, 2003; Sathye, 1999; Shih and Fang 2006; Waite and Harrison 2004: 68; Salaun and Flores 2001; Gatingnon and Robertson 1985
	Front line employees behaviour	Courtesy Willingness to help	Parasuraman *et al*. 1985; Jamal and Nasser 2002; Blanchard and Galloway 1994; Levesque and Mc Dougall 1996;Sharma and Patterson 2004
	Bank branch Features	location waiting time	Levesque and Mc Dougall 1996; Colgate and Hedge 2001; Blanchard and Galloway1994; Jun and Cai 2001; Parasuraman *et al*. 1991
	Complaints handling through alternative channel	-Responsiveness -Accessibility of feedback	Levesque and Mc Dougall 1996; Jun and Cai 2001; Joseph *et al*. 1999; Colgate and Hedge 2001; Mukherjee and Nath 2003; Parasuraman *et al*. 1991; Blanchardand Galloway1994 Tax *et al*. 1998; Bitner *et al*. 2000
E-banking services quality	E-banking services most important features	-reliability -Security	Thornton and White 2001; Black *et al*. 2002; Joseph *et al*. 1999; Jun and Cai 2001; Gurau 2002; Sohail and Shanmugham 2003 Pikkarainen *et al*. 2004; Gerrard and Cunningham 2003; Peppard,2000, Polatoglu and Ekin 2001; Akinci *et al*. 2004;Yousafzai *et al*. 2003; Rotchanakitumnuai and Speece, 2003; Jaruwachirathanakul and Fink 2005
External Forces	External environment Support	-Intermediaries -Social pressure	Hsh and Chiu 2004; Jaruwachirathanaku and Fink 2005; Roy and Dutta 2003; Gurau 2002; Laforet and Li 2005; Veiga *et al*. 2001; Gerrard and Cunningham, 2003.

The use of NVIVO

Researchers disagree on the benefits of **using computer software** (CAQDAS) in the analysis of qualitative data. Although, analysing qualitative data could be done nowadays using NVIVO (computer software for analysing qualitative data), it is viewed of little value to the quality of the coding (Creswell 1998:155). Sutton and David (2004:253) commented that using software itself is unable to draw logical and meaningful conclusion from data. This is because the whole process of data analysis depends mainly on the researcher (Miles and Huberman 1994:11). The selection and the meaningful contribution of the codes to the research question, the process of linking codes together and linking the inferential codes to a sound well established theory, depends on the researcher (Bryman and Bell 2003:445).

The main aim at the PhD level was developing the skills of searching, extracting, thinking, and interpreting findings, while using computer software in analysing qualitative research was not the main aim.

Accordingly, the manual approach, rather than NVIVO software was used to analyze interviews, extract codes, and linking codes together in abstract categories.

The next section presents an example showing the process of code development and the process by which inferential codes are theorized.

6.3.4 Coding process in Application: An Example

Figure 6.2 provides an example of descriptive codes and their related inferential code.

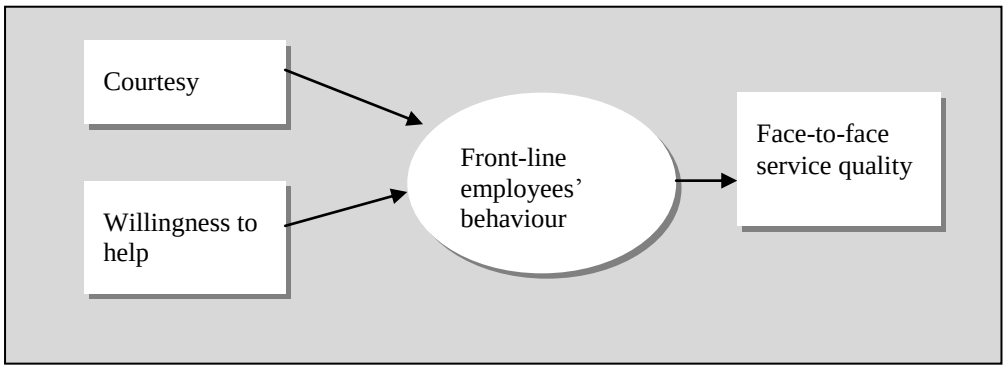


Figure 6.2: Example on the development of inferential and descriptive codes

To develop the following descriptive codes: ***Courtesy*** and ***willingness to help***, all transcripts were read through collectively, and then each transcript was read separately.

While reading the transcripts, it was found that bank customers who mostly were not e-banking users referred to the way employees treated them in the bank branch and how this affected their decision towards expected risks from e-banking services.

Those sentences addressing the employees' roles in communicating information and their behaviour towards customers were grouped to reflect two descriptive codes *Courtesy* and *willingness to help*. Then these two descriptive codes were expressed in a more abstract expressive inferential code: *Front-line employees' behaviour*, which introduces the role of employees in building trust and reducing expected risks associated with the use of e-banking services in the Egyptian environment. The role of Front office employees' behaviour in building trust and minimizing expected risks is deeply rooted in the relationship marketing theory. Moreover, *front office employees' behaviour* is a determinant of ***face-to-face service quality*** the 2nd order inferential code.

Bringing together all the previous steps assisted in justifying how codes are linked to the transcripts and to each other in a form of cause and consequence, supported with theories, while simultaneously reflecting the reality of the Egyptian environment.

6.4 Factors Shaping the Value of E-Banking Services

This section presents the factors which emerged from the interviews and explains how they contribute to the value of e-banking services in the Egyptian environment. This section starts first by presenting the emerging factors and highlighting the sample characteristics. Then proceeds with a commentary part in which the contribution of each factors in explaining the value of e-banking services is logically drawn from the data.

6.4.1 Findings

Eight factors are of relative importance in shaping the value of e-banking services in the Egyptian environment. These factors are: e-banking services reliability, complaint handling, front line employees' behaviour, information availability, bank branch features, intermediaries, e-banking services security, and social pressure. The contribution of each factor[27] in shaping the value of e-banking services in the Egyptian environment is presented in **Figure 6.3**. These eight factors could be grouped under three major factors (categories): face-to-face service quality, e-banking services quality and external environmental support.

[27] It is calculated as follows:
equation: (**number of participants reported the factor ÷ total number of participnts**) × **100**

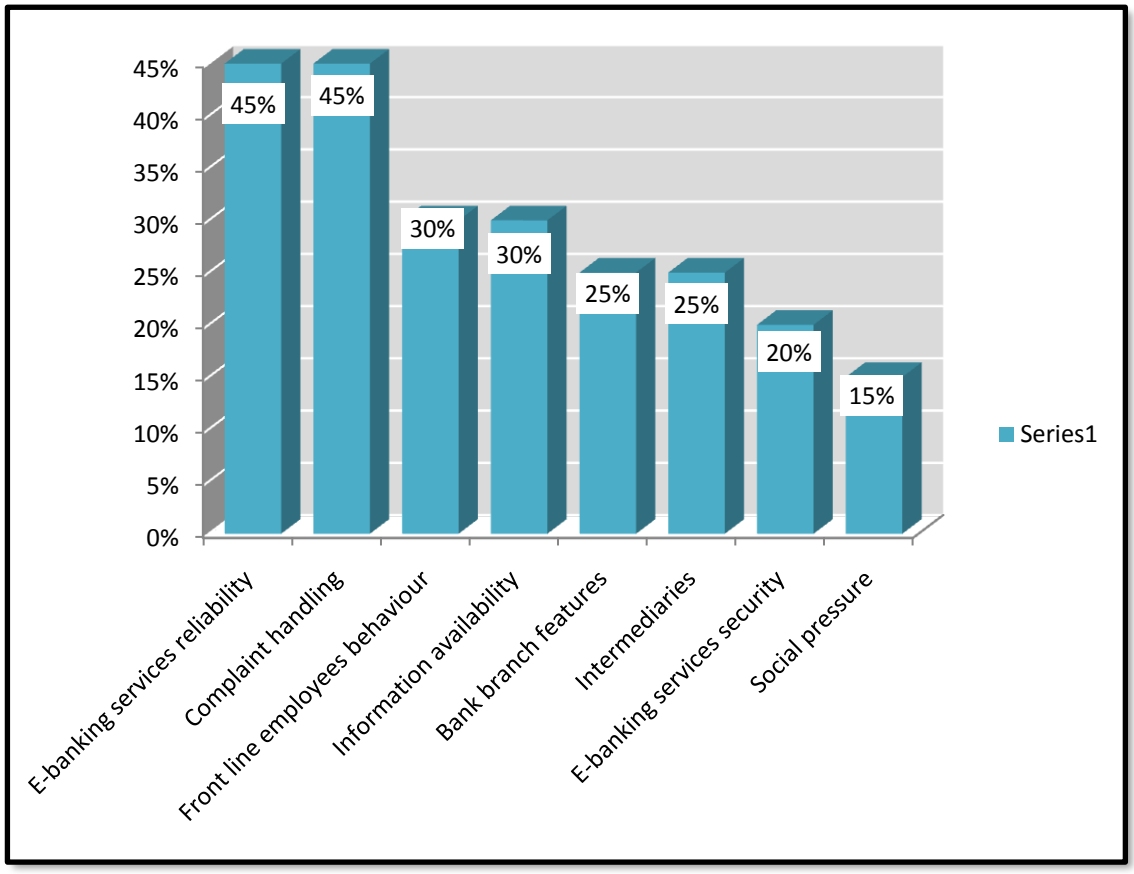


Figure 6.3: The contribution of the proposed factors in explaining the perceived value of e-banking services in the Egyptian environment

Figure 6.3 presents factors shaping the perceived value of e-banking services in the Egyptian environment in a descending order. **Figure 6.3** shows that *e-banking services reliability*, the most important factor. At the same degree of importance is complaint handling through alternative channel. While, both front line employees behaviour and information availability comes in the second level of importance. At the third level of importance are bank branch features and role of intermediaries. E-banking services security comes in the fourth level of importance. While the least important factor in shaping the value of e-banking services is the social pressure.

The difference among the relative importance of these factors in shaping the perceived value of e-banking services could be due to the sample characteristics or banks in which respondents are members. Sample characteristics help understanding the context emphasizing these factors; while simultaneously justify the limited generalizability of these emerged factors to other samples with different characteristics.

Types of banks, interviewees were members in and their previous experience with e-banking services are depicted in **Figures 6.4** and **6.5**.

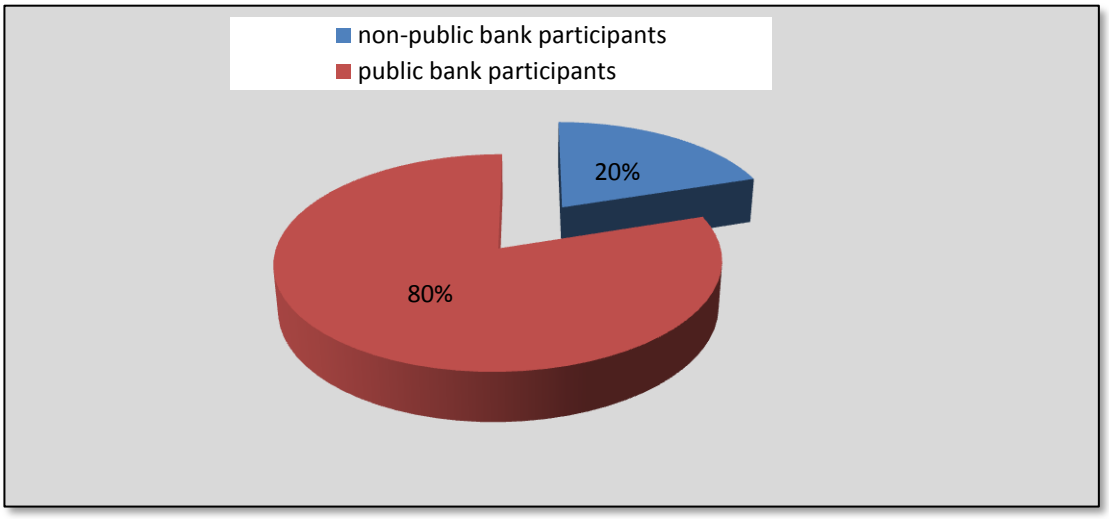


Figure 6.4: Classifying participants according to the type of banks

Figure 6.4 shows that 80% of interviewees were public bank customers. This might limit the genralizability of the qualitative findings to the real world, where both public and non-public banks share nearly the Egyptian market. Although generalizability is always limited by the context, the questionnaire phase is still needed to explore the extent to which findings emerged from the interview analysis could be generalized to a wider scale of bank customers.

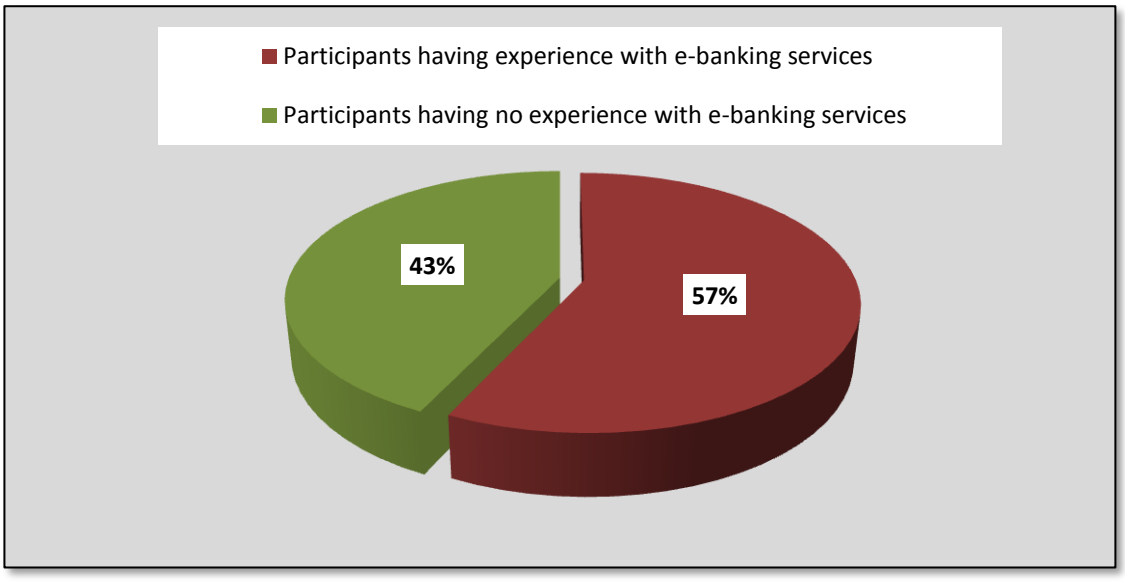


Figure 6.5: Classifying participants based on their experience with e-banking services in the Egyptian environment

Figure 6.5 demonstrates that 57% of participants had previous experience with e-banking services in the Egyptian environment. This contributed to emphasizing face-to-face service quality of the service supplier explicitly in explaining the value of e-banking services. However, it also places this finding under question when tested on a large sample of e-banking users.

A detailed presentation of descriptive codes supported by interviewees' quotes and how these codes are merged into inferential factors are presented in **table 6.2**. Moreover, **Table 6.2** presents quotes justifying the factors extracted

Table 6.2: Example of quotations supporting Factors extracted

Inferential 1st order codes	Descriptive Codes	Examples of quotations From Interviews	total number of participants	Percentage from Interviews
Information availability	Message content	*'In Egypt, the whole system discourages bank customers from using e- banking services, because of the incomplete information. The bank is responsible for a large part in it'.* **No. 2** *'They told me that I should have had an internet visa card, which I was not informed about it before, I just wonder why haven't I informed before with this piece of information-------I lost the offer '.* **No.7** *'the more is that the bank can change the charge rate without prior notification sent to the customers, which does not give the customer the right to choose whether to continue using this service or not. This might turn the visa card to be infeasible'* **No. 14** *'In Egypt to benefit from the information, you have to ask and dig for what you need not waiting for what they want to give you'* **No. 9**	6	30%
	message timing	*'Before I came here in the U.K., what was given to me as information was taken as granted. But after the information I had here on types of e-banking services and their uses, I will know what to ask about to select the best type of service that suits my needs and I'll change my bank to another one which gives me a variety of e-banking services so that I feel that they really saves my time.'* **No.3** *'providing the customer with full information about all types of services makes you feel secure that if anything goes wrong while using one of e-banking services forms you know exactly what to do to correct the situation'.* **No.16** '*Here in the U.K. you don't look for information, your bank informs you through many ways about any information about new products even on the interest rates and the new changes in the security procedures on using internet banking. I mean they try to find you wherever you are, not the reverse. I didn't see this in Egypt. I do think that this should be considered if banks need full utilization of e-banking services in the future '.***No. 5**		
Front line employees behaviour	Willingness to help	'*Employees disrespect customers; this is inherited in our culture where the human being is disrespected. It is the system of the queue for bread which is everywhere in Egypt. Even if you have deposit in the bank. '***No.16** *'In my second bank, I have ATM (123 card), its type enabled me to withdraw from any machine not necessarily the bank's machine without any charges. But this was because I know someone, if I don't, they will never issue this card for me'* **No. 17**	6	30%
	Courtesy	'*employees in my bank have no time to allocate for you as a customer, I think because we are not asking for loans, I'm just a customer with small deposits and I take my yearly interest but don't benefit them as any businessman I don't think that they will change if we use e-banking services, the situations will be worse'.* **No.6** **'***You know that responsiveness of customer service was the thing that made me switch to a private bank. Their employees are helpful, they know that you as a customer who is paying their salaries. Because of that I trusted to use their e-banking services because I know that if I faced any problem I'll find someone there for help'* **No. 10** *"Look I'm a public bank customers. Sometimes employees are not responsive but this not the rule. You know that sometimes bank branches are highly congested. I think to avid that one need to have ATM or visa card to be able to avoid congestions to access basic financial needs"* **No. 5.**		

	Branch features bank	*'I do not use any form of e-banking services. Just tell me if I have some problems where could I go most branches of my bank operates for limited hours, this makes me have to rush and suffer the traffic congestion.'''***No. 3*** *'my bank branch is near to my home and I know someone there who get me all what I need to be done without waiting in the queue, I don't feel that I'm in a real need for ATM card.***'No.9** *'Waiting in long queues to get my complaint solved makes me reluctant to use any type of e-banking services. You know sometimes computers and the system in my public bank is not working especially on the first of each month. From my view technology adopted by my bank is also responsible for that.* **'N0. 20** *'I was really thinking about applying for the visa in my bank. and I have a saving account in the bank. But when I saw a long queue of customers coming to pay for their credit in the bank, while others have problems with their visa, I cancelled the idea'* **No. 12**	5	25%
Complaint handling through alternative channel	Responsiveness	*'I had an unsatisfactory experience with customer service in one of the public banks. They left me 20 or even 30 minutes on the telephone in Egypt to ask just about if my salary was transferred regularly. I think this is very risky if this is the case if I lost my money through internet banking or lost my visa card and the bank branch is closed!'* **No.16** '*In our culture, to get a quick solution to your problems telephone is not the way rather you have to go to the bank branch. I faced a problem with my ATM card before and I tried to call the given numbers after accessing them, they told me to go to my bank branch, this makes me really thought of returning to face to face and cancel it, I didn't benefit from it so I don't feel regret for not using e-banking services'* **No. 11** '*I'm not a user of e-banking services. I usually raise my complaints at the bank branch but I don't know if I decided to use these services in Egypt and I was suddenly faced a small problem, It is money which is very risky. I'll leave the bank if I didn't access an immediate 24 hour help line.*' **No. 12**	9	45%
	Accessibility	*'My visa stopped working while I was shopping from the U.S.A., I tried to call my bank's customer service in call banking. When I returned to the hotel, but unfortunately it was not accessible at that moment. Thus, I gave their phone number to the hotel to contact them and get me to speak with them. The hotel called the customer service on the international number, which is very costly as international calls especially from hotels are very costly. I kept calling them many times but with no answer. Really having one visa from one bank is unreliable. Then, I switched to another bank to get a more reliable visa* **'No.13** *"If bank branch might be enough to raise any complaint in traditional bank services, it might be not enough. If one thinks of using e-banking services in which money transfers immediately and there is no chance for stopping them and going into further losses except in the existence of alternative complaint channel which helps all bank customers not just visa users.*". ***No.5***		
E-banking services most important features	Reliability	'*I find it uncomfortable to use ATM machines as it is not easy to find one near me, so I have to take a taxi and spend 5%-10% of the needed money***'No.19** **'***Once I thought about withdrawing money from the ATM machines I found it most of the time out of* ***service'*****No.11** *'To access money easily and make payment for purchases using one visa card is unreliable at all in Egypt'* **No.13** '*When I used a visa card I found that I needed to access internet banking to follow my account but it was inaccessible'* **No. 18** '*I can't depend on ATM to access money at any time because the number and places of ATM machines are unsatisfactory, thus I always have to keep enough cash money with me, I think this might be enough indicator for the rest of e-banking services offered* **'No.15** *'I view that the whole idea is not convincing. Why do I need to keep my salary in the bank if I need to access it, I pay a charge. Because the ATM machines of my bank are not, in convenient places for me, but here in the U.K. we are forced to do that because any salary has to be transferred to a bank and you can access you money without paying a charge for that.* **No.3** **'***I think complete dependability on e-banking services will not be there***,** *except if there is a full diversified range of e-banking services by which acts as an alternative to visiting the bank branch, so that services are complementary and are one unit'.* **No. 2** *"For me using e-banking services enabled me from accessing my funds anywhere. This solved a ;lot of problems for me sometimes I had to the bank to access my savings but now no longer my bank has ATMs everywhere and I can know changes to my bank account through phone banking. This is really a great idea".* **No. 10** '*Although, phone and internet banking facilitate accessing my account, they does not extend to all services, thus still visiting the bank branch is the main channel by which one can access any new information about financial products''****No.8***	9	45%

	Security	‘*I used my credit card to buy a book online and the book arrived to me, after 3 months after buying the book I found a letter from the bank telling me that my visa was not secure now . But now public banks started to recognize the importance of security issues and the needs f customers They started to establish internet visa prepaid cards which achieved the difficult equation for them. It is really become less risky for those interested in online purchasing’.*__No.1__ *‘In our Egyptian banks if you want more security for your services, you have to be charged more as if you have to bear the security charges not the service supplier I think this extends to the e-banking services as well. For example, it is not allowed to change the PIN code of your visa or credit card to secure yourself, I think banks had to think seriously about developing security requirements if e-banking services are to develop beyond just viewing transactions and extends to provide more advanced financial needs’* **No.6** *‘If the same security level which is there in face to face services is transferred to the electronic services, I think this will increase the adoption as even those non highly educated people will feel secure while using these services in managing their funds*’ **.No.20** **‘***You know in our culture the issue is not the security itself , because most of the e-banking services are not so advanced as in the U.K.. The security I’m talking about is if the card is stolen and used how can you prove that it is not you for the bank, you have to go to the police it is really a waste of time and a lot of steps to go through.* **’No.9**	4	20%
External environment support	Intermediaries	*‘Really having a visa to access my current account and another one to access my saving account rescues me from some situations where I find myself with no enough cash in times I have to pay for purchase in front of others. It really saves my social image.------- You know you cannot go outdoor unless you have sufficient money in pocket’.* **No. 10** *‘The use of credit card or even visa card is not a style of living in our society.’* **No. 20** *‘How can I depend totally on ATM or internet banking if big companies and the government agencies do not accept them in payment! I see that it is still early for our economy to depend totally on e-banking services’***No.6** *‘You can’t compare the situation in the U.K. with that in Egypt. E-banking services are luxury. It is illogical to think about this type of services when the basic needs of a large category of Egyptian people are unsatisfied’.* ***No.9*** *‘You know I’m from a rural governorate , a visa card is not useful for m, I can’t pay for my purchases theree’***No.16**	5	25%
	Social Pressure	‘*I don’t use e-banking services. I don’t feel this strange. My close friends even my family do not use them’.* ***No.5*** *‘I knew about the visa from my friends who use them while we all go out together. Since then, I recognized that I should have a visa card too to provide me prestige among my friends’.* **No. 13** ‘*before I use internet banking or apply for any type of credit card, I will ask my near friends or relatives about its usefulness and uses because they have experience they can provide me with honest information.* **’No.2**	3	15%

6.4.2 Commentary

In the next pages, the role of each factor (code) in explaining the perceived value of electronic banking in the Egyptian environment is discussed.

I. Information Availability

Findings showed that 30% of participants (**figure 6.3**) reported that communicating sufficient information affects the perceived value of electronic banking services offered. The role of information availability in affecting the value of e-banking services is emphasized through its content and accessibility. Those two components are concerned with ***what information is relevant***, and ***how information is conveyed***.

Communicating accurate and timely information assists Egyptian customers in two decisions. First is the right selection of the e-banking service or the related product that fits their needs, reflecting their social and economic status. Second is the re-evaluation of the present selection in order to judge its feasibility under present circumstances.

Information about the location of ATMs, the types of cards accepted in payment, and the applicable charges, is seen important in minimizing the loss or extra costs associated with the use of visa/master cards. Communicating information about the usability of plastic cards in shops is important to some respondents in selecting among different types of cards. This is because, not all shops in Egypt are linked to the electronic banking system and have point of sale (POS). This might be due to reasons related to shop owners, the values and ethics of the customers and the availability of tele-communication network infrastructure in different areas.

One interviewee reported that the faulty selection of plastic cards due to insufficient information resulted in perceived opportunity cost represented in the loss of a product or price offer, stating:

> *"They told me that I should have had an internet visa card, which I was not informed about it before, I just wonder why haven't I informed before with this piece of information-------I lost the offer".* ***Interviewee No.7***

For others, the value of information did not stop at the selection phase but extends to the usage phase. In this phase, information is considered important to evaluate the current product or service ongoing feasibility to reduce expected time or financial risk resulting

from its usage. This is because an e-product that is feasible to use under certain conditions might become infeasible if users' circumstances change. This necessitated accessing timely and accurate information. For example, one interviewee commented on effect of complete information availability on the perceived value of visa card stating:

> *"the more is that the bank can change the charge rate without prior notification sent to the customers, which does not give the customer the right to choose whether to continue using this service or not. This might turn the visa card to be infeasible".* ***Interviewee No. 14***

Accessing up-to-date information about some electronic banking related products might reduce the financial risk of using them. For example, the charges paid on plastic cards could be perceived as relatively unaffordable in times of increasing inflation rate, when the user might need to switch to a lower charge card and give up some of his/her needs, by changing his/her consumption and shopping patterns. This seems relevant in the Egyptian environment due to the economic circumstances, which might lead customers to review their financial priorities and rethink the feasibility of a current visa/master card. However, previous experience might improve the customers' searching abilities to enquire about the specific piece of information that might minimize his/her perceived risks and maximize the expected benefits.

To summarize, providing sufficient complete information in the communication message could infuse trust and reduce the perceived risks of e-banking current or potential users.

Although, there are many ways and strategies to supply required information to customers, front line employees seemed to affect information availability through their behaviour towards customers in the bank branch.

II. Front-line employees behaviour

Interviews showed that employees' behaviour in face-to-face bank branch contact explained the value of e-banking services for 30 % of participants (**figure 6.3**).

Accessing e-banking services might not guarantee complete separation from the bank branch. This depends largely on the e-banking services reliability, design and the availability of diverse complaint handling channels. In bank branches, customers depend on face-to-face communication to obtain the information needed or to solve problems in case of e-banking services failure.

Face-to-face contact represents the most popular channel of communication between the customer and the financial service supplier in Egypt. In the bank branch, front line employees' behaviour and their willingness to offer meaningful and complete information and provides help gives impressions about the priority of the customer to the bank, which influences customers' trust in e-banking services.

The way employees behave and their willingness to help during face-to-face interaction extends to affect the value of e-banking services through the risks expected in case of e-banking services failure. For non-e-banking users, this might set a basis on which customers decide to use e-banking services. One interviewee reported that employees' behaviour not only affected his perceived risks from using e-banking services but affected the decision to switch from his current bank as well, stating:

> ***"****You know that responsiveness of customer service was the thing that made me switch to a private bank. Their employees are helpful, they know that you as a customer who is paying their salaries. Because of that I trusted to use their e-banking services because I know that if I faced any problem I'll find someone there for help".* ***Interviewee No. 10***

However, the relative importance of including employees' courtesy in shaping the value of e-banking services might differ among customers according to the type or nature of bank they are dealing with. Another opinion pointed to the benefit of using e-banking services to avoid dealing with front office employees in days and times where the bank branch suffers congestion and employees suffer high pressure. This could be understood from an interviewee's words, stating:

> *"Look I'm a public bank customers. Sometimes employees are not responsive but this not the rule. You know that sometimes bank branches are highly congested. I think to avid that one need to have ATM or visa card to be able to avoid congestions to access basic financial needs".* ***Interviewee No. 5.***

However, the role of front office employees' behaviour in shaping the value of e-banking services depend on the reliability of these services.

Also, perceived employees willingness to help is affected by the degree of customer favouritism, which leaves unfavourable impressions for some customers. Customer favouritism, a manifestation of employees' behaviour maximizes the benefits resulting from economic and psychological privileges for a selected group of customers, while represents a source of financial and time loss for others. Customer favouritism affects

the value of electronic banking services in the Egyptian environment, through the degree of responsiveness perceived in case of any complaint.

Interviewees pointed to the existence of customer favouritism in financial institutions, as a part of the Egyptian culture. However, interviewees disagree on the effect of customer favouritism on their perceived risk of e-banking services. Beneficiaries of favouritism view that it constitutes one of their established criteria for bank selection and affects their loyalty to the bank. This is explained by Patterson (2004) who argued that favouritism could act as a switching barrier for its beneficiaries due to the psychological and economic risk associated with the new supplier. Beneficiaries from favouritism gain by saving time, effort and extra charges, which increases the perceived value from using electronic banking services. This is usually done by directing those customers to the best plastic card to use that fits their economic abilities and providing them with up to date information. Or favouritism might direct its beneficiaries for the way they could maximize their utility from the existing range of e-banking services offered with minimum risks. Further, favouritism might facilitate the complicated procedures of applying for a visa/master card or even accelerating the process of service recovery. For others, however, favouritism leaves an impression of distrust in the mind of the customer especially for those who have experienced problems. These problems could be financial or time loss because of incomplete or distorted information or unresponsive employees. This distrust could be transferred to e-banking services in the form of expected risks.

III. Bank Branch features

Findings (**figure 6.3**) showed that 25% of participants considered bank branch features a factor shaping the value of e-banking services in the Egyptian environment. The role of bank branch features in shaping the value of e-banking services is highlighted through bank branch location, operating hours and waiting time inside the bank.

A. Bank Branch location

Bank branch location is one of the service quality dimensions of banks. Ease of getting to the bank branch reflecting tangible /empathy dimension in SERVQUAL, while it affects the process of providing service quality dimension in Blanchard and Galloway (1994). Thus, it is included in those models measuring face-to-face service quality.

Convenient location has proved to affect the perceived service quality of traditional retail banking quality in another study (Levesque and McDougall 1996). It also affected the switching decision among New Zealand and Australian customers (Colgate and Hedge 2001). However, bank location is not included in those factors measuring the quality of e-banking services in western culture. This is due to the level of technology involved in e-banking services, which affects the degree of separation from bank branch and allows convenient access to financial needs anywhere and anytime.

For an interviewee, visiting the bank branch might mean suffering from traffic congestion and parking problems, which is a source for inconvenience and raises risks from using e-banking services. He commented:

> *'I do not use any form of e-banking services. Just tell me if I have some problems where could I go most branches of my bank operates for limited hours, this makes me have to rush and suffer the traffic congestion.".* ***Interviewee No. 3***

However, the role of bank branch location in shaping the perceived value of e-banking services might depend on the distance customers spend to reach their bank branch to report any problem from using e-banking services. Egyptian bank customers in large cities, especially Great Cairo, suffer accessibility inconvenience more than the rest of customers in other Egyptian cities. This is because Great Cairo is one of the most crowded cities in the world, with a population accounting for one third of Egypt's overall population, which is 80 million. It suffers from a high population density, of more than 25,000 inhabitants per km^2 (Al-Baaly 2005), approaching that of Mumbai. What worsens the situation is the large number of vehicles, which reaches 1.6 million operating daily in its streets, making parking difficult if not impossible and costly.

The inconvenience in accessing the bank branch could be of concern for e-banking users for different purposes in various contexts. Bank branch location might reduce the perceived usefulness of e-banking services for those users who might find themselves forced to go to the bank branch to access their financial needs in case of e-banking services failure or to report any complaint experienced while using e-banking services, in case of absence or failure of alternative channels to handle that. This also might depend on the ability of e-banking users to access their accounts and solve their problems through any branch belongs to the bank.

If reaching the bank might be a source of time risk that might reduce the value of e-banking services in certain contexts, long waiting time inside the bank for the services to be performed contributes negatively to the value of e-banking services.

B. Waiting Time

Long queues and in-branch waiting time contributes to shaping the value of e-banking services from public bank users, who represented 80% of the participants (**figure 6.3**).

Equally, in-branch waiting time could be a source of expected risk for e-banking services users or those who think about using e-banking services, in situations where they find themselves forced to visit the bank branch and wait for hours to access their financial needs in case of e-banking services' failure or inaccessible alternative complaint channels. An interviewee views that long waiting queue indicates inability of the bank to manage technology, or it might indicate poor e-banking services performance. He commented:

> *"Waiting in long queues to get my complaint solved makes me reluctant to use any type of e-banking services. You know sometimes computers and the system in my public bank is not working especially on the first of each month. From my view technology adopted by my bank is also responsible for that".* ***Interviewee N0. 20***

Unsatisfactory opening hours could contribute to the congestion and long queues inside the bank branch. This might be a source of inconvenience for those living in Great Cairo that suffers from traffic congestion at peak times, usually in the morning and afternoon from 2p.m.to 6 p.m. This requires the customer or the e-banking services user to take a whole day off to achieve what he/she needs at his bank branch, which might be unaffordable or inapplicable in some situations.

Although waiting time is a function of operating hours of the bank branch, the level and the robustness of technology used by front office employees, to accelerate the process of serving customers, could also affect it. However, the relative importance of in branch waiting time in shaping the value of e-banking services depend on the employees behaviour in the bank branch, the degree of favouritism the customer enjoys. Lastly, it might depend also on the e-banking services reliability and design, which secure accessing financial needs and achieve time convenience away from the bank branch.

IV. E-banking services related features

This factor is concerned with presenting those service dimensions relevant in triggering positive e-banking services perceived value, from interviewees' perspective.

A. Service Reliability

Findings showed that e-banking services reliability is the most important factor shaping the value of e-banking services from 45% of participants (**figure 6.3**). Reliability is defined by Parasuraman *et al*. (1988: 6) as:

"The ability to perform the promised service dependably and accurately"

Customers judge service outcome. Thus, difficulty in accessing their financial services could reduce the perceived dependability and credibility of these services and the credibility of banks as well. Problem of ATMs accessibility was emphasized by some interviewees, as an indicator of the reliability of other e-banking services.

It was understood from the interviews that the geographical spread of ATMs inside Greater Cairo and the rest of the Egyptian governorates shapes the value of e-banking services. For example, one interviewee who is an ATM or visa/master cardholder reported difficulty from depending on ATM machines to access basic financial needs, stating:

> *"I can't depend on ATM to access money at any time because the number and places of ATM machines are unsatisfactory, thus I always have to keep enough cash money with me, I think this might be enough indicator for the rest of e-banking services offered".* ***Interviewee No.15***

However, perceived risks represented in the effort and money spent to access ATM machines depends largely on the financial needs and the type of e-product used. These risks might increase for those holding plastic cards, designed only to facilitate convenient access to cash from the bank customers' current or saving account.

Those cardholders might find it better to access their funds through face-to face visit in the bank branch. According to those customers, time sacrifice could be better than spending both time and money in the form of visa/master charges.

Inability of internet and call baking to provide relevant information that assists customers in the selection of the best-fit financial product reduces their dependability and their expected benefits, as reported by an interviewee. He commented:

> *"Although, phone and internet banking facilitate accessing my account, they does not extend to all services, thus still visiting the bank branch is the main channel by which one can access any new information about financial products".* ***Interviewee No.8***

The inability of internet and call banking to provide the advanced financial transactions, enabling the whole package of e-banking services to stand as an alternative to the traditional way of banking through the bank branch could reduce the dependability on these services, hence their perceived benefits. This was reported by one interviewee, stating:

> ***"****I think complete dependability on e-banking services will not be there****,*** *except if there is a full diversified range of e-banking services by which acts as an alternative to visiting the bank branch, so that services are complementary and are one unit".* ***Interviewee No. 2***

Thus, e-banking services ability to provide their users with different forms of financial needs emphasizes the necessity of an integrated range of e-banking services provided by banks.

The relative importance of an integrated range of e-banking services in minimizing the perceived risks of e-banking services could depend on the type of the service and the problems experienced in using that service. For example, the perceived risks from the technical breakdown of call banking might increase in the absence of an alternative range of e-banking services able to satisfy similar financial needs. Having access to internet banking might also appear to be valuable if the e-banking user is travelling abroad and has no access to phone banking because of technical breakdown or because of limited connectivity to a particular area.

B. E-banking services security

E-banking services security is important to 20% of participants (**Figure 6.3**). For interviewees, security of e-banking services is judged by the security of using visa/master cards. The perceived security of plastic cards extends to affect their perceived usefulness and the perceived trustworthiness of other e-banking service offerings. An interviewee indicated that lack of an option to change the visa/master PIN increases the risks associated with using this type of e-banking services, stating:

> *"In our Egyptian banks if you want more security for your services, you have to be charged more as if you have to bear the security charges not the service supplier I think this extends to the e-banking services as well. For example, it is not allowed to change the PIN code of your visa or credit card to secure yourself, I think banks had to think seriously about developing security requirements if e-banking services are to develop beyond just viewing transactions and extends to provide more advanced financial needs".* ***Interviewee No.6***

However, interviews pointed to the continuous efforts made by banks to develop the security of e-banking services. They pointed to the development of security awareness in the Egyptian banks, by the tendency of banks even public banks to invent the prepaid internet visa card. This card is seen as achieving the *difficult equation* as quoted by one interviewee, by providing the acceptable level of security from using the visa card in online shopping. This card is changed by an amount of foreign exchange when used, it is recharged again. Although, it is still risky if subjected to fraud, but it is a form of controlled risk.

Although, security of both internet and call banking services might not be of critical concern under present capabilities of such services, it is expected to be of maximum concern in shaping the value of e-banking services, if the features of call and internet banking extend beyond viewing transactions to third party exchange (payment).

While financial institutions might be responsible for the perceived security of e-banking services, still part of security responsibility shared by Egyptian e-banking users. E-banking services' education and social status might shape their security awareness behaviour.

Risks resulting from failure to access e-banking services or unsecure services might extends to affect the role of e-banking services in driving bank loyalty negatively, if e-banking users perceive complaining channels as always inaccessible or unresponsiveness. Thus, effective handling of complaints through bank branch and alternative channels is valuable for minimizing the risks associated with unreliable e-banking services.

V. Complaint handling through alternative channels

Findings (**figure 6.3**) showed that complaint handling is the most important in shaping the value of e-banking services in the Egyptian environment, among 45% of

interviewees. Complaint handling through alternative channels shapes the value of e-banking services in the Egyptian environment, through two main sub-factors; perceived accessibility and perceived responsiveness of alternative complaint channels. While accessibility emphasizes the issue of technical dimension, responsiveness emphasizes the functional dimension of such channels.

In the Egyptian environment, as reported by interviewees, there are two channels through which feedback and complaints about e-banking services could be raised are: the telephone and the face-to-face interaction by visiting the bank branch.

The place and the timing of service failure might affect the perceived accessibility and responsiveness of such channels and its perceived relevancy in reducing the risks associated with e-banking services. However, usage context governs the usefulness of those channels and their role in e-banking services failure recovery. One interviewee pointed to the bad experience gained from the inaccessible and irresponsive complaint channel and its impact on the perceived risks from using e-banking services and the impact on loyalty to her bank. She commented on the situation stating:

> *"My visa stopped working while I was shopping from the U.S.A., I tried to call my bank's customer service in call banking. When I returned to the hotel, but unfortunately it was not accessible at that moment. Thus, I gave their phone number to the hotel to contact them and get me to speak with them. The hotel called the customer service on the international number, which is very costly as international calls especially from hotels are very costly. I kept calling them many times but with no answer. Really having one visa from one bank is unreliable. Then, I switched to another bank to get a more reliable visa".* ***Interviewee No.13***

Moreover, the time length of using e-banking services and exposure to previous similar service failure might emphasize the relevance of some complaint channel in minimizing the risks associated with service failure.

Accessibility of alternative complaint channels is important to minimize the time and financial risks associated with the use of e-banking services. These channels could also assist in integrating customers' voices during the process of e-banking services design.

Findings showed that some interviewees were reluctant to use e-banking services due to the absence of alternative complaint channels able to perform the tasks of the bank branch in case of e-banking services failure. One interviewee reported that lack of immediate access to alternative complaint channel during out of branch operating hours,

or when it is difficult to access the bank branch, increases the perceived risks of e-banking services, stating:

> *"In our culture, to get a quick solution to your problems telephone is not the way rather you have to go to the bank branch. I faced a problem with my ATM card before and I tried to call the given numbers after accessing them, they told me to go to my bank branch, this makes me really thought of returning to face to face and cancel it, I didn't benefit from it so I don't feel regret on not using e-banking services".* ***Interviewee No. 11***

While, accessibility emphasizes issues of connectivity and other issues of technical natures, responsiveness stands at the same degree of importance for those e-banking users experiencing problems. Responsiveness is reflected in knowledgeable customer service, and positive behaviour from customer services. So that the customer feels that the bank branch is transferred to wherever he/she is. Responsiveness of such channels and their ability to handle service failure effectively minimizes expected risks of e-banking services. It also fosters customers' trust in the ability of their bank to manage the expected problems or perform service recovery in case of e-banking services failure.

The negative impact of alternative complaint channels to handle failure of e-banking services might extend to threaten e-banking users' loyalty to the bank. This is because inaccessible alternative complaint handling channel conveys a message of customer negligence.

VI. External environmental Support

The role of external environment in shaping the value of e-banking services was raised by 40% of interviewees through two factors: social pressure effect and the role of intermediaries. The way those variables shape the value of e-banking services, through expected risks or usefulness in the Egyptian environment is discussed in the next sections.

A. Role of Social Pressure

Figure 6.3 shows that 15% of participants pointed to the role of social pressure in shaping the value and creating the need for e-banking services. The relative importance of considering social pressure in shaping the value of e-banking services could depend to a large extent on customer's previous experience with e-banking services. Interviews showed that bank customers with no experience of e-banking services in the Egyptian

environment, and those with a risk-averse attitude towards technology in general were the most to depend on the opinions of friends or family members to support their decision of using e-banking services.

The effect of social norm on behavioral intention might not be limited to the stage of awareness, but might extend to the trialability or initial adoption. For example, one interviewee reported that he used a visa card to minimize social risk and to comply with group norms, more than feeling for a real need for it, stating:

> *"I knew about the visa from my friends, who were using them while we all go out together. Since then, I recognized I should have a visa card too to provide me prestige among my friends".* ***Interviewee No. 13***

However, the transfer from the initial adoption of e-banking services to the full adoption could be a function of other factors rather than merely social pressure. Such factors might be related to a large extent to the reliability of e-banking services and their ability to provide the required financial information and needs through the way they are designed to meet all needs. Other factors could be the existence of effectiveness complaints handling. This implies that the experience with using different types of e-banking services might minimize the role of social pressure in shaping the value of e-banking services especially for those with new experience with using these services.

B. Intermediaries

Figure 6.3 supported by **table 6.2** show that role of intermediaries contributes in shaping the perceived benefits of e-banking services, in the Egyptian environment. Interviews indicated that the perceived financial benefits and time convenience are associated with the acceptance of using e-banking services in exchanging transactions.

For example, one interviewee pointed to the relationship between accepting payment with e-banking services in governmental agencies and the benefits expected from them, stating:

> *"How can I depend totally on ATM or internet banking if big companies and the government agencies do not accept them in payment! I see that it is still early for our economy to depend totally on e-banking services".* ***Interviewee No.6***

Another interviewee pointed to the place of living and its impact of expected benefits from using e-banking services, stating:

"You know I'm from a rural governorate, a visa card is not useful for me, I can't pay with them for my purchases there". ***Interviewee No.16***

This factor appeared because actually the whole system is not linked yet to the use of e-banking services in the Egyptian environment. This is due to ownership structure of shops, tele-communication availability in some areas. Interviewees pointed to the impact of linking the whole Egyptian system to e-banking services technology, on the benefits gained from using these services. These benefits could be derived if customers could perceive a substantial time saving from paying a bill through internet banking or receive a discount if paying by telephone or make online purchases. Grasping the benefits from using these services in transactional exchanges with external parties, depend also on the perceived quality of these services.

However, gaining benefits from using visa/master cards in purchases depends on the e-banking users' economic and educational characteristics. Customers who are financially well might perceive the economic benefit from using visa/master card in shopping from big malls where there are POS. Also, educated, internet skilled and financially well off customer could benefit from accessing the internet and purchase online and pay their bills if this option is offered through internet banking service.

6.5 Summary and Proposed Model

This chapter presented factors shaping the value of e-banking services in the Egyptian environment, from bank customers' perspective. These factors emerged from the analysis of interviews with Egyptian bank customers.

Finding presented three main factors shape the value of e-banking services in the Egyptian environment. ***The first factor*** mostly reflects the quality of face-to-face service especially the dimensions of empathy, assurance and responsiveness. It encompasses four dimensions: *information availability*, *bank branch features, front office employees' behaviour*, *complaint handing through alternative channel*. This major factor highlights the role of service supplier and show how it is involved in shaping the value of e-banking services in the Egyptian environment.

The second factor reflects the role of electronic services quality in shaping the value of e-banking services in the Egyptian environment. It highlights the role of *e-banking*

services' reliability and *e-banking services security* in shaping the value of e-banking services.

The third factor reflects the role of the external environment in shaping the value of e-banking services in the Egyptian environment. This factor encompasses two factors: *the role of intermediaries* and *the social pressure*.

The first two factors are deeply rooted in the relationship marketing theory. The role of the third factor in shaping the value of e-banking services reflects the role of diffusion of innovation theory in explaining consumer buying behaviour towards e-banking services. Thus, the three factors ensure that consumer behaviour theories could be combined to explain Egyptians' buying behaviour towards e-banking services in the Egyptian environment. These factors are conceptually and logically interrelated. Each one of these factors is necessary but not enough to shape the value of e-banking services in the Egyptian environment, on its own.

Those factors might not be generalizable to all bank customers in the Egyptian environment, due to the subjective interpretation underlying their interpretation. The relative importance of these factors depends on the situational and contextual circumstances in which e-banking services are offered and used in the Egyptian environment. Moreover, the relative importance of these factors is shaped by the sample characteristics presented in the chapter. These highlighted characteristics are types of banks customers deal with, and the usage pattern of e-banking services.

However, those three main factors and their underlying dimensions guided the questionnaire design in the subsequent quantitative phase. Proposed factors shaping the value of e-banking services in the Egyptian environment and their explanatory dimensions (descriptive codes) are presented in **Figure 6.6**

The next chapter is concerned with the process of designing the questionnaire, which was used in the second phase of investigating the demand side of e-banking services.

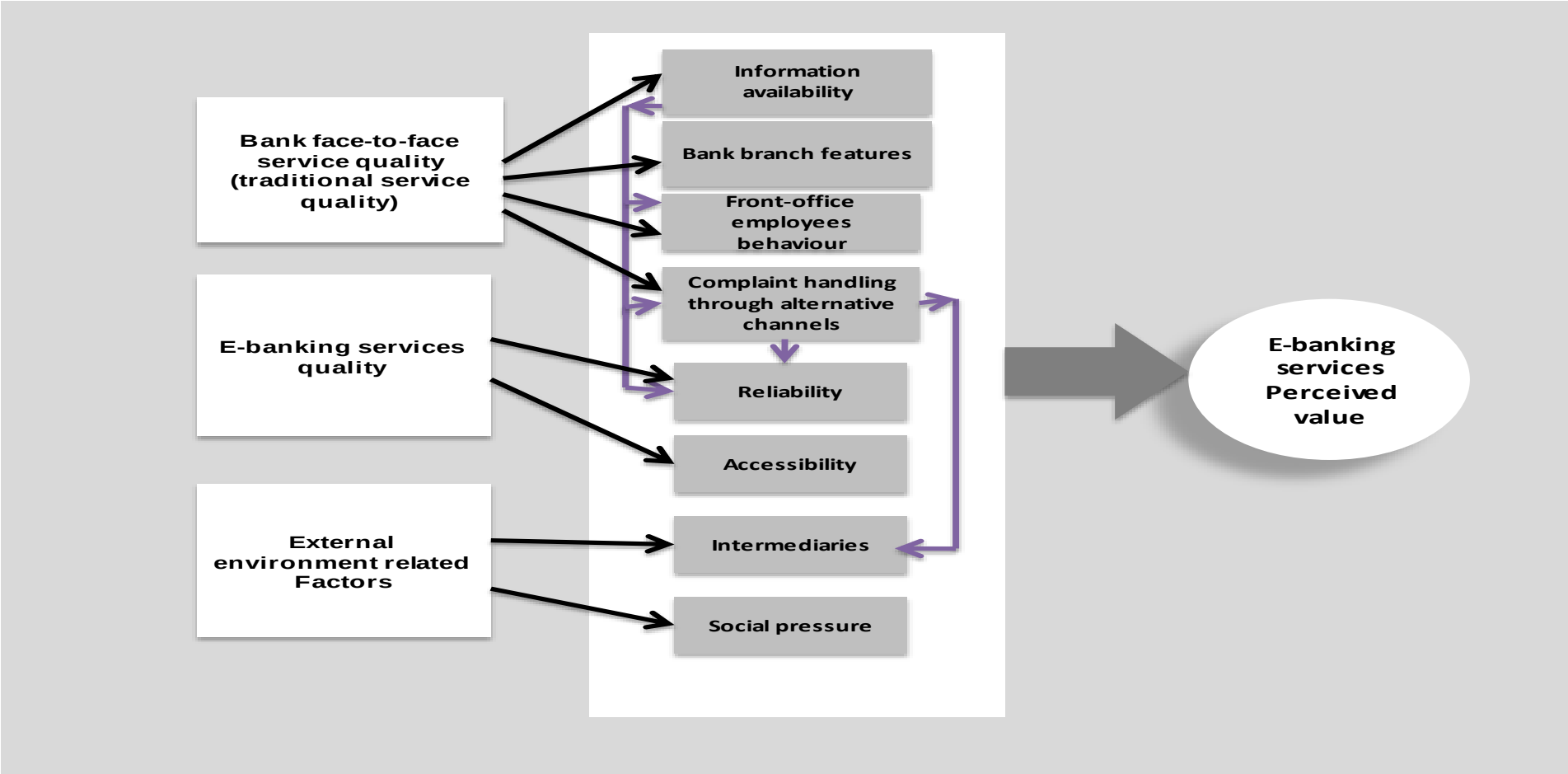


Figure 6.6: Proposed Factors shaping the value of e-banking services in the Egyptian Environment

Chapter 7

The Design of the Survey Instrument

(The Questionnaire)

7.1 Introduction

This chapter overviews the process of designing the questionnaire, used to answer the first and second research questions.

The questionnaire was used to measure the bank customers' attitude towards factors developed in the interview phase, in order to identify the antecedents of e-banking perceived value (first research question). Also, it was employed to role of e-banking services in strengthening the relationship between banks and customers in the Egyptian environment (second research question). Figure **6.1** presents the stages employed in designing the questionnaire. Although, every stage is discussed separately, all stages contribute to the validity of the questionnaire.

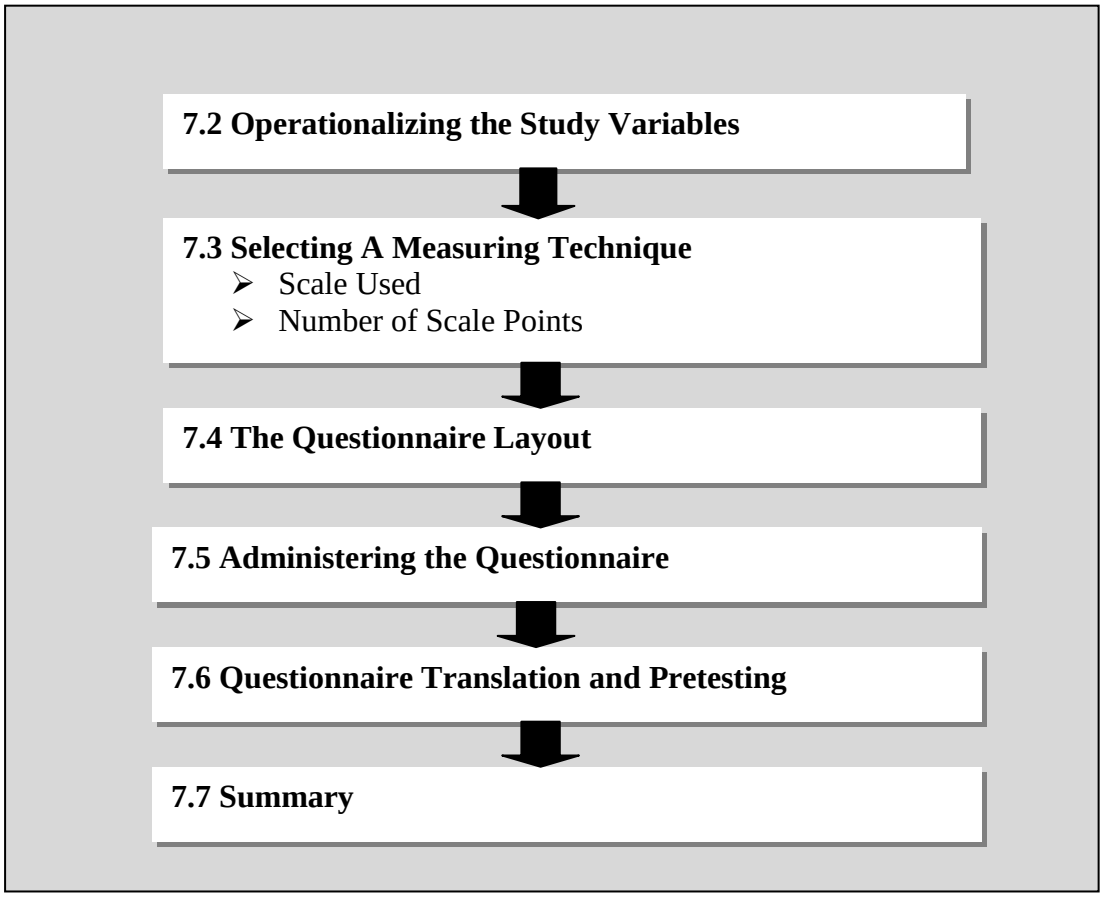


Figure 7.1: Questionnaire Design Stages

7.2 Operationalizing the Study Variables

This questionnaire explored the factors shaping the perceived value of e-banking services from a large number of bank customers in the Egyptian environment. It also aimed to explore the effect of perceived value on customers' loyalty (commitment) to their banks. The literature and comments from interviewees were used in developing attitude statements measuring the factors revealed from the interview phase. Using respondents' quotations is appropriate in exploratory studies, where the development of the questionnaire is guided by the interviews (Creswell and Clark 2007: 124).

The interview phase introduced three main factors which are expected to represent the antecedents of perceived value in the Egyptian environment. These factors are: face-to-face service quality (traditional service quality), e-banking services quality and external environmental effect. These factors expanded to identify the antecedents of e-banking services perceived value. These factors represented the independent variables while perceived value and loyalty were treated as dependent variables.

In developing the number of attitude items measuring each independent and dependent variables, two issues were considered. The first was the balance between the questionnaire length and its effect on the non-sampling error resulting from non response rate. The second was generating a sufficient number of items to represent factors generated by interviewees in the interview phase.

There is no rule guiding the number of items per factor. However, there is a consensus that using a multi-item scale increases the reliability of the construct and reduces measurement error (Churchill 1979: 66; Churchill and Peter 1984: 364; Marsh *et al.* 1998: 213; Hinkin 1998). Accordingly, a multi-item scale measured the independent and the dependent variables, representing the core part in the questionnaire.

There is debate about the effect of using the reversed worded items in the wording of attitude statements. Some researchers, such as Jayawardhena (2004), preferred not to use reversed worded items. However, there is no clear evidence on the effect of reversed worded items on the reliability of the constructs (Churchill and Peter 1984).

Advocates of using reversed-worded statements view that using them in developing the questionnaire reduces the response bias (Churchill 1979; Field 2009: 675). Others

support the use of the reversed worded items, believing in their ability to reveal more information and to attract the respondent's attention to think about the meaning behind the questionnaire items (Herche and Engelland 1996). Moreover, it is argued that using reversed worded items enables the researcher to distinguish between those respondents who took care in reading the questionnaire from those whom were careless in answering the questionnaire (Drolet and Morrison 2001).

In generating attitude statements measuring independent and dependent variables, reversed statements were used for the purpose of double checking other statements and ensuring careful reading of the questionnaire. However, in consideration of respondents' time, the number of the reversed worded items was restricted to approximately 20% of total questionnaire items, measured on Likert scale.

7.2.1 Independent Variables: Antecedents of Perceived Value

This section introduces the generation of items measuring the expected independent variables. Independent variables represent the factors shaping the value of e-banking services in the Egyptian environment, guided by the exploratory interview phase. Exploratory interviews revealed three main factors expected to form the independent factors shaping the perceived value of e-banking services in the Egyptian environment. These factors are: face-to-face service quality (traditional service quality), e-banking service quality and external environment support.

Several reasons have created difficulty of adopting a specific service quality model whether in face-to face (off-line) service quality or in e-banking services quality. They are:

- The subjective interpretation of quality dimensions resulting from analyzing exploratory in-depth interviews.
- As discussed earlier in **chapter 3**, section **3.6.2**, there is no agreement on a scale for measuring off-line face-to face-service quality. The same disagreement extends to scales measuring e-service quality.
- The differences in culture, forming the context in which service is delivered and used, proved to affect the relative importance of some quality dimensions

(Donthu and Yoo 1998; Espinoza 1999). This creates difficulty in importing a quality model to measure the quality of the same service to different cultures (Furrer *et al*. 2000).

- Moreover, the difference in the definition of e-banking services adopted in this research and the e-banking services in the western culture, usually referred to as *internet banking*, creates difficulty in adopting one of the models measuring e-services quality.

In designing questionnaires informed by interviews, it is recommended to use codes to express themes representing the larger scales (Creswell and Clark 2007). Accordingly, several sources were used o generate items representing the main themes: face-to-face service quality, e-banking service quality, and external environmental support. These sources are literature on quality models, guided by the inferential codes revealed from the qualitative exploratory phase. These codes are information availability, front line employees' behaviour, bank branch features, complaint handling, service reliability, and e-banking services security. To generate statements representing the external environment support, interviews quotations and attitudinal models discussed in previous studies were used.

7.2.2 Dependent Variables

In this quantitative study, two dependent variables are recognized:

I. Perceived value (the mediating variable)

The concept measuring *perceived value* in general was adopted from previous studies, which measured the value of the product or service value by comparing the benefits against risks or monetary price (cost). However, attitude statements adopted were adapted to reflect the value of e-banking services in the Egyptian environment.

Accordingly, some attitude statements were adapted to compare the benefits of the e-banking services to the bank branch as an alternative means of accessing the financial service. Others measured the perceived benefits against perceived risks of e-banking services in the Egyptian environment. For example, the phrase *other competitive companies* in Yang and Peterson's study (2004), has been replaced by the phrase *bank branch*.

I. Loyalty: the consequence of perceived value

Behavioural measures of loyalty represented by repeated purchases were seen as insufficient to capture the logical reasons behind loyalty (Bloemer *et al.* 1999). Thus, willingness to recommend was added to loyalty indicators to represent the attitudinal aspect of loyalty (Bloemer *et al.* 1999). Word of mouth or recommendation behaviour is seen as powerful in shaping the expectations of potential customers (Anderson *et al.* 1994). Willingness to invest with the same supplier or sometimes called re-patronage behavior considers satisfaction in account (Hallowell 1996) Expressing loyalty from the customers' perspective as attitude-behaviour relationship provides more insight to its antecedentss (Dick and Basu 1994). Keiningham *et al.* (2007) concluded that depending only on recommendation intention (word of mouth) failed as a measure of customers' future loyalty behaviour. Accordingly, behavioural intentions accompanied with repurchase commitment, word-of-mouth and recommendation intentions together, are viewed to be the best indicators for loyalty, which is regarded as ***action loyalty*** (Oliver 1999). Similarly, Zeithaml *et al.* (1996) viewed that behavioural intentions towards the service or the service supplier are representative of actual behaviours. However, the number and the wording of scale items measuring loyalty differ among studies.

It is argued that using two separate scales; re-patronage intentions and word-of-mouth, to measure loyalty provided better measurement for loyalty than depending on a scale made of a cocktail of the two indicators mixed together (Soderlund 2006). Similarly, Bendall-Lyon and Powers (2004) employed two separate scales for measuring loyalty; the economic behavioural scale measured through re-purchase patronage, willingness to pay more and switching behaviour, and the social behavioural intention was measured by word of mouth and recommendation.

However, the majority of previous studies measured loyalty through re-patronage behaviour, word of mouth and recommendation intention mixed in one scale (Zeithaml *et al.* 1996; Bloemer and Ruyter 1999; Cronin *et al.* 2000; Polatoglu and Ekin 2001; Sirdeshmukh *et al.* 2002; Anderson and Srinivasan 2003; Roberts *et al.* 2003; Lam *et al.* 2004; Yang and Peterson 2004; Parasuraman *et al.* 2005; Leverin and Liljander 2006; Floh and Treiblmaier 2006). Also, since one of the concerns of this research is to measure the impact of e-banking services on driving bank loyalty, an attitude item reflecting sacrifice was added to the items measuring loyalty (commitment) as in Ryssel

et al. (2004). Accordingly, loyalty was measured using three main indicators: sacrifice, willingness to invest (re-patronage behaviour) and word of mouth (recommendation intention). However, items reflecting such indicators were adapted to measure the impact of e-banking services on bank loyalty.

7.2.3 Other Variables (Control Variables)

These variables representing the profile of the sample include age, socio-economic status expressed by education level and income level. Although, multiple measurements such as education level, income level, place or residence, computer ownership and internet access were used in previous studies to capture socio-economic status[28], not all of them were used in this study. This is because, some factors are considered to be poor indicators of the socio-economic profile in the Egyptian environment.

For example, place of residence inside greater Cairo might not be a precise indicator of the social status in the Egyptian environment. Moreover, place of work could in some cases be misleading to judge the socio-economic status. For example, although, university lecturers possess high qualifications and enjoy the highest education level, they are classified as a limited income group that barely falls into the middle income segment. In conclusion, Egyptian society is full of contradictions, so that no precise judgement could be drawn from a definite set of indicators. Therefore, the study confined itself to three main, widely used socio-economic and demographic indicators; age, income and education. Those three indicators have been a source of argument in the literature of e-banking services.

The age categories started from 21 years, which is the minimum allowed legal age to be a bank customer and deal officially with a bank. Education categories included started from the bachelor or an equivalent degree for several reasons. The minimum education level for holding a permanent job as a university staff or in joint venture companies is a bachelor degree. The second reason was to eliminate the impact of uneducated or poorly educated on the perceived value of e-banking services.

[28] Such studies are for instance: Gounaris and Koritos, 2008; Lichtenstein and Williamson, 2006; Kaynack and Harcar, 2005*; Jaruwachirathanakul and Fink, 2005; Tan and Teo, 2000

The monthly income categories started with 1000-less than 3000 L.E. as a minimum income. 1000 L.E. is close to the average gross national income per capita reported by the World Bank in 2008 is 1800 US dollars[29], equivalent to 9900 annually and 825 L.E monthly.

Also, relationship length with the bank, usage pattern of e-banking services and bank selection variables were placed in the questionnaire for the aim of understanding the context in which the perceived value of e-banking services and impact of e-banking services on bank loyalty could be maximized.

These variables are represented in the first and third sections of the questionnaire. Involving such variables in the analysis aimed at understanding the context under which e-banking services affect bank loyalty. These variables were employed in the analysis to understand the context in which e-banking services value added model derived from the demand side is achieved. **Table 7.1** summarizes the main variables included in the study and their origin from literature.

[29] http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf September 2009

Table 7.1: sources of items measuring the main constructs in the questionnaire[30]

Question number in the questionnaire	Factors	Detailed Factors	Items Number	Adopted and Adapted from the following sources
Section 2 question 1 Independent variables	Face-to-face service quality Or traditional service quality	Information availability complaint Handling Bank branch Features	Items 21, 20, 28, 31	Parasuraman *et al.* (1991)
			Items 1, 6, 30and 32 ,33	Blanchard and Galloway (1994)
			Items number 16and 17	Tax *et al*. (1998) , Snellman and Vihtkari (2003)
			Item number 29	Levesque and McDougall (1996)
	E-banking services quality	Reliability And design	Items 11 and 13	Waite and Harrison (2004)
			Items 38 and39	Blanchard and Galloway (1994)
			Items 37 and 47	Lertsatwatana (2003)
			Items 45 and 48	Jayawardhena (2004)
	External environment	Intermediaries and Social pressure	52 and 55	Gerrard and Cunningham (2003)
			56, 57, and 59	Lertsatwatana (2003)
Section 2 question 2 Dependent variable	Perceived value		6 items	Yang and Perterson (2004) Cronin *et al*. (2000)
Section 2 question 3 Dependent variable	Loyalty		7 items	Yang and Peterson (2004) Parasuraman *et al.* (2005) Ryssel et al. (2004)
***Other items not adopted from literature were guided by the interviwee quotes presented in chapter 6**				

[30] The questionnaire is presented in appendix 3

7.3 Selecting A Measurement Technique

Since the main aim of the questionnaire was to measure the intensity of e-banking customers' attitudes towards the independent and dependent factors, closed questions were used. Closed questions allow respondents to select among a set of given alternatives. This was done to save respondents' time for ensuring maximum cooperation.

In measuring the attitudes against factors developed in table 6.1, a rating scale was used. The next section justifies the type of scale used and the number of scale points employed.

7.3.1 Scale Used

Attitudes could be measured on several rating scales (Oppenheim 1992). However, Oppenheim (1992) argued that Likert scale is the best to use if the aim is to study an attitude pattern (i.e to measure the intensity of feelings or agreement towards established concepts). The Likert scale is known as a uni-dimentional scale. It cannot be used to do paired comparison (Oppenheim, 1992). It is designed to measure one factor in one group at a time.

Using a Likert scale is popular throughout studies measuring attitudes or satisfaction for the simplicity of its design (Oppenheim, 1992; 200). It provides a wide range of choices through its rating scale ranging from extreme agreement to the extreme disagreement, which provides a precise measure of the respondents' level of agreement (Oppenheim, 1992; 200). Malhotra, *et al.* (1996; 21) argued that verbal rating is much easier to understand. In this study, Likert scale was employed to measure the attitudes by ticking the degree of agreement versus disagreement towards the items representing the independent and dependent factors. Also, all the scale points are verbalized.

In using Likert scale, there is a debate on whether to employ an even scale or an odd scale with a neutral point. Advocates of employing an odd scale with a neutral point, argue that it provides freedom for respondents and does not force them to record a certain negative or positive attitude (Bradley 2007: 209). Hawkins and Tull (1994: 287) emphasized the importance of including a neutral point if the subject under discussion is

new or hits a private issue, so that respondents might be unwilling to provide an answer. Also, a neutral point could be used by respondents who do not have a specific opinion which could be rated on one of the two extremes of the scale. There was no evidence that employing a scale with a neutral point affects the reliability of findings (Churchill and Peter 1984). Malhotra (2006: 106) added that there is no clear evidence on the biasing effect of the neutral point, stating:

> *"Little research is available about the biasing effects of midpoint responding, but it appears that except possible in cases in which comparisons between individualistic and collectivistic culture are of interest, use of midpoint is less problematic than the other response styles"*.

Therefore, the rating scale adopted, had a mid-point between the two extremes. This mid-point was labelled **'neither agree nor disagree'** which is synonymous to **'neutral'.** The inclusion of a neutral point allowed those respondents with neither a strong negative nor a strong positive opinion, because of their recent experience with the service, to take a part in the survey, rather than skipping parts of it. However, controlling the use of the neutral point by respondents requires careful selection of the scale with an appropriate number of points representing response alternatives (Cox III, 1980: 420).

7.3.2 Number of Scale Points

Likert scales can range between three and nine points. Deciding on the appropriate number scale points is an issue of debate among researchers. It is argued that there is no best number of scale points, which is appropriate under all circumstances, in all research (Cox III 1980). However, it is believed that scales of two or three are insufficient to transmit enough information and to permit appropriate unbiased selection, while more than nine points are seen to be of minimum benefit to the quality of choices given (Cox III 1980). Although, a nine-point scale is theoretically acceptable in measuring attitudes, seven or five-points scales are the most commonly employed in previous studies.

The number of scale points debate extended to discuss the effect of scale length on response accuracy, measurement validity and measurement error. In a study aimed at evaluating the effect of scale points, ranging from 2 to 20, on construct validity and residual error, longer scales were found to produce higher data quality and improve the validity of measurement, and simultaneously decrease the residual error (Andrews

1984). However, Weathers *et al.* (2005) argued that the use of a shorter scale improves response accuracy and improves the validity of the measurement tool, but, reduces measurement reliability.

A five-point scale could be sufficient to achieve easy and accurate understanding of the scale differences, thus, increasing the response rate and reducing non-response error, while increasing the reliability of the study results.

Non-response error is viewed as one of the components of non-sampling error, which affects the total survey error, and the reliability of survey results (Assael and Keon 1982). Similarly, Brace (2004: 82) asserted that a five point scale is sufficient to produce the required discrimination and is easy to understand. Aaker *et al.* (1998: 313) also, maintained the same view, stating;

> *"As a general rule, the range of opinion on most issues can be captured best with five or seven categories. Five categories are probably the minimum needed to discriminate effectively among individuals".*

Table 7.2 shows that a five-point scale is the most appropriate when self-completion is employed in administering the questionnaire, or when the sample involve individual customers who might vary in their degree of education, and hence, their interpretation and understanding of the slight differences among scale points.

For considerations related to the self-completion manner of administering the questionnaire, the time of the respondents, reducing the non-sample error and the response rate sought, a five-point scale was used to measure attitudes towards the predetermined independent and dependent factors in the Egyptian environment.

Table 7.2: Scale points and ways of administering the Questionnaire

	Way of administering the questionnaire	
Scale points	**Interviewer-based questionnaire**	**Self-Administered questionnaire**
Five points scale	Shemwell, *et al.* (1998) Ratten and Ratten (2007) Walker *et al.* (2002) Chen and Chang (2005) Pikkarainen *et al.(*2004)	Chen and Dubinsky (2003) Yang and Peterson (2004) Leverin and Liljander (2006) Colgate and Hedge (2001) Mukherjee and Nath (2003) Herington and Weaven (2007) Herington and Weaven (2009)
	Samples in those studies that used five-point scale and employed self administered questionnaires were mainly individual bank customers or internet users. Due to the differences in their education level and other qualifications, that might affect their understanding of the questionnaire and of the differences among the scale points. A five-point scale was used to match the sample qualifications and to elicit a relatively high response rate.	
Seven Points scale	Wan *et al.* (2005) Caruana *et al.* (2000) Dabholkar and Bagozzi (2002) Wang *et al.(*2003) Sweeney *et al.* (1999) Cornin *et al.* (2000)	Hsu and Chiu (2004) Jaruwachirathanakul and Fink (2005) Patterson and Spreng (1997) Ryssel *et al.* (2004)
	Samples in those studies that used a seven-point scale with self-administration were competent to understand the questionnaire and realize the differences among the scale points. They were: employees in top companies in Hsh and Chiu (2004), office workers in large organizations and who are possibly internet users in Jaruwachirathanakul and Fink (2005), clients of three consultancy firms who comprised public and private clients in Patterson and Spreng (1997), customers of an audit firm in Caruana *et al.* (2000) and employees in IT based intensive industries in Ryssel *et al*. (2004)	

7.4 The Questionnaire Layout

There is no one best way to arrange the questionnaire sections. The final sequence is determined by the culture in which the survey will be done. Similarly, Oppenheim (1992: 112) argued that the decision about the sequence of questions in the questionnaire depends on both the expected survey problems and the result of the pilot study. However, the general approach for questions arrangement, known as ***funnel sequence*** was followed. Funnel sequence is defined by Parasuraman *et al.* (2004: 330) as;

> *"A funnel sequence begins with a very general question on a topic, gradually leading up to a narrowly focused question on the same topic"*

The order of the questionnaire sections leads the respondent smoothly to gain respondents' cooperation throughout the questionnaire. The section order and the length of the questionnaire seemed acceptable in the pretesting phase, after translating it into the Arabic language.

The questionnaire has three main sections. The three sections were linked in the analysis phase to answer those research main questions related to the demand side.

Section one included general questions aimed at understanding the context in which e-banking services perceived value antecedents and consequence emphasized. These questions were concerned with the criteria for selecting banks in the Egyptian environment, the duration of the customer with the bank and the means of accessing financial needs.

Section two measured attitudes towards the factors derived from the interview based phase and supported by the literature: bank face-to-face service environment, e-banking services quality and external environment related factors. In this section, the researcher was concerned with measuring the intensity and direction of attitudes. Attitude statements were constructed in such a way as to predict the respondents' behaviour towards e-banking services, through reflecting on their experiences with e-banking services or the banking institution itself.

Section Three described the sample profile in terms of socio- economic status. Whilst, not the main objective of the analysis, the data resulting from this section will enriched the quantitative analysis, by providing more insights into the conditions under which the relationships in the predetermined model would be determined. **Table 7.3** summarizes the objective behind each section included in the questionnaire.

Table 7.3: Questionnaire Sections

Section	objective	source
First	Includes general questions aimed at understanding the context in which e-banking services perceived value antecedents and consequence emphasized.	qualitative phase and Literature
Second	It is the core part of the questionnaire. It aimed at exploring the antecedentss and consequence of e-banking services perceived value from a larger sample of bank customers. This section is developed in the light of both literature review and exploratory interviews.	Literature and exploratory interviews
Third	To describe the socio-economic and demographic characteristics of the sample. This section helps in understanding the extent to which the consequence of e-banking services value could be generalized.	Literature

7.5 Administering the Questionnaire

The way of delivering the questionnaire affects both the response rate, and the way the questionnaire is designed. The method of designing the questionnaire depends on the way in which the questionnaire will be delivered, and the medium that will be used.

Questionnaires could be delivered either by structured interviews or self-administered. In the latter case, respondents complete the questionnaire without interference from the researcher.

There is no one best way of delivering the questionnaire to achieve an acceptable desired response rate, with minimum bias. Each way has its benefits and disadvantages. However, Synodinos (2003) argued that the best way depends on the researcher's time, budget and the objective behind the questionnaire. Also, it might depend on the statistical analysis sought.

In this research, the self- administered or self-completion questionnaire was employed to collect data from the target respondents. Self-administered questionnaires suffers low response rate, especially when combined with random sampling. However, in case of adopting non-probability sampling, self-administered questionnaire could be the most appropriate to achieve a compromise between achieving a relatively acceptable response rate in less time and with minimum budget. Bryman and Bell (2003: 142) added that self-completion is more convenient for allowing respondents flexibility of time to complete the questionnaire.

The self-administered method of delivering the questionnaire has frequently been used in studies measuring attitudes towards internet banking or banking delivery channels. Some of them used the internet as a means of delivering self-administered questionnaires, others used mail, and the rest employed the traditional way of delivering the questionnaire to the respondents and collecting it afterwards.

In this study, questionnaires were delivered mainly by hand to respondents, through drop and collect strategy. This was the most appropriate strategy in administering the questionnaire in the Egyptian environment to the target sample for several factors:

- To allow respondents sufficient time to read and answer the questionnaire.

- To secure an acceptable response rate with a minimum number of unusable questionnaires.
- To secure the best possible cooperation from respondents in minimum time and at the lowest cost.

7.6 Questionnaire Translation and Pretesting

Brace (2004: 99) pointed to the importance of wording the attitude statements, stating:

> *"No matter which scale is used, one crucial factor to get right is the wording of items against which the attitude is to be measured".*

In an attempt to validate the questionnaire to ensure that it measures what it intends to measure. This was done through translating and pre-testing the questionnaire.

7.6.1 Questionnaire Translation

The questionnaire was translated into Arabic language to be understood by Egyptian customers. This assisted in eliminating any ambiguous meaning that might arise from answering the questionnaire in English. Also, this might have contributed in increasing the response rate. Translation started after the first phase of pretesting, to reach the best appropriate, clear version in Arabic.

Although, there is no common set of procedures for translating questionnaires or even evaluating the quality of translation (Harkness *et al.* 2004: 454), translation and back translation is a widely used technique in cross-cultural research (Malhotra *et al.* 1996: McGorry 2000; Yoo and Donthu 2001). Accordingly, it was used in translating the questionnaire and evaluating the translation.

In translation or back translation, the main concern was not the words, but rather, the meaning behind these words. This was to ensure that the source and the target language questionnaires provide the same meaning for the same questions if read by anyone who has mastered the two languages. Bilingual researchers were consulted in the translation and back translation phases.

Translation from the source questionnaire developed in English to the target language Arabic version was done with the help of an Egyptian PhD researcher in a U.K. university. In translating the source to the target, Arabic, language questionnaire,

difficulties appeared in getting the exact word to reflect words such as brochures, prestigious, would. To solve the conflict of the translation of these words, an English-Arabic translator was consulted.

After consulting translators in English-Arabic Language, awareness was gained that an auxiliary verb such as **would** could have different meanings in Arabic. Sometimes, it reflects the future, while in other situations it reflects the present tense, depending on the intended meaning behind each sentence. After reaching the final form of the Arabic questionnaire, back translation started to take place.

The back translation phase involved translating the Arabic version into English version. This was done with the assistance of a colleague who is proficient in both languages. Then the two versions, the source and the back translated questionnaires, were compared against the Arabic version with the help of another colleague studying PhD in the U.K. This step was done to determine the most suitable English statement that best reflected the Arabic one. The evaluation criteria used were not based on the exact English words as those in the source questionnaire, but rather, those which captured the intended meaning. Although, the manner of wording differed, no great differences were found in the meaning between the source English version and the back-translated English version. Pre-testing the English version of the questionnaire assisted in removing ambiguity by suggesting the addition of some examples to clarify the intended meaning. Moreover, piloting the translated version on a wider scale removed any ambiguity caused by the English language and reduced the average time to answer the questionnaire from 25 to 15 minutes.

7.6.2 Pretesting the Questionnaire

Pretesting is sometimes called piloting. Pretesting or piloting the questionnaire means testing the questionnaire with the aim of reaching the best possible questionnaire design, to increase the validity of the research and improve response rate (Wilson and Sapsford 2006).

There is a consensus on the importance of pretesting as an initial stage before launching the questionnaire on a large scale to the target sample. This was justified by Bryman and Bell (2003: 170), who asserted that the importance of pretesting increases when the questionnaire is self-completed due to the absence of an interviewer who might clarify

ambiguous words or meanings in the questions. Parasuraman *et al.* (2004: 334) argue that there are no specified rules for the number of pre-tests. However, it is recommended that questionnaire pretesting passes through two stages; the informal and the large scale stages (Brace 2004).

The questionnaire was therefore subjected to two pretesting phases, which were complementary to improve the quality of the questionnaire and increasing its validity. The first phase of pretesting aimed at reaching the best form of the questionnaire in English, which would facilitate translation and minimize any misunderstanding. Pretesting at this phase was done with the help of four Egyptian students studying PhD in different fields, different years of study and at different universities in the United Kingdom. They were allowed to write down their comments freely on a separate sheet or beside the questions in the questionnaire, as recommended by Brace (2004: 169).

To remove any ambiguity in translation or any inconvenience resulting from the length of the items, a wider-scale piloting of the translated questionnaire, the Arabic version, was undertaken in the second phase. This was done by testing the questionnaire on nine respondents of a similar profile to the target sample, and not intended to be part of the target sample. These respondents were bank customers with education levels varying from bachelor degree to PhD degree. The nine selected respondents were allowed to complete and review the questionnaire without any interference from the researcher. The objective of the second phase was to evaluate the Egyptian customers' understanding of the intended meaning beyond each sentence, to pinpoint the quality of sentence structure and finally to determine the average time of responding to the questionnaire. The outcome of the pretesting phase reflected in respondents' comments, was valuable in arriving to the final form of the English version and the Arabic questionnaire.

As a result of pre-testing the questionnaire in this phase, some English expressions were added beside their corresponding Arabic words in the Arabic questionnaire, to eliminate any misunderstanding. For example, **PIN number** and **ATM** were written besides the corresponding English word was written beside the Arabic word. **Table 7.4** summarizes the outcome of the first phase of pretesting.

Table 7.4: Outcome of the pretesting phase

Number of question	Before pretesting	After pretesting	Reason for the change
Section 1 No.1	Private	Non-Public sector banks	Not to confuse those who are multinational bank members. Thus, it was changed to include private local, private non-Egyptian and multinational banks.
Section2 Item no. 5	leaflets	Leaflets (brochures)	To fit those respondents who might use either of those two words.
Section2 Item no. 41	It is not secure to rely on one visa/credit card from one bank	Relying **only** on one visa/master card from one bank cannot secure my financial needs	Adding **only** to the wording makes it more understandable and clearer in translation.
Section2 Item no.37	Using visa/master card is reliable	I cannot rely on my card to withdraw money when needed	This is much easier in translation
Section2 Item no. 60	It is not applicable to pay utility bills online	It is not applicable to pay utility bills **(e.g. water, electricity or gas)** online	More understandable, clear and facilitate translation.
Section 2 Question2 Items no. 2 and 5	The word: promised	The word: expected	To be more understandable for those translators non- specialized in marketing.
Section 3 Question 3	2 categories	3 categories A category of **post graduate diploma certificate** has been added	As they represent a large category among Egyptians are holders of Diploma and Diploma programmes are included in the postgraduate programme in all universities.
Scale arrangement	The five-point scale started with strongly agree up till strongly disagree	The scale points were reversed and started from strongly disagree up to strongly agree	This is much easier for Egyptian customers to answer as they are used to see the scale arranged by the suggested way.
Adding titles to a number of questions	Items expressing face-to- face service environment were not separated.	Items expressing the organizational related factors were separated through placing a title for each set of related statements.	This was recommended by respondents engaging in the first phase of pretesting. They claimed that putting titles and subtitles makes the questionnaire seem shorter and introduces the items to the respondents.
Demonstrate the meaning of the measurement scale Question 4 Section 1	Moderately and heavily was not explained	The meaning of moderately and heavily was explained as a part of the question title	This was recommended to remove any ambiguity that might occur between the words: moderately and heavily

7.7 Summary

This chapter illustrated the stages undertaken to develop the questionnaire used to answer the first and the second research questions. The first question is concerned with determining the antecedents of e-banking services perceived value in the Egyptian environment. The second research question is concerned with exploring the impact of e-banking services perceived value on bank loyalty.

The design of the questionnaire started by operationalizing the factors revealed from the in-depth interview phase and thought to affect the value of e-banking services in the Egyptian environment. These factors are: face-to-face service quality (traditional service quality), e-banking services quality and external environmental support. Then, a five points Likert scale was employed to measure the intensity of attitude against these attitude items representing above mentioned factors. Lastly, translation and piloting the questionnaire was undertaken as part of the questionnaire design process. This was done mainly to validate the attitude statements for the Egyptian culture to increase the response rate and reduce the non-sampling error resulting from the non-response error.

Each stage in the process of designing the questionnaire contributes to improve the validity of the questionnaire to the research. For example, a five points Likert scale was the most appropriate to the Egyptian culture and the type of respondents, in order to minimize the non-response error.

Discussion showed that questionnaire design stages are interrelated. Each stage is necessary but not sufficient on its own to secure a clear, understandable and valid questionnaire.

While, this chapter was concerned with process of designing the questionnaire, chapter nine is concerned with presenting the results of the quanititative study concerning the second phase of investigating the demsnd side of e-banking services. The next chapter overviews the statistical techniques employed to analyze data revealed from the questionnaire.

Chapter 8

Overview of the Statistical Techniques Employed

8.1 Introduction

This chapter overviews the main statistical techniques employed in analysing the quantitative data resulted from the survey, to answer the first two research questions. The first question is concerned with determining the antecedents of e-banking services perceived value in the Egyptian environment, while the second research question is concerned with exploring the effect of e-banking services perceived value on bank loyalty.

8.2 Statistical Techniques Employed

Both bivariate parametric and non-parametric techniques and multivariate parametric techniques were employed to answer the first two research questions. The selection of the appropriate technique was based on the nature of the scale measuring the data, the normality of the data distribution, and the linearity of relationships between items to be measured (Bryman and Cramer 2005: 144; Field 2009). **Table 8.1** presents the statistical techniques employed in this research.

Table 8.1: Statistical techniques employed and their purposes

Statistical techniques		Use of the technique	Uses in this research
Bivariate Statistical techniques	**Kruskall-Wallis test**	It allows the comparison among three or more groups on a metric continuous variable	It was used to explore the relationship between customer socio-demographic characteristics and perceived value of e-banking services. Also, it was employed to test the differences between visa/master card users concerning e-banking value drivers to enrich the discussion
	Jonckeere test	It is used to test for the differences between the medians of groups involved in the analysis. It provide extra information about the trend in the data. It tests whether the order of groups based on their median is meaningful and provides any observable trend.	The Jonckeere test was employed after the Kruskall-Wallis to test the trend of the relationship between each of age, education and income on the perceived value of e-banking services. It was also used to test the trend of the relationship between e-banking services usage pattern and e-banking services value drivers.
	Independent samples t-test	It is employed when it is required to compare between the mean score of two different groups. Independent samples t-test is used when there is a need to compare between two different groups on one or more continuous variables.	It was used to test the existence of any differences between the e-banking services users: ATM, call banking and internet banking concerning the six e-banking value drivers. An independent-samples t-test was employed instead of ANOVA to look for the existence of statistical differences concerning the six e-banking value drivers (antecedents) [31] and the perceived value of e-banking services, between the two types of banks: public and non-public banks.
	Bivariate correlation	It is employed to inspect the significance, the strength and the sign of the relationship between each of the independent variables and the dependent variable.	It was employed to inspect the significance, the strength and the sign of the relationship between each of the independent variables and the dependent variable.
	Simple regression	Simple linear regression summarizes the causal relationship between two variables. It is used to test the casual relationship between each independent variable and the intended dependent variable. Also, it is used to explore the homoscedasticity (equality of residuals of variances) for each of the independent variable against the dependent variable.	Simple linear regression was undertaken for inspecting the causal relationship between value and loyalty. Also, it was used to inspect the causal relationship between the six e-baning value drivers and the value of e-banking services.
Multivariate statistical techniques	**Exploratory factor analysis (EFA) using Principal component analysis PCA**	EFA is the best to use when there is little empirical evidence supporting the number or nature of factors measured in the questionnaire. EFA is recommended when the purpose is to identify those constructs (factors) revealed from data. Principal component analysis (PCA) is used to extract factors explaining relationships in the data.	Lack of empirical evidence and the absence of prior studies in the same topic, from which the number and the nature of factors could be formed, created the need for using EFA to explore the number and structure of those independent factors (e-banking value drivers), of importance to the Egyptian bank customers. EFA using PCA was used for extracting those relevant factors believed to represent the independent factors affecting the perceived value of e-banking services.
	Stepwise Regression	Is a type of multiple regression. It suits exploratory studies. It is used to test the ability of a set of independent variables in predicting the changes in the dependent variable. It is used to decide on the best variable that can predict the dependent variable.	Since there are no previous similar studies from where inferences could be drawn and hypotheses could be tested, this makes the study exploratory .In this study, stepwise regression was used to explore the ability of e-banking services value drivers to predict the value of e-banking services. Also, it was used to decide on that independent variable responsible for the most variance in the ***perceived value of e-banking services.***

[31] The six e-banking value drivers: *service environment in the bank branch*, *information availability*, *complaints handling through alterative channels*, *reliability of cards usage*, *e-banking services design* and *role of intermediaries*

8.2.1Bivariate statistical techniques employed

I. Kruskall-Wallis test

Since, the socio-demographic groups violated the assumption of equality in variances and were unequal in size, which could bias findings, a non-parametric test, the Kruskal-Wallis test was employed instead of ANOVA, to explore the relationship between customer socio-demographic characteristics and perceived value of e-banking services. Also, it was employed to test the differences between visa/master card users concerning e-banking value drivers to enrich the discussion.

Kruskall-Wallis test is a non-parametric alternative to ANOVA. It allows the comparison among three or more groups on a metric continuous variable (Pallant 2007: 226). Similarly, Field (2009: 374) recommends employing Kruskall-Wallis instead of ANOVA, under the previously mentioned situations, stating:

> *"Post hoc tests----------.The good news is that most multiple comparison procedures perform relatively well under small deviations from normality. The bad news is that they perform badly when group sizes are unequal and when population variances are different."*

II. Jonckeere-Terpstra Test

It is used to test for the differences between the medians of groups involved in the analysis (Field 2009: 568). The Jonckeere-Terpstra test is conducted after Kruskall-Wallis test. Although, it is viewed as similar to Kruskall-Wallis test, it provides extra information about the trend in the data. It tests whether the order of groups based on their median is meaningful and provides any observable trend.

For example, although, the kruskall-Wallis test detects the existence of any significant differences between age groups regarding perceived value of e-banking services, Jonckeere-Terpstra test detects whether the trend is increasing, indicating that the higher the age the more favourable is the perceived value of e-banking services.

The Jonckeere test was employed after the Kruskall-Wallis to test the trend of age groups, education and income groups on the perceived value of e-banking services. It was also used to test the trend of the relationship between e-banking services usage pattern and the six e-banking services value drivers.

III. Independent samples t-test

The independent-samples t-test is a parametric test, employed when it is required to compare between the mean score of two different groups (Field 2009).

Independent samples t-test is used when there is a need to compare between two different group on one or more continuous variables (Pallant 2005).

This test was used in several situations. It was used to test the existence of any differences between the e-banking services users: ATM, call banking and internet banking concerning the six e-banking value drivers.

Since banks in the Egyptian environment are classified into two categories; public and non-public banks, an independent-samples t-test was employed instead of ANOVA to look for the existence of statistical differences concerning the six ***e-banking value drivers*** (antecedents) and ***the perceived value of e-banking services***, between the two types of banks.

Although, normality of data and homogeneity of variances are required to run independent sample t-test, violating the assumption of homogeneity of variances does not undermine the findings (Pallant 2005: 198). An independent samples t-test usually displays two results for the same test, one of which was used when the assumption of homogeneity of variances was violated. When the significance level for Levene's Test is larger than 0.05, indicating that the assumption of equal variances has not been violated, using the first line reported by t-test is appropriate. Otherwise, using the second line of t-test is required. Also, Field (2009: 332) argued that a significant difference among two groups does not necessarily have practical effect in reality. Accordingly, the effect size (r) was calculated between each two groups based on the equation provided by Field (2009: 332). The effect size is seen according to Field (2009: 57) as small if $r= 0.1$, of medium size if $r= 0.3$ and of large effect if $r= 0.5$.

IV. Bivariate Correlation

This provides an overview of the strength, significance and direction of the relationship between two variables (Field 2009: 175; Pallant 2007: 126). It was employed before running stepwise regression to inspect the significance, the strength and the sign of the relationship between each of the independent variables and the dependent variable.

Pearson's ***r*** correlation coefficient was used to measure the strength, significance and direction of relationship because both the independent and the dependent variables were measured on a Likert scale and none of these factors (variables) violated the normality assumption.

Pearson's ***r*** correlation was significant between each of the six factors representing ***E-banking value*** drivers and the ***perceived value of e-banking services***. Also, a significant Pearson's ***r*** correlation resulted between the ***perceived value of e-banking services*** and ***bank loyalty***. **Table 4 in the quantitative data appendix** displays a positive significance correlation between the ***perceived value*** scale and ***the loyalty scale***. **Tables 5 to 10 in the quantitative data appendix**, show a positive significance correlation between the six ***E-banking value drivers*** and ***the perceived value scale***.

However, Pearson's *r* correlation coefficient fails to assess relationship causality between two variables (Bryman and Cramer 2005; Field 2009: 179). Accordingly, simple linear regression was employed.

V. Simple Linear regression

Simple linear regression summarizes the causal relationship between two variables. It was used to test the casual relationship between each independent variable and the intended dependent variable. Also, it was undertaken to explore the homoscedasticity (equality of residuals of variances) for each of the independent variable against the dependent variable. This was done through inspecting the histogram of the residuals for each of the independent variables as recommended by Hair *et al.* (2006: 207). **Figures 9 to 14 in the quantitative data analysis appendix**, display the normal distribution of residuals for each of the e-banking value drivers, perceived value of e-banking services.

Simple linear regression was undertaken for inspecting the causal relationship between value and loyalty, the six factors[32] (mentioned latter in this chapter) and the value of e-banking services. **Figure 18 in the quantitative data analysis appendix** shows the normal distribution of residuals

[32] The six factors refer to the e-banking value drivers: *service environment in the bank branch*, *information availability*, *complaints handling through alterative channels*, *reliability of cards usage*, *e-banking services design* and *role of intermediaries*

In reality, independent factors might not exist isolated from each other, but rather interact together. Thus, it is more logical and more realistic to run stepwise regression to explore and inspect the interactive effect of those variables on the intended independent variable and decide on the most important factor in explaining the variance in the dependent variable.

For example, the effect of each variable from the six factors representing the ***E-banking value drivers,*** on the perceived value of e-banking services does not happen separately apart from each other, but rather, they could interact together. Thus, it is important to know the importance of each independent variable in explaining variance in the perceived value of e-banking services, in the presence of other independent variables. Thus, using stepwise regression was found to be more logical in achieving this goal.

8.2.2 Scanning data for multivariate analysis

Scanning the data to ensure appropriateness to the multivariate statistical techniques was done through preparing a summated scale for each scale, testing the reliability consistency for each scale and inspecting the normality, linearity and absence of outliers.

I. Preparing a summated scale for multi-item scales

The internal consistency of the items measuring the scale of loyalty and that of value was measured using Cronbach alpha. Cronbach alpha demonstrates the internal consistency and the uni-dimensionality of scales (Mackenzie *et al.* 2005; Hair *et al*. 2006; Field 2009: 675). **Table 8.2** displays the inter-correlation among value items and the overall measure of the internal consistency of the scale measuring e-banking services value. The internal consistency of the scale measuring the value of e-banking services showed high reliability (Cronbach alpha= 0.916).

However, the reliability of the scale measuring loyalty, although acceptable, was lower than that measuring the value. This is due to the inconsistency of the first and the third items with the rest of the scale, as they showed very low inter-item correlation with the rest of items. To improve the internal consistency of the loyalty scale, items L1 and L3 were removed one after the other, and the scale reliability test was performed each time until it showed no need for item deletion. Tables **1, 2** and **3 in the appendix of the**

quantitative data analysis show the process of reliability inspection and the deletion of the two inconsistent items. **Table 8.3** shows the final reliability of the loyalty scale with five items after the deletion of the two inconsistent items.

The remaining five items were aggregated into a new scale by calculating the summated scale. To do this, multiple items under each factor were summed and averaged to represent the factor in one item. Expressing a multi-item factor by a summated scale is seen as having an advantage over expressing the factors by their highest factor loading (Hair *et al.* 2006: 139). Hair *et al.* (2006: 140) noted that replacing the factor by calculating the average of those items highly loaded on the factor to obtain a summated scale reduces the measurement error that might be caused by representing the factor by the highest loading variable. The use of summated scales results in better psychometric properties for the resulting variable (Spector 1992: 2). Moreover, Hair *et al.* (2006) considers that the use of summated scale facilitates the representation of the factor in subsequent multivariate analysis. Expressing a multi-item factor by a summated scale facilitates its usage in regression analysis.

Moreover, summated scales were calculated for the six factors arising from the exploratory factor analysis (EFA), named '***E-Banking value drivers***'. The test of internal consistency measured by Cronbach Alpha showed scores above 0.7, which is considered acceptable.

Table 8.2: Item-total Statistics and overall consistency of scale measuring value

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
V1*	**15.93**	**8.816**	**.784**	**.633**	**.897**
V2*	**16.02**	**8.794**	**.759**	**.607**	**.901**
V3	**16.01**	**9.060**	**.760**	**.592**	**.901**
V4*	**16.03**	**8.886**	**.749**	**.601**	**.902**
V5	**16.00**	**8.966**	**.762**	**.605**	**.900**
V6	**16.01**	**9.074**	**.758**	**.605**	**.901**

Value items denoted by (*) were reversed to increase the reliability of the total scale after showing negative correlation with the rest of the scale items in the initial screening trial analysis.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.916	**.916**	**6**

Table 8.3: Five-item Loyalty Scale items inter-correlation and overall consistency

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
L2	**12.66**	**5.540**	**.634**	**.640**
L4	**12.65**	**5.429**	**.666**	**.627**
L5	**12.59**	**6.190**	**.404**	**.732**
L6	**12.71**	**6.277**	**.434**	**.718**
L7	**12.53**	**6.586**	**.387**	**.733**

Cronbach's Alpha	Number of Items
.739	5

II. Inspecting the normality, linearity and absence of outliers

Verifying the data for multivariate tests was done by checking its normality, linearity and existence of outliers as recommended (Pallant 2005; Hair *et al.* 2006; Field 2009).

At the beginning, a Kolmogorov test was undertaken to inspect the normality of variables to be used in multivariate analysis. The Kolmogorov test was significant, indicating non-normal distribution of the variables tested. However, researchers differ on the way they judge the normality of data. For example, Neuman (2006: 349) considered equality of central tendency measures: mode, mean and median as indications of normal distribution, stating:

> *"If the frequency distribution forms a normal distribution or bell-shaped curve, the three measures of central tendency equal each other"*

Brown (1997) argued that skewness falling within the range of -0.8944 and +0.8944, and kurtosis falling in the range of ±1.7, are regarded as accepted and do not cause a severe normality problem.

Moreover, it is recommended to ignore the normality significance test with a large sample, more than 200, because this test is very sensitive to standard errors that are common in large samples (Field 2009:139). Also, in case of large samples, it is recommended to view the shape of distribution and look at the value of skewness and kurtosis and relate them to their standard errors, rather than depending on normality significance tests (Field 2009: 139). Bian (2006: 262) added that presenting the graphical shape of the distribution of variables provided by histogram, is the best indicator for variables that are required to be transformed, and the way they are

transformed to meet normality. Normality was inspected for the perceived value scale, loyalty scale, and the six ***E-Banking value drivers*** after summating them and representing each of them as one item scale.

Because the sample is large, more than 300, normality was checked visually through the histogram as recommended (see Hair *et al*. 2006: 81; Tabachnick and Fidell 2007: 80). Moreover, measures of central tendency calculated by the SPSS were nearly the same for both scales; the differences were small (0.1 up to 0.3).

Those variables that showed severe observed skewness were transformed according to the shape of the original shape of distribution and guidelines provided by Pallant (2005) or Field (2009). Any small departure from normality in the rest of items is offset by the large sample size[33] (Hair *et al.* 2006: 81).

Also, the normality of the imported scales: *loyalty* and *perceived value* and the six factors that resulted from running the exploratory factor analysis: *service environment in the bank branch*, *information availability*, *complaints handling through alterative channels*, *reliability of cards usage*, *e-banking services design,* and *role of intermediaries* was inspected through histogram.

Figures 1 to 8 in the quantitative appendix displaying the histograms for loyalty, value scales and the six *e-banking value drivers*, indicate no severe violation of normality that required remedy by transformation.

Most of the individual 60 items included in the questionnaire and representing the independent variables, the value and the loyalty scales and the six ***E-banking value drivers,*** showed trimmed mean nearly equal to arithmetic mean, indicating the absence of extreme influential outliers (Pallant 2005). Also, the distribution of the ***value*** and ***loyalty*** scales and the ***six e-banking value drivers***, shown on the histogram, was a proof of the absence of outliers.

Random scatter-plots provide an indication of the shape of the relationships, whether linear or non-linear (Pallant 2005). The linearity of relationships was inspected through preparing scatterplots between randomly selected individual variables measured on a Likert scale. All the variables showed linearity.

[33] Large sample size is regarded by Hair *et al*. (2006) as more than 200 and For Field (2009) as more than 300.

8.2.3Multivariate statistical techniques

I. Exploratory Factor Analysis (EFA)

There are two basic types of factor analysis: confirmatory factor analysis (CFA) and EFA. In CFA, both the number of factors measuring the variables and the underlying structure that assign variables to factors is predetermined through previous empirical studies and/or a measurement theory (Hair *et al*. 2010: 693). A measurement theory is a prerequisite in CFA to assist in specifying how measured variables represent factors (Hair *et al*. 2010: 693).

EFA is the best to use when there is little empirical evidence supporting the number or nature of factors measured in the questionnaire (Fabrigar *et al.* 1999; Hair *et al*. 2010:693). Thus, in EFA, factors are named after the analysis and not before it, while CFA is a technique for modelling data using already identified factors (Hutcheson and Sofroniou 1999: 218). Gorsuch (1997) added that exploratory factor analysis is the most adequate technique, when there is no strong pretested theory regarding the existence of the factors and the way they are related to the variables measuring them and the way they relate to each other. Similarly, Chrurchill (1979: 69) reported the purpose of using factor analysis by stating;

"Factor analysis can indeed be used to suggest dimensions"

Accordingly, researchers recommend the use of exploratory factor analysis when the purpose is to identify those constructs (factors) revealed from data (Fabrigar *et al.* 1999; Henson and Roberts 2006; Kline 2005: 5).

EFA using principal component analysis was employed to reduce the number of irrelevant items and to explore the structure of the data revealed from the respondents. Principal component analysis (PCA) is used to extract factors explaining relationships in the data (Hutcheson and Sofroniou 1999: 227). PCA was used for extracting those relevant factors believed to explain the perceived value of e-banking services.

EFA is criticized by some, seen as a subjective measurement tool depending largely on the researcher's judgement in interpretation (Henson and Roberts 2006). However, conducting exploratory factor analysis is popular in exploratory studies in which questionnaires are built on exploratory interviews, where overlapping among different

items measuring the factors might occur due to the subjectivism encountered in extracting codes.

EFA is popular in exploratory studies where interviews precede the development of a questionnaire. For example, Joseph *et al.* (1999) employed EFA to explore the factors affecting the quality of e-banking services after discovering the main themes on which the questionnaire would be based in a focus group. Further, Polatoglu and Ekin (2001) employed EFA for data revealed from a questionnaire after conducting interviews to inform the questionnaire development, aiming at exploring those factors affecting Turkish customers' stance towards internet banking. Moreover, Gerrard and Cunningham (2003) employed EFA in exploring those factors affecting the diffusion of internet banking among Singapore customers, after conducting interviews to inform the design of the survey tool. Sweeney and Soutar (2001) also employed EFA to explore value dimensions and Pavlou (2003) employed EFA as a data reduction technique that aimed at determining items highly loaded under each predetermined factor.

The questionnaire was developed in the light of literature and interviews. However, differences in the definition and the features of electronic banking between western culture and Egyptian environment, and the subjectivity involved in the interpretation and extraction of codes resulting from the interview-stage, created difficulty in building firm hypotheses and adopting previously tested scales. Moreover, lack of empirical evidence and the absence of prior studies in the same topic, from which the number and the nature of factors could be formed, created the need for using EFA to explore the number and structure of those independent factors (***e-banking value drivers***), of importance to the Egyptian bank customers.

A. Scanning the data for EFA

The usable questionnaires form approximately 6:1 cases per item[34]. This usable number of cases or ratio produced is viewed as enough to conduct EFA (Tabachnick and Fidell 2007: 613; Hair *et al.* 2006). However, Henson and Roberts (2006: 402) viewed that sample size is not enough to judge the adequacy to perform factor analysis; but rather, much consideration should be directed towards the ability of the sample to produce

[34] The number of items to be subjected to exploratory factor analysis was 60 items, and 381 observations.

adequate correlations among variables. Fabrigar *et al.* (1999: 274) expressed the same opinion, stating;

> *"Adequate sample size is not a function of the number of measured variables per se but is instead influenced by the extent to which factors are over-determined and the level of communalities of the measured variables".*

Further, MacCallum *et al.* (2001: 636) asserted that sample size alone might fail to capture the quality of data shown in the level of communalities. Thus, the efficiency of sample size should be guided by other factors such as the level of communalities of variables included in the analysis. Accordingly, considering overall measures of inter-correlation between variables is important in considering whether the correlation among variables is suitable for factor analysis. Such measures are judged by the measure of sample adequacy test (MSA) and the Bartlett test of sphericity (Hair *et al.* 2006).

B. Preliminary Analysis

The 60 statements representing the proposed factors shaping the value of e-banking services in the Egyptian environment (revealed from the exploratory interviews) were entered at one shot into the correlation matrix designed as an initial step in the EFA. Several criteria were employed to decide on those items that should be retained in the correlation matrix. One criterion was correlation scores. Another depended on deleting those items showing very low communalities and no loadings under any factor (Field 2009). Moreover, another criterion for deleting items depends on the anti-image matrix and those showing very low Cronbach alpha as a measure of reliability (Hair *et al.* 2006). Each time a variable was deleted, EFA with principal component analysis was run to ensure improvements in results.

For improving the measure of sample adequacy (MSA), variables that showed partial correlation less than 0.5 as a bare minimum, on the diagonal axis provided by the anti-image correlation matrix, were deleted (Field, 2009: 659 ; Hair *et al.* 2006: 115). Items retained for subsequent analysis were refined at the stages of factor selection or reliability test. To ensure acceptable correlation among variables in the factor matrix, variables showing correlation above 0.9 with most variables in the correlation matrix were deleted (Field 2009).

Thus, trial and error was followed to reach that group of items showing an acceptable level of multi-collinarity, high level of MSA, and maximum cumulative percentage of variance with meaningful interpretation.

There is no explicit rule controlling the selection of rotation methods that could be employed to allow the grouping of the mostly correlated items into one factor to ensure uni-dimensionality (Hair *et al.* 2006). Costello and Osborne (2005: 3) viewed that using oblique rotation is the most appropriate in social sciences, because it provides more realistic and conceptually acceptable factors by allowing factors to correlate and provides the degree of correlation between factors in a separate matrix. However, Hair *et al.* (2006: 127) recommended the use of orthogonal rotation because results of oblique rotations are difficult to validate and generalize. Orthogonal (Varimax) rotation maintains independence between factors, by maintaining a 90 degrees angle between them, which makes it preferred when the aim is data reduction and reaching a number of factors for subsequent use in multivariate data analysis (Hair *et al.* 2006).

Although, Oblique rotation, **table 11 in the quantitative data appendix**, shows correlation between two factors above 0.32, Varimax rotation was employed. Since, the effect of the six factors on the perceived value of e-banking services will be tested using stepwise regression; a varimax rotation is recommended (Hair *et al.* 2006: 127; Tabachnick and Fidell 2007). While, Walker *et al.* (2002: 99) reported that correlation above 0.3 between factors is sufficient to justify the use of Varimax rotation. The difference between the factors displayed by both types of rotations lies in the variance explained by each factor. The importance of each factor is judged by its share in the overall variance provided by the factor matrix, which is best calculated by orthogonal rotation using Varimax (Tabachnick and Fidell 2007).

A principal component analysis (PCA) was conducted on 23 out of 60 items with orthogonal rotation (varimax). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO=0.840 (meritorious, according to Hair *et al.* 2006; 114), and all KMO values for individual variables provided by the anti-image matrix, **table 13 in the quantitative appendix**, were above 0.5, which meets the minimum acceptable level (Hair *et al.* 2006). Bartlett's test of Sphericity X^2 (253) = 3745, $p<0.001$, indicating that correlation between items are sufficiently large enough for PCA.

Also, a significant Bartlett test of sphericity indicates the existence of factors in the data examined by ensuring that correlations in the correlation matrix are not zero (Tabachnick and Fidell 2007: 614). The correlation matrix, **table 14 in the quantitative appendix,** provided as an output of factor analysis showed correlations above 0.3, indicating appropriateness of the items for factor analysis. The correlation determinant was 0.0000418, which is greater than the minimum correlation determinant of 0.00001, indicating an acceptable level of multi-collinearity between items in the factor matrix as recommended by Field (2009).

An initial analysis was run to obtain eigenvalues for each component in the data. To measure the reliability and the internal consistency of the factors extracted, Cronbach Alpha was calculated for each factor (Field, 2009; Hair *et al.* 2006). To avoid the negative reliability score (measured by Cronbach's Alpha) for the extracted factors, some statements were reversed (Field 2009: 676). Hair *et al.* (2006) added that reversing scores is required to avoid the cancellation of that variable with opposite loading under the same factor, as this will simplify the process of calculating a summated scale for each factor.

C. Construct validity

Constructs are evaluated from several aspects: convergent validity, discriminant validity and face or content validity (Parasuraman *et al.* 1991; Buttle 1996; Neuman 2006). Unidimensionality is viewed as equivalent to convergent validity of a construct (Parasuramsn *et al.* 1991; Buttle 1996). Bagozzi *et al.* (1991: 425) defined convergent validity as:

> *"Convergent validity is the degree to which multiple attempts to measure the same concept are in agreement. The idea is that two or more measures of the same thing should covary highly if they are valid measures of the concept".*

Discriminant validity is defined by Neuman (2006: 194) as;

> *"Discriminant validity is the opposite of convergent validity and means that the indicators of one construct hang together or converge, but also are negatively associated with opposing constructs."*

While, Sin *et al*. (2005: 1277) defined discriminant validity as:

> *"Discriminant validity indicates the degree to which measures of conceptually distinct construct differ"*

Cronbach Alpha a measure of internal consistency and uni-dimensionality could also be an indirect indicator of convergent validity (Parasuraman *et al*. 1991: 439). As mentioned previously, Cronbach Alpha test shows scores > 0.7, demonstrating uni-dimensionality and convergent validity. Also, convergent validity and discriminant validity are assessed by the loadings of the items on the factor (Hair *et al.* 2006: 137; Sekaran 2003: 207; Yim *et al*. 2004; Eid 2007: 1030; Parasuraman *et al*. 1991). Items constituting each factor of the e-banking value drivers, **table 9.3 in chapter 9**, are loaded more highly (0.5 and above) under their related factors, more than other factors. This indicates the uni-dimensionality of factors extracted and ensuring the discriminant validity of the factors extracted.

Although, Cronbach's alpha measures the internal consistency of items formulating the construct, it could also be used as an indicator for convergent validity (Hair *et al.* 2006; Churchill 1979). This is because, Cronbach's alpha indicates the extent to which items measuring the same construct or factor are positively and highly correlated to one another (Sekaran 2003: 307). The six factors show high reliability measured by Cronbach's alpha, indicating convergent validity.

Face validity, sometimes called content validity, could be represented by items loading on the factor pattern matrix or the rotated matrix (Parasuraman *et al.* 1991). Face or content validity reflects the extent to which the items forming the scale represent the conceptual meaning of the construct they load on (Neuman 2006). Similarly, Sekaran (2003: 206) defined face validity as follows:

> *"Face validity indicates that the items that are intended to measure the concept do on the face of it look like they measure the concept"*

Face validity could also be judged subjectively based on opinions of experts in the field of study and previous literature (Hair *et al.* 2006: 136). Also, it could be judged by relating the factor and its loadings to a well-defined theory. In general, the face validity of the factors has deep roots in the service quality literature, services switching behaviour literature.

II. Stepwise regression

Stepwise regression is criticized for reducing the researcher's ability to exercise complete control over the sequence of some variables included in the regression

equation (Hair *et al.* 2006: 212). However, stepwise regression enables the examination of the contribution of each variable to the regression estimation. Stepwise regression was employed instead of multiple regression due to the research novelty, both in terms of the types of factors revealed and the culture in which it was employed.

Moreover, since there are no previous similar studies from where inferences could be drawn and hypotheses could be tested, this makes the study exploratory and not confirmatory in nature. Similarly, stepwise regression is best suited to exploratory studies (Field, 2009: 213; Tabachnick and Fidell 2007: 140). Similarly, Bian (2006) employed stepwise regression due to the exploratory nature of her study.

In this study, stepwise regression was used to explore the factors responsible for the most variance in the ***perceived value of e-banking services.***

Scanning the data

As mentioned earlier, that variables entered in the stepwise regression were inspected in terms of normality, homosdicity of variance, linearity and significance of such relationship. The results of such tests proved that the variables were suitable for multivariate statistical techniques. The six independent variables in each stage of running the stepwise regression, and the 381 observations made the ratio of observations to the six independent variables, *e-banking value drivers*, approximately 63:1. This ratio meets the minimum acceptable level of sample size appropriate for running stepwise regression as recommended by Hair *et al.* (2006: 196).

8.3 Summary

This chapter illustrated the main statistical techniques employed to analyse the quantitative data and answers the first two research questions. The first question is concerned with determining the antecedents of e-banking services perceived value in the Egyptian environment, while the second research question is concerned with exploring the extent to which e-banking services could strengthen the relationship between banks and customers (operationalized as: the effect of e-banking services perceived value on customers loyalty to banks). While multivariate techniques were used to answer the research questions, both bivariate and multivariate techniques were employed to understand the context in which relationships occur. The chapter went

through the process of scanning data to ensure the appropriateness of the data to the statistical techniques employed.

While this chapter presented the main techniques employed in analyzing the quantitative data, the next chapter presents the findings of the statistical analysis from which the discussion were drawn.

Chapter 9

Antecedents and Consequence of E-banking Services Perceived Value: Findings from a Quantitative Study

9.1 Introduction

This chapter seeks to answer the first and second research questions. The first research question examines the factors shaping the value of e-banking services perceived value (antecedents of PV). While the second research question explores the extent to which e-banking services could strengthen the relationship between banks and their customers. The chapter starts by overviewing the main findings from the quantitative data analysis. Then, proceeds to answer the first two research questions related to the demand side of e-banking services. The main areas discussed in the chapter are presented in **Figure 9.1**.

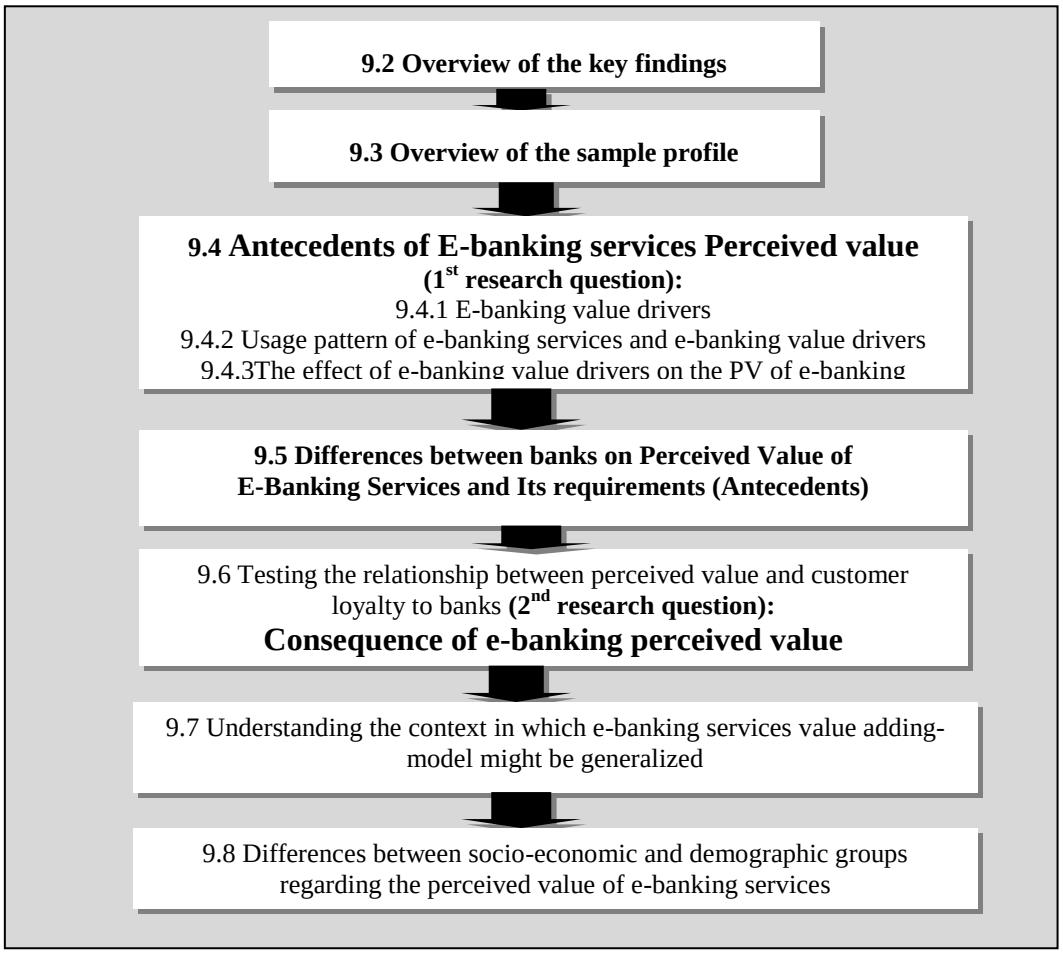


Figure 9.1: Structure of chapter 9

9.2 Overview of the Key Findings

Findings were drawn by analysing 381 usable out of 416 distributed questionnaires, with a response rate of 38%. Findings revealed a significant relationship between perceived value of e-banking services and their impact on bank loyalty (the consequence). **Figure 9.2** summarizes key findings to answer the first two research questions in one model titled: ***e-banking services value-adding model***. It shows that the value of e-banking services could be viewed as a mediator between a set of antecedents and loyalty as consequence. The model shows that perceived value of e-banking services could strengthen the relationship between banks and their customers interested in using these services. The model also shows that the value of e-banking services is a function of six antecedents, named e-banking value drivers.

The perceived value of e-banking services explained 21% of the loyalty to banks. **Figure 9.2** shows that perceived value of e-banking services is a function of six ***e-banking value drivers*** (antecedents). Those six e-banking value drivers significantly affected the value of e-banking services. They predicted 53.2% of the variance in the perceived value of e-banking services. The six factors are: *service environment in the bank branch, complaints handling through alternative channel, information availability, reliability of card usage, e-banking services' design* and *the role of intermediaries in promoting e-banking services. Service environment in the bank branch* is the most influential antecedents in explaining perceived value of e-banking services in the Egyptian environment. *Complaints handling through alternative channel* accounts for the second importance in explaining the perceived value of e-banking services. *However, reliability of card usage* accounts for the third level of importance in explaining the perceived value of e-banking services in the Egyptian environment.

The six antecedents are a combination of the explicit involvement of *service suppliers in supporting face-to-face service encounters*, *e-banking services quality*, and *the role of external environment in promoting e-banking services.*

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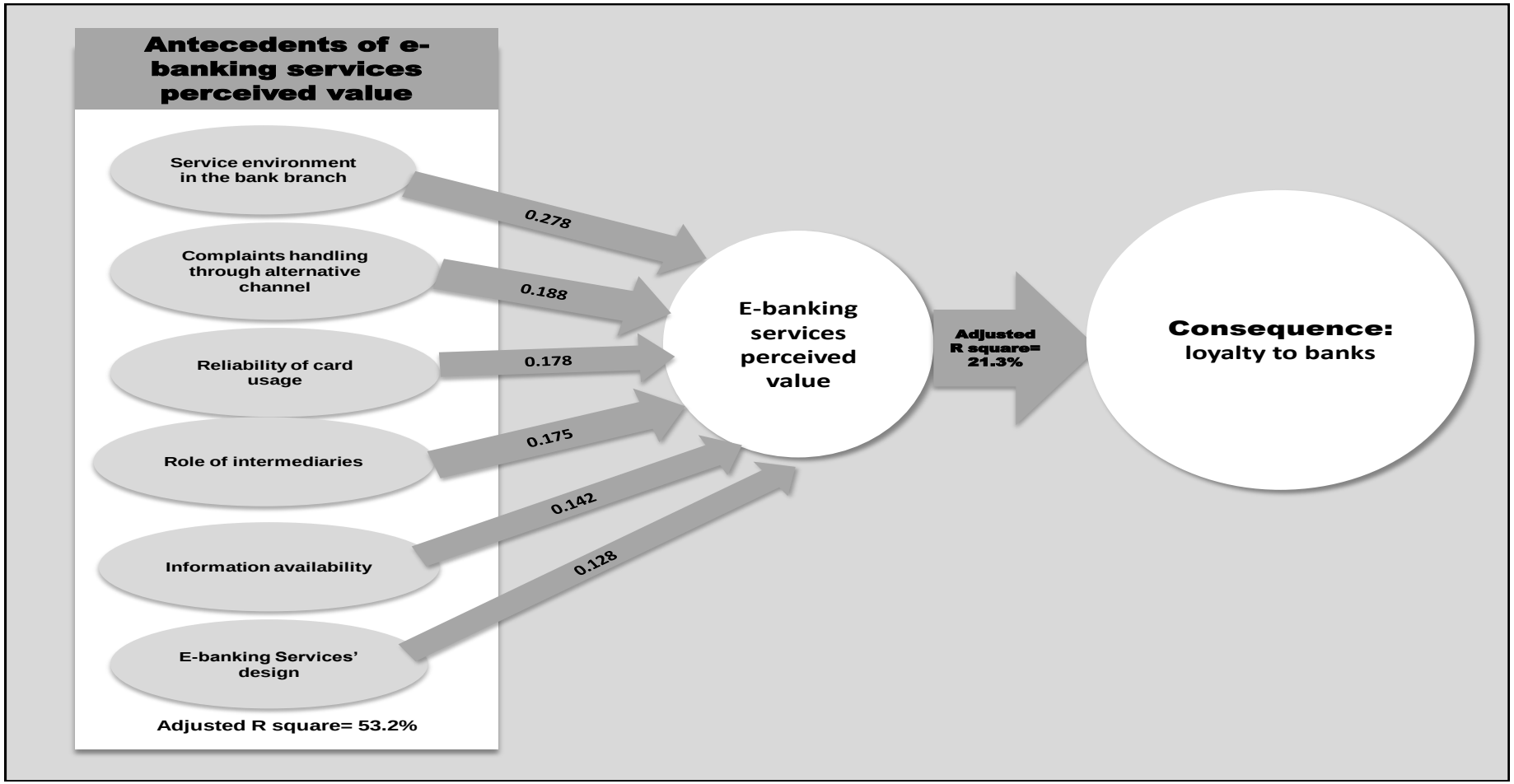

Figure 9.2: E-banking services value-adding model

9.3 Overview of the Sample Profile

An overview of the profile of the sample assists in justifying the results and understanding the context in which e-banking services might act as a loyalty driver. Full sample profile is presented in **Table 9.1**.

Table 9.1: Sample Profile

Bank Type		*Public Banks*	*Non-public banks*	N= 381
		47%	53%	
Relationship length with the bank		*5-6 years*	*7 years and above*	
		59%	41%	
Age of respondents		*21-39*	*40-59*	*60 and above*
		13%	65%	22%
Monthly income of respondents		*1000-2999*	*3000-6999*	*7000 and above*
		46%	40%	14%
Education level		*Bachelor or an equivalent degree*	*Post-Graduate Diploma*	*Master or PhD graduate*
		42%	34%	24%
Usage Pattern		*Do not use*	*Use moderately*	*Use heavily*
	Visa or/and master cards	13%	47%	40%
	ATM card	80%	20%	N=381
	phone banking (call centres)	42%	58%	
	Internet banking	51%	49%	

Non-public bank customers accounted for 53% of the whole sample. Thus, the sample reflects nearly a realistic mix between non-public bank and public bank market share in the Egyptian banking sector. This might enhance the ability to generalize the findings of the e-banking services perceived value antecedents and consequences between the two bank sectors.[35]

[35] It will be discussed later in the chapter section 9.5

Table 9.1 shows that sample participants' length of relationship with their banks is 5 years and over (the sum of two categories). Although, this might improve the generalizability of findings among the same category of bank customers, it limits the scope of generalizability to other bank customers of shorter relationship length.

I. Socio-economic and demographic profile of respondents

Data was collected mainly from participants working in permanent jobs, thus, 78% of participants fall in the workforce aged from 21-59. Although, the retirement age is 60 years, a small percentage of the sample aged 60 years and above, is university lecturers.

In Egypt, the average gross national income per capita reported by the World Bank in 2008 is 1800 US dollars[36], equivalent to 9900 annually and 825 Egyptian pounds (L.E) monthly. Results showed that most respondents' monthly income falls in the first category (1000 L.E-less than 2999 L.E.). The difference between the average per capita income reported by the World Bank and that detected in the sample could be justified by the convenience sample employed. This is because; the questionnaire was collected from university staff and those who are in permanent jobs in well-established companies.

Results show that the largest educational category of the sample respondents are bachelor degree holders (42%), while, the least category is those with master or PhD holders (24%). This might extend the generalizability of the findings to the rest of Egyptian bank customers who are not necessarily Masters or PhD graduates.

II. Usage pattern of e-banking services

Table 9.1 shows that 87% of respondents are moderate and heavy users of visa and master cards. This indicates that use of visa and master card extends beyond accessing the funds and extends to the use in payment for purchases. The results imply that the use of visa and master cards are the most dominant forms of e-banking services in the Egyptian environment if compared to call and internet banking.

[36] http://siteresources.worldbank.org/DATASTATISTICS/Resources/GNIPC.pdf September 2009

Table 9.1 shows that internet and call banking are used moderately to satisfy basic financial needs. However, the usage of internet and call banking does not extend to payment of bills or transferring money to a third party.

Table 9.1 shows that call banking is used on a moderate basis by more than 50% of respondents. But, those who use internet banking on a moderate basis are less than 50% of the sample. The rate of using ATM card usage is very low among respondents, due to limiting the use of such cards to specific types of ATM machines which belong to the user' own bank.

III. Socio-economic and demographic characteristics/ Usage pattern of e-banking services

Table 9.2 displays cross tabulation between the socio-economic and demographic characteristics and e-banking services usage pattern[37].

Table 9.2: Profile of e-banking services users

N=381 cases	Age (Years)			Monthly Income (L.E)			Education		
	21-39 years	40-59 years	60 years and above	1000-2999	3000 to 6999	7000 and above	Bachelor or an equivalent degree	diploma	PhD or master degree
Users of Visa/master cards:									
Moderate	24%	54%	22%	17%	52%	31%	64%	24%	12%
Heavy	3.3%	84%	12.5%	70%	30%		10%	46%	44%
Users of Internet banking:									
Moderate	20%	65%	15%	40%	34%	26%	47%	23%	30%
Users of phone banking:									
Moderate	19%	57%	24%	24%	51%	25%	47%	37%	16%
ATM cards									
Moderate users	3%	57%	40%	57%	40%	3%	53%	37%	9%

Table 9.2 shows that most of e-banking services users' are falling in the age 40-59 years old and are bachelor or an equivalent degree graduates. This is not surprising, because these two categories dominate the sample socio-economic and demographic characteristics (**see table 9.1**).

[37] It is prepared from a number of tables of cross tabulation of e-banking services with socio-economic and demographic characteristics of the respondents.

The table indicates that 54% of visa/master cards users are 40-59 years old, while this category constitutes 84% of those using visa/master cards on moderate basis. Also, **table 9.2** shows that 52% of visa/master card moderate users fall in the 3000-6999 category of income, while, 70% of those using visa/master cards on heavily basis belong to the 1000-2999 category of income. Further, 64% of visa/master card moderate users are holders of bachelor or an equivalent degree, and, 46% of visa/master cards moderate users are diploma graduates.

Also, 65% of internets banking users are 40-59 years old and 40% of internet banking users fall in the 1000-2999 category of income. While, 47% of internet users are holders of bachelor or equivalent degree.

Moreover, **table 9.2** shows that users of call banking are mainly, 40-59 years old, belong to the category 3000-6999 income, and are holders of bachelor or equivalent degree. The table also shows that ATM users are of 40-59 years old; belong to the 1000-2999 income category, and holders of bachelor or an equivalents degree.

The next section answers the first research question, by exploring the antecedents of e-banking services perceived value.

9.4 Antecedents of E-banking services Perceived value (1st research question):

9.4.1 E-banking Value Drivers

9.4.2 Usage Pattern of E-Banking Services and E-Banking Value Drivers

9.4.3The Effect of E-Banking Value Drivers on the PV of E-Banking Services (**antecedents)**

9.4 Antecedents of E-Banking Services Perceived Value (1st Research Question)

9.4.1 E-Banking Value Drivers

Table 9.3 shows that, with the use of exploratory factor analysis (EFA), six factors were extracted. They are: *Service environment in the bank branch, Complaints handling through alternative channel, information availability, e-banking services design, reliability of card usage* and *role of intermediaries.*

Those six factors show eigenvalue > 1, supported by the scree plot test provided by SPSS provided in the quantitative data appendix. All of the extracted factors showed reliability above 0.7, which meets the minimum general accepted reliability measurement (Hair *et al.* 2006; Field, 2009).

Table 9.3 shows that ***organizational related practices in supporting face-to-face service encounter*** represented in *the service environment in the bank branch (*28.8% of variance*), complaints handling through alternative channel* (6.4%of variance), and *information availability (*7.1%of variance*),* taken together account for 42.33% variance in the data. **E-*banking services quality*** accounts for 17% of variance and represented in *e-banking services design* (11.6% of variance) and *reliability of card usage* (5.57% of variance). Finally, ***the role of external environment in promoting e-banking services*** represented in *the role of intermediaries in promoting e-banking services* accounts for 4.4% variance in the data.

Table 9.3: E-banking value drivers

Variables from the questionnaire	Service environment in the bank branch	e-banking services' design	Information Availability	Complaints handling through alternative channel	Reliability of card usage	Role of intermediaries in promoting e-banking services
v21: In the bank branch, customer service employees show immediate help.	**0.788**					
v20: In the branch, customer service employees have the knowledge to answer my questions.	**0.781**					
v28: My bank shows sincere interest in solving any problem.	**0.748**					
v31: Operating hours are convenient to resolve e-banking problems	**0.731**					
v32: Acceptable waiting time in the bank branch to get a problem solved	**0.658**					
v45: Range of financial transactions through internet banking*		**0.735**				
v11:Ability to access information on banking products through internet banking		**0.722**				
v50: Using internet banking to transfer money between accounts is safe.		**0.703**				
v44: Range of financial transactions available through call banking*		**0.638**				
v13: Ability of call banking to provide required information on banking products		**0.607**				
v1: The bank provides up-to-date information about its products and services.			**0.745**			
v8: Information provided by my bank is helpful to guide my selection decision.			**0.671**			
v16: Procedures of raising a complaint are announced clearly in the bank branch			**0.652**			
v5: Leaflets (or brochures) provides enough information about e-banking services			**0.648**			
v25: Solving complaints by telephone saves time				**0.850**		
v23: Ease of accessing customer service employees by telephone*				**0.828**		
v24: Acceptable waiting time on the telephone to get problems solved*.				**0.817**		
v38:Accessibility of ATM machines*					**0.795**	
v37:Using cards are reliable to access money when needed*					**0.725**	
v42:Pin number secures the use of visa/master cards*					**0.607**	
v47: Flexibility provided by Visa/master card in accessing cash					**0.575**	
v60: Payment for utilities online*						**0.836**
v57:Accepting visa/credit cards in most governmental agencies*						**0.825**
Eigenvalue	**6.625**	**2.685**	**1.638**	**1.472**	**1.282**	**1.015**
% variance by each factor	**28.805**	**11.673**	**7.122**	**6.402**	**5.576**	**4.415**
% of cumulative variance	**28.805**	**40.478**	**47.6**	**54**	**59.578**	**63.99**
Reliability score (Cronbach Alpha)	**0.830**	**0.771**	**0.748**	**0.789**	**0.871**	**0.803**

Items marked with (*) were reversed Extraction method: Principal component analysis Extraction method: Varimax with Kaiser Normalization Rotation converged in 9 iterations N=381

Overall fit of the EFA results

Six factors had eigenvalues over Kaiser's criterion of 1 and explained together 63.99% of the variance. Most of communalities are above the minimum acceptable rate of 0.5 as recommended by Hair *et al.* (2006). This indicates that variables included in the factors have acceptable explanatory levels.

The roots criterion (eigenvalue) is accurate when the number of variables is small to moderate and the communalities are high (Stewart 1981: 58). Further, Field (2009: 662) added that the scree test is dependable when the average communalities are above 0.6 and the sample size exceeds 250. The average communalities of 23 items are approximately 0.64 and the sample size is 381, indicating that the scree plot diagram (**Figure 15 in the quantitative data appendix)** and the total variance explained (**Table 12 in the quantitative data appendix**) should be accepted as reliable. Moreover, Tabachnick and Fidell (2007: 644) added that, the number of components with Eigenvalue > 1 could be estimated by dividing the number of the variables in the correlation matrix by 3 to get the maximum number of factors and by 7 to get the minimum number of factors. Since, the number of variables in the factor matrix is 23; the number of factors should be between 3 and 7. This indicates that the scree plot showing factors of eigenvalue > 1 is to be trusted.

The residual matrix based on reproduced correlations, shows that 25% of correlations among items included in the factor matrix are greater than 0.05, indicating no great differences between the model represented in the extracted factors and the observed data (Field 2009).

Although, factor loading of ± 0.3 is acceptable because the sample size is greater than 300, factor loadings of ± 0.5 are considered necessary for practical significance (Hair *et al.* 2006). Loadings are above 0.6, indicating that variables are well indicative for explaining their related factors (Hair *et al.* 2006). All factors loadings are above 0.5, indicating significance relation to the related factors.

Variable number 47 (*flexibility provided by visa/master cards*) shows cross loading on the fifth and sixth factors. However, its loading in the fifth factor was higher and is well representative to its factor by showing 0.575 factor loading.

While, three variables are regarded as sufficient to define the factor in most studies, two variables meet the minimum acceptable level for defining or retaining a factor (Henson and Roberts 2006: 408). The validity of a factor defined by two variables depends on the correlation between its components (Tabachnick and Fidell 2007: 646). Five factors extracted are defined by three to five variables, but, the last factor is interpreted using two variables. However, the two and three factor loadings show high reliability score measured by Cronbach Alpha. Moreover, the correlations between the two items forming the sixth factor are higher than their correlation with the rest of items in the correlation matrix (**Table 14 in the quantitative appendix**). Number and nature of factors extracted, factor loading of variables, variances explained by each factor, the eigenvalue and the reliability scores, all are displayed in **Tables 9.3**

9.4.2 Usage Pattern and E-Banking Services' Value Drivers

The results of tests used to detect the relationship between sample profile and e-banking services value drivers are summarized in tables **Table 9.4, 9.5, 9.6 and 9.7**.

Table 9.4: visa/master card usage pattern and e-banking value drivers

		E-Banking value drivers resulting from EFA					
e-banking service type and usage pattern	Test used	Service environment the bank branch	complaints handling through alternative channel	Information availability	E-banking services design	Reliability of card usage	Role of intermediaries in promoting these services
Visa or/and master cards	Kruskall-Wallis test	Significant with significant increasing trend	Significant with significant increasing trend	Significant with significant increasing trend	Significant with non-significant increasing trend	Significant with significant increasing trend	Significant with significant increasing trend

Kruskall-Wallis test showed a significant relationship between the use of visa/master cards and *service environment in the bank branch, H (2)*= 60.77, *p<0.05,* Jockhree test revealed a significant positive trend in the data **J=28328.5, *Z*= 5.7**.

Also, Kruskall-Wallis test showed a significant relation between the use of visa/master cards and *complaints handling through alternative channel, H (2)*= 48.158, *p<0.05,* Jockhree test revealed a significant positive trend in the data ***J=28464, Z= 5.84***,

This test also, showed a significant relationship between the use of visa/master cards and *information availability*, H (*2*)= 75.35, *p<0.05*. Jockhree test revealed a significant positive trend in the data ***J=27357, Z= 4.832,*** *p<0.05*

Kruskall-Wallis test revealed a significant relationship between the use of visa/master cards and *e-banking services' design*, *H(2)=* 97.68, *p<0.05*. Jockhree test revealed a positive non-significant trend in the data, ***J= 22730, Z= 0.704,*** *p> 0.05***.**

Kruskall-Wallis test revealed a significant relationship between the use of visa/master cards and *reliability of card usage*, *H(2)=* 118.27, *p<0.05*. Jockhree test revealed a positive significant trend in the data, ***J= 24918, Z= 2.651,*** *p<0.05***.**

Kruskall-Wallis test revealed a significant relationship between the use of visa/master cards and *role in intermediaries in promoting e-banking services*, *H(2)=* 82.423, *p<0.05*. Jockhree test revealed a positive significant trend in the data, ***J= 26328, Z= 4.027,*** *p<0.05***.**

Table 9.5: Internet banking usage pattern and e-banking value drivers

		E-Banking value drivers resulting from the EFA					
e-banking service type and usage pattern	Test used	Service environment the bank branch	complaints handling through alternative channel	Information availability	E-banking services design	Reliability of card usage	Role of intermediaries in promoting these services
Internet banking	Independent samples t-test	significant	significant	significant	significant	significant	significant

Independent samples t-test revealed a significant relation between the use of internet banking and *service environment in the bank branch*. The importance of considering *service environment in the bank branch* is affected by level of using internet banking. Moderate users of internet banking show higher means for considering service environment in the bank branch (M=3.98) than those who do not use IB (M= 3.57). The difference is significant ***t=-7.306, p<0.05****, with a* medium size effect, ***r = 0.35***.

There is a significant difference between considering *complaints handling through alternative channel* among respondents depending on their level of using internet banking. Moderate users of internet banking showed a higher significant mean (M=3.385), than those who do not use IB (M=2.92). The difference is significant, ***t=-6.794***, ***p<0.05,*** with a medium size effect ***r= 0.328.***

There is a significant difference between considering *information availability as a value driver* among respondents depending on their level of using internet banking. Moderate users of internet banking show higher significant mean (M=4.05), than those who do not use internet banking (M=3.39). The difference is significant, ***t= -12.146***, ***p<0.05,*** with a large size effect ***r= 0.529.***

There is a significant difference between considering *E-banking services' design* as value driver among respondents depending on their level of using internet banking. Moderate users of IB showed higher significant mean (M=3.49), than those who do not use IB (M=3.05). The difference is significant, ***t= -9.596***, ***p<0.05,*** with a medium effect ***r= 0.45.***

There is a significant difference between considering *reliability of card usage* as a value driver among respondents depending on their level of using internet banking. Moderate users of IB showed higher significant mean (M=3.66), than those who do not use internet banking (M=3.199). The difference is significant, ***t= -8.834***, ***p<0.05,*** with a medium size effect ***r= 0.4123.***

There is a significant difference between considering *role of intermediaries* as a value driver among respondents depending on their level of using internet banking. Moderate users of IB show higher significant mean (M=3.4811), than those who do not use internet banking (M=3.0281). The difference is significant, ***t= -6.613***, ***p<0.05,*** with a medium size effect ***r= 0.322.***

Table 9.6: phone banking usage and e-banking value drivers

		E-Banking value drivers resulting from EFA					
e-banking usage pattern	Test used	Service environment the bank branch	complaints handling through alternative channel	Information availability	E-banking services design	Reliability of card usage	Role of intermediaries in promoting these services
phone banking	Independent samples t-test	Not significant	Not significant	significant	significant	significant	significant

Independent samples t-test revealed non-significant differences between the usage pattern of call banking and *service environment in the bank branch*, and showed a non-significant differences among users of phone banking and managing *complaints in the bank branch, p<0.05*. However, there is a significant difference between means of both nonusers and moderate users of call banking in each of *information availability, reliability of card usage, role of intermediaries and e-banking services design*. For

information availability, the difference between non-users (M=3.57) and moderate users (M=3.82), **t= -3.92**, with a very small size effect ***r= 0.197***.

Also, there is significant difference between the means of both moderate users (M=3.4) and non-users (M=3) of phone banking concerning *e-banking services design*, with **t=-11.063** and a substantial large effect size ***r= 0.5***.

Also, there is significant difference between the means of both moderate users (M=3.6) and non-users (M=3.16) of phone banking concerning *reliability of card usage,* **t=-8.71** but with a very small inconsiderable effect size ***r=0.04***. Further, there is significant difference between the means of both moderate users (M=3.4) and non-users (M=2.9) of call banking in considering *role of intermediaries in promoting e-banking services* as a value driver, **t=-8.18** with a medium effect ***r= 0.387.***

Table 9.7: ATM usage and e-banking value drivers

		E-Banking value drivers resulting from the EFA					
e-banking usage pattern	Test used	Service environment the bank branch	complaints handling through alternative channel	Information availability	E-banking services design	Reliability of card usage	Role of intermediaries in promoting these services
ATM cards	Independent samples t-test	significant	significant	significant	significant	significant	significant

On average, independent samples t-test show that *service environment in the bank branch* as a value driver scored higher for non-users of ATM cards with a mean (M= 3.296) compared to the users of ATM cards who showed a mean of (M= 3.89), **t= 10.27**, *p<0.05,* with a substantial effect size of ***r= 0.645.***

Also, independent samples t-test showed that *complaints handling through alternative channel* as a value driver scored higher for non-users of ATM cards with mean (M= 3.26) compared to the users of ATM cards who showed a mean of (M= 2.67), **t= 6.914**, *p<0.05,* with a medium effect size of ***r=0.334.***

Independent samples t-test also showed that *information availability,* as a value driver, is higher for non-users of ATM with a mean of (M= 3.84) compared to the users of ATM cards with a mean of (M= 3.19), **t= 11.209**, *p<0.05,* with a substantial great effect size of ***r=0.657.***

Independent samples t-test also showed that *role of intermediaries* as a value driver is higher for non-users of ATM with a mean of (M= 3.34) compared to the users of ATM

cards who showed a mean of (M= 2.8), **t= 5.728**, *p<0.05,* with a small effect size of ***r=0.28.***

Independent samples t-test also showed that *e-banking services design* as a value driver is higher for non-users of ATM with a mean of (M= 3.33) compared to the users of ATM cards who showed a mean of (M= 2.98), **t= 6.19**, *p<0.05,* with a medium effect size of ***r=0.44.***

Independent samples t-test also showed that *reliability of card usage* as a value driver is higher for non-users of ATM show with a mean of (M= 3.49) compared to the users of ATM cards who showed a mean of (M= 3.14), **t= 4.916**, *p<0.05,* with a small effect size of ***r=0.24.***

From this, it could be concluded that the six e-banking value drivers are important for all e-banking services users except the ATM card users. This should not be generalized to all the ATM card users in the Egyptian environment, because the results are biased by the non-users of ATM cards who represent 80% of the sample, while the users represent only 20% of the sample. Moreover, cross tabulation (**tables 9.8, 9.9 and 9.10**) show that non-users of ATM cards are users of other e-banking services. Thus, it is more logical to consider other forms of e-banking services to be indicators for e-banking value drivers.

Table 9.8: Visa /mater card * ATM Cross tabulation

		ATM card		
		Do not use	Use moderately	Total
Visa/master card	Do not use	17	34	51
	Use moderately	148	30	178
	Use heavily	141	11	152
	Total	306	75	381

Table 9.9:Call banking * ATM Cross tabulation

		ATM card		
		Do not use	Use moderately	Total
Call banking	Do not use	115	45	160
	Use moderately	191	30	221
Total		306	75	381

Table 9.10:Internet banking * ATM Cross tabulation

		ATM card		
		Do not use	Use moderately	Total
Internet banking	Do not use	128	68	196
	Use moderately	178	7	185
Total		306	75	381

9.4.3 The Effect of E-Banking Value Drivers on the PV of E-Banking Services: 1st Research Question

Table 9.11 shows that, six independent factors explain 53.2% of the variance[38] in the perceived value of e-banking services. The six independent variables are: *service environment in the bank branch, complaints handling through alternative channel, information availability, reliability of card usage, e-banking services' design and the role of intermediaries in promoting e-banking services.*

Table 9.11 shows that the service environment in the bank branch is the most important independent variable (*b=0.278*) for explaining the value of e-banking services in the Egyptian environment compared to the other five factors. Managing complaints through alternative channels show the second level of importance (*b=0.188*) in affecting the value of e-banking services. Reliability of cards usage shows the third order of importance in explaining the value of e-banking services (*b=0.178*). Although, the role of intermediaries and e-banking services design showed the same bivariate correlation with the perceived value of e-banking services, the role of intermediaries is more important compared to the service design in explaining the value of e-banking services, supported by a higher significant beta coefficient. On the other hand, value of ***t*** associated with each independent variable is significant at 0.01. Significant ***t*** values ensure that the coefficient associated to the independent variables is not equal to zero (Hair *et al.* 2006; 241).

[38] This figure refers to the adjusted R^2 . It is viewed as more conservative estimate than the ordinary R^2 becasue it considers both the number of subjects and the independent variables involved (Bryman and Cramer: 2005; 305)

Table 9.11: Results of the stepwise regression
Perceived value of e-banking services and the six e-banking value drivers

Results of the stepwise regression N=381					
Dependent variable: value of e-banking services **Number of Independent variables: six variables**					
Independent variables		**SEB**	**B**	**T**	**Sig T**
Service environment		0.042	0.278	6.692	.000
Complaints handling through alternative channel		0.035	0.188	4.534	.000
Reliability of cards usage		0.047	0.178	3.997	.000
Role of intermediaries		0.034	0.175	4.33	.000
Information availability		0.042	0.142	3.185	.002
E-banking services design		0.051	0.128	3.08	.002
R^2	**0.54**		**DF**	**Sum of Squares**	**Mean Square**
Adjusted R^2	**0.532**	**Regression**	**6**	**72.078**	**12.013**
Standard Error	**0.40533**	**Residual** **F= 73.12** **Sig F= 0.000**	**374**	**61.445**	**0.164**

In reality, each variable is not held isolated, but rather, all the six independent variables might exist and operate together to explain the value of e-banking services. Thus, it is more realistic to depend on *beta coefficient* in explaining the importance of each factor in affecting the value of e-banking services relative to other factors in the estimation model. **Table 9.11** shows that the beta coefficients of all the six independent variables are significant. Standardized beta values or coefficients (**B**) are the best to provide an understanding of the importance of a predictor in the model, because it is measured in standard deviation units (Field, 2009; 239; Hair *et al*. 2006; 226). However, *beta* values should be interpreted in the context of other variables in the model (Hair *et al*. 2009; 226), especially if the six independent factors are significantly correlated as shown in **Table 9.12**.

Table 9.12: correlation between the six e-banking value drivers and the PV of e-banking services

		perceived value	Service environment	Information availability	reliability Of cards	Complaints handling through alternative channel	Service design	Role of intermediaries
Pearson Correlation	perceived value	1.000						
	Service environment	.540*	1.000					
	Information availability	.522*	.424*	1.000				
	Reliability of cards usage	.496*	.240*	.446*	1.000			
	Complaints handling through alternative channel	.491*	.462*	.418*	.246*	1.000		
	Service design	.446*	.266*	.434*	.463*	.229*	1.000	
	Role of intermediaries	.446*	.218*	.280*	.471*	.242*	.322*	1.000
***All correlations significant at one tail test $p<0.01$**								

Overall model fit

The overall fit of the regression model could be derived from **tables 9.13** and **9.14**. The linearity and normality of residuals could be detected from **figures 28 and 29 displayed in the quantitative appendix**.

Six independent variables contribute in explaining 53.2% (adjusted R^2) of the dependent variable in **table 9.13.** The change of R square through the equations is significant, indicating that adding an extra independent variable from equations ***a*** to ***f*** *to* the regression equation enhances the prediction by improving the R square and reducing the standard error of the estimate simultaneously.

The difference between the adjusted $R^2$and R^2 is 0.008 (about 0.8%). This means that if the model is derived from the whole population rather than the sample, 0.8% less in variance will result (in the outcome). Overall, the difference between the R^2 and the adjusted R^2 indicates that the cross-validity of the model is acceptable[39].

[39] Applying an advanced equation provided by Field (2009; 235) results in an adjusted $R^2 = 0.523$. So that, the difference in the R square produced by the SPSS and that produced by the equation = 0.017.

Table 9.13: Model Summary of E-banking value drivers and PV of E-Banking services

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.540[a]	.291	.289	.49972	.291	155.683	1	379	.000	
2	.629[b]	.396	.393	.46181	.105	65.785	1	378	.000	
3	.686[c]	.470	.466	.43311	.074	52.752	1	377	.000	
4	.708[d]	.501	.496	.42087	.031	23.255	1	376	.000	
5	.719[e]	.517	.510	.41481	.016	12.059	1	375	.001	
6	.735[f]	.540	.532	.40533	.023	18.752	1	374	.000	1.630

a. Predictors: (Constant), Service environment
b. Predictors: (Constant), Service environment, Information availability
c. Predictors: (Constant), Service environment, Information availability, reliability of cards
d. Predictors: (Constant), Service environment, Information availability, reliability of cards usage, complaints handling through alternative channel
e. Predictors: (Constant), Service environment, Information availability, reliability of cards usage, complaints handling through alternative channel, service design
f. Predictors: (Constant), Service environment, Information availability, reliability of cards usage, complaints handling through alternative channel, service design
g. Dependent Variable: perceived value of e-banking services

Table 9.13 shows that the Durbin-Watson value associated with the model in consideration is 1.63, not far from 2 as maximum level accepted (Field, 2009). This implies that the errors (residuals) are almost independent from the model and within the acceptable range.

Table 9.14 (ANOVA) shows that adding an extra independent variable to the regression model results in an improvement in the prediction by the model. This is denoted by an increase in the sum of squares of regression and reduction in the residuals, resulting in a significant F change, indicating an improvement in the model's prediction ability.

Table 9.14: ANOVA

Model		Sum of Squares	D f	Mean Square	F	Sig.
1	Regression	38.878	1	38.878	155.683	.000[a]
	Residual	94.646	379	.250		
	Total	133.523	380			
2	Regression	52.908	2	26.454	124.040	.000[b]
	Residual	80.616	378	.213		
	Total	133.523	380			
3	Regression	62.803	3	20.934	111.599	.000[c]
	Residual	70.720	377	.188		
	Total	133.523	380			
4	Regression	66.922	4	16.731	94.454	.000[d]
	Residual	66.601	376	.177		
	Total	133.523	380			
5	Regression	68.998	5	13.800	80.198	.000[e]
	Residual	64.526	375	.172		
	Total	133.523	380			
6	Regression	72.078	6	12.013	73.120	.000[f]
	Residual	61.445	374	.164		
	Total	133.523	380			

Multi-collinearity is viewed to distort both of the findings and the accuracy of the regression model (Mason and Perrault 1991). It affects the stability of regression coefficients (Bryman and Cramer 2005: 302). A preliminary scan for the bivariate correlations in **table 9.12** is an evident of the absence of an explicit multi-collinearity between the independent variables with most of bivariate correlations between the independent variables fall in the range of 0.218 and 0.540 with a sample size of 381. Multi-collinearity is detected in the correlation matrix provided as an output by SPSS, by those correlations at 0.9 (Hair *et al.* 2006) or 0.95 (Mason and Perrault 1991). However, absence of high correlation in the correlation matrix does not guarantee the absence of high levels of multicollinearity (Hair *et al.* 2006; 227). Accordingly, both of the tolerance and the variance inflation factor (VIF) measures are widely used for detecting multi-collinearity. Hair *et al.* (2006; 230) recommends a cut-off of 0.1 tolerance value and 10 VIF, while Field (2009) added that multi-collinearity is not of concern if the average VIF value is not greater than 1.

Table 9.15 shows that VIF values associated with the six-independent variables model are all above 0.1 and less than 10. However, the average VIF value for the six factor model is greater than one (average VIF = 1.45). Considering the high statistical power represented by the R^2 or the adjusted R^2 and the large sample size, that average VIF is accepted and does not distort the model and its findings. Similarly, Mason and Perreault (1991: 279) pointed to the importance of considering collinearity within the context of power, by stating;

> *'Diagnostics that do not assess collinearity within the broader context of power are likely to be misleading. High levels of shared variances among predictors may not have much differential effect on accuracy if power is sufficient.'*

Table 9.15: Relative importance of E-banking value drivers (antecedents) in explaining PV

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
6 (Constant)	-.494	.185		-2.675	.008					
Service environment	.280	.042	.278	6.692	.000	.540	.327	.235	.715	1.399
Information availability	.135	.042	.142	3.185	.002	.522	.163	.112	.619	1.615
Reliability of cards usage	.189	.047	.178	3.997	.000	.496	.202	.140	.622	1.608
Managing complaints through alternative channel	.159	.035	.188	4.534	.000	.491	.228	.159	.717	1.394
E-banking services ' design	.156	.051	.128	3.080	.002	.446	.157	.108	.708	1.412
Role of intermediaries	.148	.034	.175	4.330	.000	.446	.219	.152	.749	1.335

Dependent Variable: perceived value

Table 15 in the quantitative appendix shows that the maximum standardized residual calculated is 2.67, indicating the absence of extreme outliers according to the cut-off points set by Field (2009; 247). Further, the number of cases detected as having 2.67 standard residuals by the SPSS default program, is less than 1% of the sample size which ensures again the absence of extreme influential outliers (Field, 2009; 247).

To ensure absence of influential outliers that might be distorting the result of the regression model, the SPSS software was asked to prepare a report on all cases in the sample. For each case, Cook's distance, Mahalanobis distance and centred leverage value was calculated. Most cases in the case summary report show Mahalanobis distance less than 15 which is acceptable even in small samples of 100 as recommended by Field (2009: 247). Also, the values of Cook's distance for all cases are less than 1, indicating that they are not influential in the regression model (Field, 2009; 247). Moreover, by employing the equation[40] recommended by Field (2009; 247) to detect the influential outlier case, one case shows a centred leverage of 0.045 (**See Tables 15 and 16 in the qualitative appendix**).

Figures 16 and 17 in the quantitative appendix ensure that residuals of the six independent variables are normally distributed and that the normal probability plots of the residuals fall along the diagonal provided by SPSS default program with no substantial or systematic departures as recommended by Hair *et al.* (2006; 81) .

[40] The equation showing the average leverage value : $\frac{number\ of\ predictors+1}{the\ sample\ size}$, the average leverage value = 0.01837, two times this value= 0.036, three times this value= 0.055

Thus, it could be deduced from the above discussion that, the estimated model provided by the stepwise regression could be generalized to the population. However, generalizability might not extend to customers of different profile from the sample. It should be noted that the effect of the six e-banking value drivers (antecedents) on the perceived value of e-banking services, is derived from a sample of highly educated bank customer, of high level of income compared to the announced average income level mentioned by the World Bank, and of 40-59 years old . This may sometimes limit the generalizability of the model to another sample of different socio-economic and demographic characteristics.

9.5 Differences between Banks on the PV of E-Banking Services and its Antecedents

Employing Independent samples t-test, **Table 9.16** reveals that perceived value of e-banking services is higher for non-public bank customers (mean=3.4), than for public bank customers (mean =2.9). This difference between the public and non-public customers had to be justified by detecting the differences between the two banks regarding the six e-banking value drivers.

Table 9.16: Mean differences between the two main bank types On the perceived value and its antecedents

	Bank type	N	Mean	Std. Deviation	Std. Error Mean
Perceived value of e-banking services	public	178	2.9242	.57900	.04340
	Non-public	203	3.4417	.49142	.03449
Information availability	public	178	3.5028	.59482	.04458
	Non-public	203	3.9015	.59142	.04151
Service environment	public	178	3.2854	.37297	.02796
	Non-public	203	4.2039	.36259	.02545
Reliability of cards	public	178	3.3329	.59228	.04439
	Non-public	203	3.5099	.51153	.03590
Service design	public	178	3.1697	.49287	.03694
	Non-public	203	3.3557	.46947	.03295
Role of intermediaries	public	178	3.1489	.73763	.05529
	Non-public	203	3.3350	.66460	.04665
complaints handling through alternative channel	public non-public	178 203	2.8127 3.4433	.66752 .58909	.05003 .04135

Table 9.17 shows that there are significant statistical differences between public banks and those of non-public banks concerning: the perceived value of e-banking services and its six antecedents *(p*<0.05).

The magnitude of difference between the value of e-banking services perceived between public bank and non-public bank customers is moderate (*r* =0.45). However, the difference between the *service environment in the bank branch* perceived by public bank and non-public bank customers is large (*r* = 0.78). The magnitude of difference between both types of banks concerning *complaints handling through alternative channel* is large (*r* = 0.45), but, of moderate size for *information availability* (*r*=0.318).

Moreover, **table 9.17**, indicates significant differences between the public bank members and the non public bank customers concerning *the role of intermediaries*, the *e-banking services' design* and the *reliability of card usage* in shaping the value of e-banking services between both groups (*p*<0.05). The magnitude of difference is very low for both *e-banking services design* (*r*=0.18), *role of intermediaries* (*r*=0.1319) and the *reliability of card usage* (*r* = 0.163), respectively. This makes ***organizational related practices in supporting face-to-face service encounter*** account for the most considerable differences between public and non-public banks in explaining the perceived value of e-banking services. Reasons behind these differences might be due to several factors, such as the positioning strategy and/or the employment scheme adopted by banks. Detailed discussion on these factors and the way they justify differences between public and non-public banks in supporting face-to-face service encounter, in addition to their role in e-banking services value creation and delivery are presented in the next chapter (**chapter 11**).

Table 9.17: Independent samples t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Perceived value	Equal variances assumed	13.974	.000	-9.437	379	.000	-.51755	.05485	-.62539	-.40971
	Equal variances not assumed			-9.336	349.159	.000	-.51755	.05543	-.62658	-.40852
Information availability	Equal variances assumed	.133	.715	-6.547	379	.000	-.39867	.06089	-.51840	-.27894
	Equal variances not assumed			-6.545	371.959	.000	-.39867	.06092	-.51845	-.27889
Service environment	Equal variances assumed	4.275	.039	-24.343	379	.000	-.91855	.03773	-.99274	-.84435
	Equal variances not assumed			-24.298	369.542	.000	-.91855	.03780	-.99289	-.84421
Reliability of cards' usage	Equal variances assumed	8.419	.004	-3.130	379	.002	-.17699	.05655	-.28818	-.06580
	Equal variances not assumed			-3.100	352.224	.002	-.17699	.05709	-.28927	-.06470
Service design	Equal variances assumed	.294	.588	-3.770	379	.000	-.18600	.04934	-.28302	-.08898
	Equal variances not assumed			-3.757	367.079	.000	-.18600	.04950	-.28334	-.08866
Role of intermediaries	Equal variances assumed	.335	.563	-2.590	379	.010	-.18610	.07184	-.32736	-.04484
	Equal variances not assumed			-2.573	359.193	.010	-.18610	.07234	-.32835	-.04384
Complaints handling through alternative channel	Equal variances assumed	8.384	.004	-9.796	379	.000	-.63062	.06438	-.75720	-.50403
	Equal variances not assumed			-9.716	355.868	.000	-.63062	.06491	-.75826	-.50297

The following section will discuss the consequence of e-banking services perceived value.

9.6 Testing the relationship between perceived value and customer loyalty to bank
(2nd research question):
Consequence of e-banking perceived value (PV)

9.6 Consequence of Perceived Value (2nd Research Question)

Table 9.18 shows that 44 % of the respondents consider the benefits of e-banking service in the Egyptian environment to outweigh their problems and risks. Indeed, 28.8% of respondents are neutral towards the value of e-banking services, and only, 27.2 % of respondents consider the problems of e-banking services more than their benefits. **Figure 2 in the quantitative appendix** displays the histogram of the perceived value in and supports **Table 9.18**.

Table 9.18: Perceptions towards the value of e-banking services

Categories	Percent
Favourable (3.5 and above)	44%
Neutral (from 3-3.3)	28.8%
Unfavourable (from 2 to 2.7)	27.2%
Total	100%

Table 9.19 and the distribution of the loyalty scale supported by the histogram (**figure 1 in the quantitative appendix**), showed that only 35% of sample respondents showed favourable intentions towards the impact of e-banking services on bank loyalty, 30% were neutral towards the impact of e-banking services on bank loyalty, Whilst, 35% of respondents perceived e-banking services of unfavourable impact on bank loyalty.

Table 9.19: loyalty to banks

Categories	Percent
Favourable (3.6 and above)	35%
Neutral (3-3.4)	30%
Unfavourable (2- 2.8)	35%
Total	100%

The role of e-banking services perceived value in strengthening the relationship between banks and customers is operationalized by testing the relationship between perceived value and customer loyalty to banks.

Table 9.20 shows that there is a positive significant relationship between the perceived value of e-banking services, and loyalty to banks, with adjusted R^2 of 21%. The difference between R^2 and $adjusted\ R^2$ is only 0.002 indicating the high predicting ability of the model. Durbin-Watson statistic provided in **table 9.20** is closer to 2 indicating that independent errors are within the acceptable range (Field, 2009; 236). Moreover, **table 9.21** shows that the ***F*** value associated with the regression equation is significant.

Table 9.20: Model Summary of the relationship between Perceived value of e-banking services and loyalty

Model	R	R^2	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.461[a]	.213	.211	.52795	.213	102.462	1	379	.000	2.169

a. Predictors: (Constant), perceived value of e-banking services
b. Dependent Variable: perceived impact of e-banking services on bank loyalty

Table 9.21: ANOVA for PV/ loyalty

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.559	1	28.559	102.462	.000[a]
	Residual	105.638	379	.279		
	Total	134.197	380			

a. Predictors: (Constant), perceived value b. Dependent Variable: loyalty

Table 17 in the quantitative appendix ensures the absence of influential cases detected as outliers, and only 17 cases (less than 5% of the whole sample) show standardized residuals above the absolute value of 2. However, these cases show no influential impact on the model supported by Cook's distance less than 1. **Figures 18 and 19 in the quantitative appendix** indicate the linearity and normality of residuals.

9.7 Understanding the Context in which E-Banking Services Value-Adding Model might be generalized

Although, this part is not a part from the main research questions, it might provide new insights or dimensions that assist in understanding the context in e-banking services value-adding model might be generalized.

9.7.1 The Effect of Bank Membership Length on the Relationship between PV and Loyalty

To explore the extent to which *length of relationship with the bank*, a categorical variable, affect the relationship between *PV of e-banking services* and *customer loyalty to banks*, the length of relationship with the bank was re-coded in the form of a dummy variable to enable using it as metric variable in the regression equation as recommended (see Field 2009: 253).

Table 9.22 shows that the correlation between relationship categories with each of the perceived value and bank loyalty constructs is significant. **Table 9.23** shows that the effect of perceived value of e-banking services on bank loyalty increases for those with 5-6 years relationship with their banks, supported by an increase in the adjusted R^2 from 21.3% to 21.8%, as the result of moving from model 1 to model 2. However, this increase is not significant supported by insignificant F change.

Moreover, **table 9.24** shows that beta associated with *5-6 years relationship category*, in the second model is insignificant. This indicates its insignificance in affecting the relationship between *PV of e-banking services* and *customer loyalty to banks.*

Table 9.22: correlation between PV, relationship length and loyalty to banks

		impact of e-banking services on bank loyalty	PV	Relationship of 4 years and above	Relationship of 5 years and above
Pearson Correlation	loyalty	1.000			
	value	.461***	1.000		
	Relationship of 5 -6 years	-.114*	-.093*	1.000	-1.000
	Relationship of 7 years and above	.114*	.093*	-1.000	1.000
***Significant at 0.01		*Significant at 0.05			

Table 9.23: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.461[a]	.213	.211	.52795	.213	102.462	1	379	.000	
2	.467[b]	.218	.214	.52694	.005	2.447	1	378	.119	2.194

a. Predictors: (Constant), value
b. Predictors: (Constant), value, Relationship of 5 years -6 years
c. dependent is: customer loyalty to bank

Table 9.24: The relative importance of bank relationship length and PV in explaining loyalty to banks

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.677	.149		11.276	.000	1.384	1.969					
	value	.462	.046	.461	10.122	.000	.373	.552	.461	.461	.461	1.000	1.000
2	(Constant)	1.748	.155		11.255	.000	1.443	2.054					
	value	.456	.046	.455	9.953	.000	.366	.546	.461	.456	.453	.991	1.009
	Relationship of 5 to 6 years	-.086	.055	-.071	-1.564	.119	-.194	.022	-.114	-.080	-.071	.991	1.009

a. Dependent Variable: impact of e-banking services on bank loyalty

In summary, it could be concluded that customer relationship length has no or little (non-significant) impact on the perceived value of e-banking services nor on loyalty to banks. This might be because there are no great differences between relationship length categories and usage of e-banking services. **Table 9.25** displays a cross tabulation between relationship length categories and e-banking services usage pattern.

However, this finding might be questionable if shorter relationship periods revealed in the data, or, if different relationship length categories are associated with large observable different e-banking services usage pattern.

Table 9.25: Relationship length with the bank /e-banking services usage pattern

	Visa/master card		*Internet banking*	*Phone banking*	*ATM cards*
Relationship length with the bank	**Moderate users**	**Heavy users**	**Moderate users**	**Moderate users**	**Moderate users**
From 5- 6 years	**59%**	**40%**	**54%**	**56%**	**69%**
7 years and above	**55%**	**44%**	**45%**	**43%**	**31%**

9.7.2 Differences between Socio-Economic and Demographic Groups on the Perceived Value of E-Banking Services

Table 9.26 summarizes the results of Kruskall-Wallis test and Jockhree-Terpstra test on detecting the existence of differences between socio-economic and demographic groups on the perceived value of e-banking services. Detailed explanation of findings is provided afterwards.

Table 9.26: Perceived value*demographic characteristics

	Perceived value of e-banking services	
	Kruskall Wallis test	*Jockhree test*
age	Significant at 0.05	Significant negative trend
education	Significant at 0.05	Not significant
income	Significant at 0.05	Significant positive trend

Kruskall-Wallis test revealed that perceived value of e-banking services is significantly affected by income, $H(2) = 14.166$, $p<0.05$, Jockhree test revealed a significant positive trend in the data; an increase in income positively affects the perceived value of e-banking services. J=25013.5, $Z = 2.5$. **Tables 18, 19 and 20 in the appendix display the results.**

Kruskall-Wallis test showed a negative relationship between age and perceived value of e-banking services. The higher the age, the lower the perceived value of e-banking services, *H (2)*=18.54, *P<0.05*. Jonckheere test[41] revealed a significant negative trend in data, J=14208.5, Z=- 4.27. Tables **21, 22 and 23 in the appendix display the results.**

However, education level significantly affects the perceived value of e-banking services. **Tables 24**, **25 and 26 in the quantitative appendix** show a significant effect of education on the perceived value of e-banking services H(2) = 14.23, $p< 0.05$. However, Jonckheere test revealed non-significant positive trend among groups.

9.8 Summary

This chapter presented the quantitative results of the survey conducted to answer the first two research questions. The first research question aimed at exploring those factors shaping the perceived value of e-banking services (antecedents of PV). While the second research is concerned with exploring the extent to which e-banking services could strengthen the relationship between banks and their customers. This was done by testing the effect of e-banking services perceived value on customers' loyalty to banks. Several bivariate and multivariate statistical techniques were employed to answer the two previously mentioned research questions.

The perceived value of e-banking services explained 21% of the customer loyalty to banks. Findings showed that perceived value of e-banking services is a function of six ***e-banking value drivers*** (antecedents). Those six e-banking value drivers significantly affected the value of e-banking services. They predicted 53.2% of the variance in the perceived value of e-banking services. The six factors are: *service environment in the bank branch, complaints handling through alternative channel, information availability, reliability of card usage, e-banking services' design* and *the role of intermediaries in promoting e-banking services. Service environment in the bank branch* is the most influential antecedent in explaining perceived value of e-banking services in the Egyptian environment. *Complaints handling through alternative channel* accounts for the second importance in explaining the perceived value of e-banking services.

[41] Recommended by Field (2009)

However, *reliability of card usage* accounts for the third level of importance in explaining the perceived value of e-banking services in the Egyptian environment.

The six antecedents are a combination of the explicit involvement of *service suppliers in supporting face-to-face service encounters*, *e-banking services quality*, and *the role of external environment in promoting e-banking services*.

Then, the chapter went on to explore differences among the banks operating in the Egyptian environment on the perceived value of e-banking services and its antecedents. Independent samples t-test showed that ***organizational related practices in supporting face-to-face service encounter*** account for the most considerable differences between public and non-public banks in explaining the perceived value of e-banking services. This emphasized the need to integrate banks' perspective, for being the service supplier, through conducting semi-structured interviews, to explore those factors that affect banks' ability to create and deliver the value of e-banking services, with special regards to justifying differences detected on the previous dimension.

Also, findings showed that relationship length with the bank had no effect on both *perceived value of e-banking services* and *loyalty to the bank.* Findings also showed that younger customers are more likely to perceive e-banking services value favourably. Findings also revealed that customers of higher income perceived the value of e-banking services more favourably.

While, this chapter reported the findings of the quantitative study aimed at answering the first and second research questions concerning the demand side of e-banking services, the next chapter validates these findings from the theoretical and cultural perspective in the Egyptian environment.

Chapter 10

Discussing Main Findings from the Demand Side of E-Banking Services

10.1 Introduction

This chapter validates quantitative findings derived from the demand side of e-banking services, from the theoretical and cultural perspectives. Within the chapter questions on the generalizability of the findings to a wider population is considered. **Figure 10.1** summarizes main points discussed in this chapter.

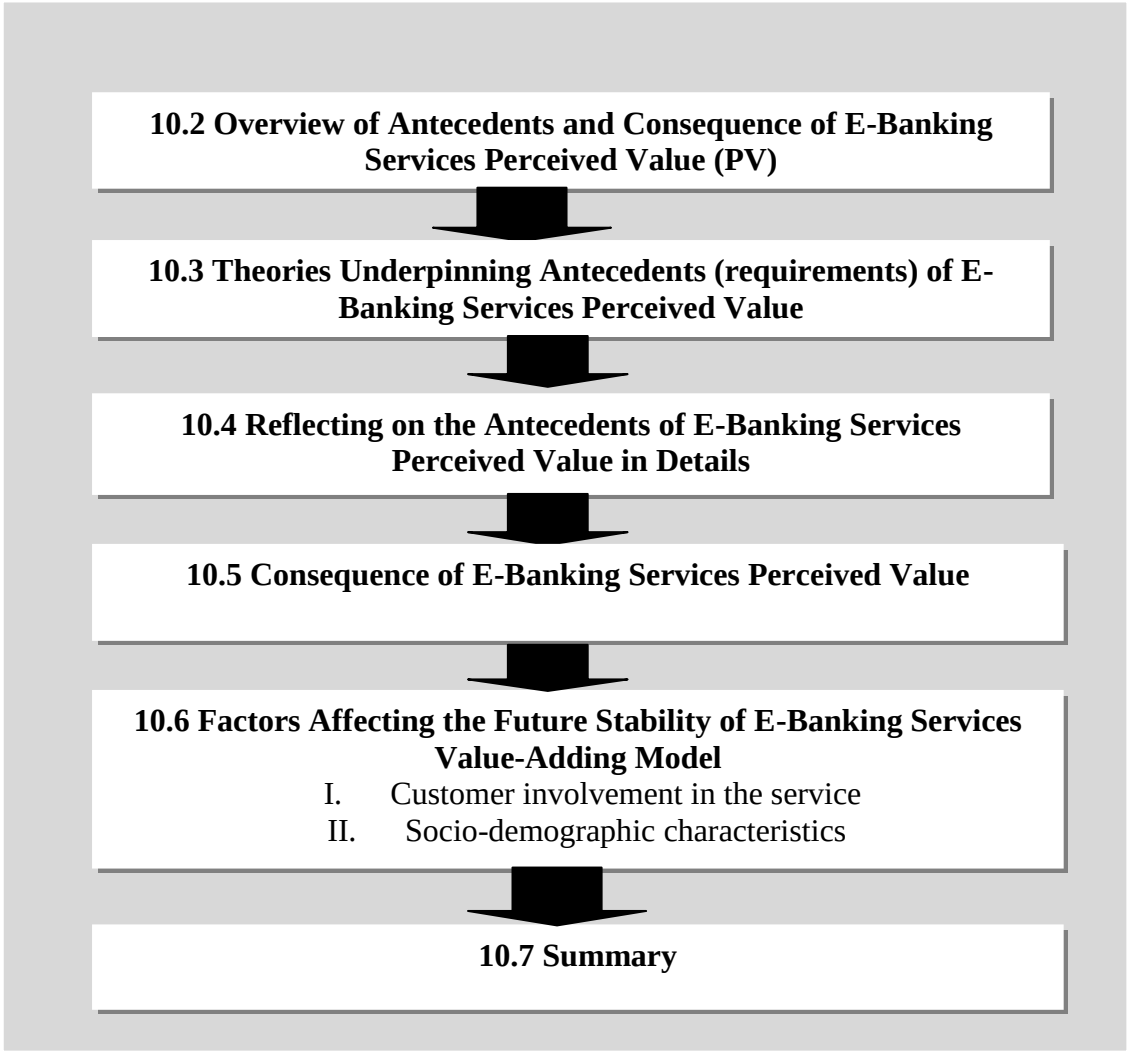

Figure 10.1: Structure of chapter 10

10.2 Overview of Antecedents and Consequence of E-Banking Services Perceived Value (PV)

Figure 10.2 shows that e-banking services perceived value is a process having inputs represented in requirements of value leading to an output, which is customer loyalty to bank.

Results from the Exploratory Factor Analysis showed that six factors are important for e-banking users in the Egyptian environment. Stepwise regression showed that these six e-banking value drivers explained 53.2% of the e-banking services' perceived value. This implies that perceived value of e-banking services is an outcome of six requirements (antecedents). They are *service environment in the bank branch, complaints handling through alternative channel, information availability, reliability of card usage, e-banking services' design* and *role of intermediaries in promoting e-banking services.* These six antecedents highlight the role of three main constructs required in e-banking value creation process:

1. ***Organizational related practices in supporting face-to-face service encounter***,
2. ***E-banking services quality***
3. ***The role of external environment in promoting e-banking services***.

Simple regression revealed a significant positive relationship between perceived value of e-banking services and bank loyalty (the consequence). The perceived value of e-banking services explained 21% of loyalty to banks.

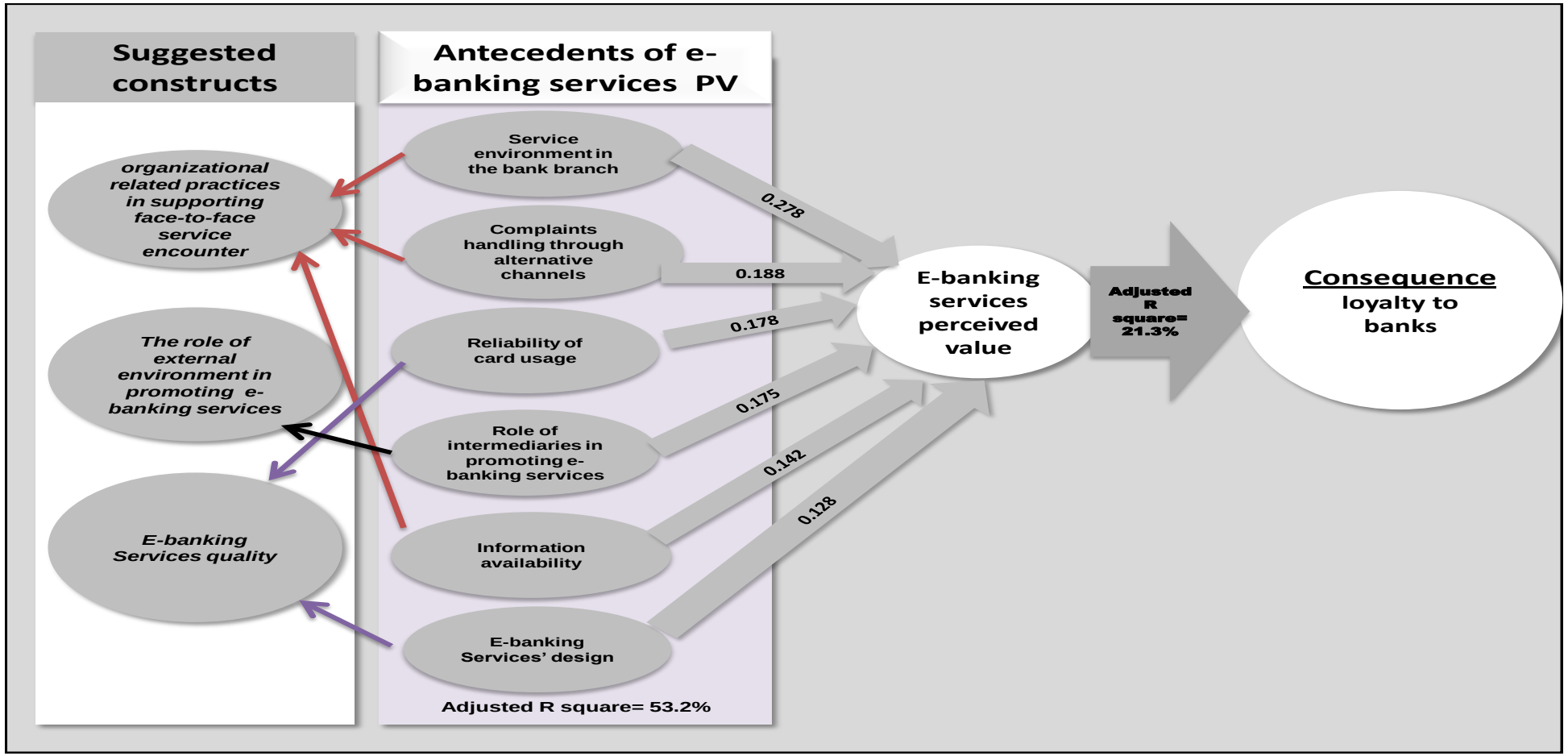

Figure 10.2: E-banking services value-adding model with suggested constructs

10.3 Theories Underpinning Antecedents of E-Banking Services Perceived Value

This section is concerned with highlighting the theories supporting the antecedents of e-banking services and their related suggested constructs. The three constructs emphasizing the six main antecedents indicate the absence of clear line that separates theories explaining consumer behaviour in e-banking services context. They combine Relationship Marketing theory, TAM and diffusion of innovation theory in explaining antecedents of e-banking services perceived value.

Next pages will discuss the relevancy of the three constructs from theoretical and cultural perspectives.

I. Organizational related practices in supporting face-to-face service encounter

The role of ***organizational related practices in supporting face-to-face service encounter*** in creating value are highlighted through *service environment in the bank branch, complaints handling through alternative channel, and information availability*. This major construct draws the attention to the crucial role of trust in the service provider in raising the perceived value of e-banking services. Reliance on ***organizational related practices in supporting face-to-face service encounter*** might be logical and rational in e-banking services, where customers judge the degree of bank commitment in face-to-face service encounters, before they decide to engage in virtual risky e-banking services, or while using e-banking services to transfer from using less risky to higher risky e-banking services.

Service encounter refers to moments of interaction between customers and service providers (Bitner *et al*. 2000; Patterson 2004). The importance of ***organizational related practices in supporting face-to-face service encounter*** and its related three antecedents in driving trust and shaping the value of e-banking services highlights the role of the Egyptian culture explicitly.

The Egyptian culture is characterized by risk avoidance, for being an agricultural economy and reliance on River Nile as an existing continuous, taken for granted source of life (Shahin and Wright 2004; Parnell and Hatem 1999). However, it is worthwhile to mention that relying on firm and rational reasons to participate in any unpredictable action is one of the main doctrines in Islam and Holly Quran. However, when corruption interferes in Islamic cultures, it might be of a paramount influence in guiding decisions in dealing with individuals and organizations. Egypt is reported as having an advanced position in those countries suffering from corruption[42]. It scores the 111th from the 180 countries listed indicating an advanced position in corruption[43] in 2009. Egypt is scoring 2.8 on the corruption index[44]. This score indicates high level of corruption compared to some developing countries such as Turkey, India, Tunisia, Ghana, Jordon, Oman, Qatar, Saudi Arabia and United Arab Emirates. Corruption dominated the Egyptian culture the last 30-40 years and resulted in the dominance of opportunistic behaviour. This makes most Egyptians lack trust in all organizations and even in other people in their daily life. This develops a cautious behaviour among bank customers. Moreover, corruption emphasizes the role of power distance, a cultural dimension, in guiding decisions of e-banking present and prospect users. It has been argued that high power distance countries suffer higher levels of corruption (Hofstede 2001; Getz and Volkema 2001; Seleim and Bontis 2009).

Chetwend *et al*. (2003) argued that corruption undermines trust in other parties, which involves institutions and thereby damage social capital. Birgelen *et al.* (2002: 61) reported that national culture affects the tendency to rely on the physical existence of a service provider to gain trust. Furrer *et al*. (2000) added that reliance on face-to-face contact is valued in cultures characterized by high-risk avoidance. Similarly, it is argued that cautious bank customers give more weight to bank face-to face service quality when deciding to adopt internet banking services (Akinci *et al*. 2004). During relationship with service provider, calculative trust is built through judging operational competence and service recovery management of service supplier (Sirdeshmukh *et al*. 2002; Kramer and Tyler 1996). Similarly, Roy and Shekhar (2010) argued that

[42] The Egyptian organization for human rights. http://en.eohr.org/?p=48 accessed on 2/03/2009
[43] Transparency international organization http://www.transparency.org/policy_research/surveys_indices
[44] Corruption index is calculated out from 10. The nearest the index to 10, the lower the corruption while the nearest the index to 0 indicates highly corrupt. Corruption index is related to the degree of corruption as perceived by business people and country analyst. Extracted from Euromonitor data base: 2009 statistics http://www.euromonitor.com

trustworthiness in the service provider is developed during relationship, through experiencing customer orientation behaviour, integrity and honesty, communications and similarity, shared values ability and consistency. Previously mentioned dimensions of trustworthiness go in line with the three dimensions highlighting the ***organizational related practices in supporting face-to-face service encounter***.

Similarly, Lewicki *et al*. (1998) believed that trust is developed through relationship experience in multiple transactions with the service provider. Correspondingly, Gima (1996:95) pointed to the effect of customers' previous experience with a service supplier on the tendency for more future transactions with this supplier, stating:

> *"Customers use their relationship with service providers as proxies to judge the quality of new service introductions".*

Correspondingly, it is argued that satisfaction with past experience affects trust, which could be reflected on the perceived value of e-banking services (Nendapudi and Berry 1997; Massad *et al*. 2006).

The role of ***organizational related practices in supporting face-to-face service encounter*** in explaining the perceived value of e-banking services agrees with Kim and Prabhakar (2000) who asserted that trusting the financial institution is the basis for adopting its internet banking service. Dimitriadis and Kyrezis (2008) also, asserted that trust transfers from the company to its electronic services. Moreover, Rotchanakitumnual and Speece (2003: 315) reported in their qualitative study that trusting the service provider affects the adoption of internet banking in Thailand.

Further, it agrees with Zhao *et al*. (2010) who proved that trust developed in the bank through experiencing integrity, benevolence and competence minimizes the risks associated with internet banking services. Also, the role of ***organizational related practices in supporting face-to-face service encounter*** in explaining the perceived value of e-banking services, agrees with Yap *et al*. (2010) who proved that perceived bank traditional service quality had a positive influence on trusting e-banking services among internet users in the United States of America.

However, involving organizational related practices in supporting face-to-face service encounter explicitly in explaining the perceived value of e-banking services disagrees with Zeithamal *et al.* (2002). They argued that SERVQUAL dimensions related to face-to-face service quality is neither applicable to the quality of websites, nor they explicitly

affect the perceived value of e-services. Involving service supplier explicitly in e-banking services usage context, also disagrees with Floh and Treiblmaier (2006) who concluded, in a quantitative study, that e-banking services related trust and quality are the main drivers for e-banking services loyalty. Moreover, the importance of ***organizational related practices in supporting face-to-face service encounter*** in explaining the perceived value of e-banking services disagrees with Mittal and Lasser (1998) who argued that functional quality is more influential in high contact customer services, to which banking services belongs, while technical quality is more influential in low contact services.

Although it might be though that ***organizational related practices in supporting face-to-face service encounter*** are important to potential users of e-banking services to enforce trust, findings[45] show that the need for organizational related practices in supporting face-to-face service encounter does not diminish with the extensive use of most e-banking services. This finding contradicts with Bell *et al*. (2005) argument that, the relative importance of functional service quality dimensions represented in the interaction between the customer and the service provider declines as the experience with the financial product usage increases. This is because the importance of interaction with the service supplier in e-banking services context emphasizes a well-trusted and committed bank branch and emphasizes the need for integrated channels for accessing financial services, as well.

The importance of ***organization related practices in supporting face-to-face service encounter*** does not undermine the significant importance of ***e-banking services quality,*** in explaining the perceived value of e-banking services. The role of ***e-banking services quality*** highlights the integration of trust and perceived usefulness in explaining the perceived value of e-banking services. The role of the two major constructs in explaining the perceived value of e-banking services places more commitment on banks offering e-banking services to their customers, which extends beyond supporting face-to-face service encounters to supporting virtual service encounters.

[45] supported by section **(9.4.2) in chapter 9**

II. E-banking services quality

E-banking services quality is highlighted through *reliability of card usage, e-banking services' design*. The importance of ***e-banking service quality related dimensions*** in explaining the perceived value of e-banking services arises from driving relative advantage and perceived usefulness, main drivers for innovation adoption in the technology acceptance model TAM and the diffusion of innovation theory.

It also, enforces the role of technical quality (what is delivered from e-banking services) in building trust, reducing perceived risks and improving perceived usefulness. In traditional services context, functional quality is argued to be more important than technical quality in strengthening relationship with customers (Gronroos 1994: 12). However, to maximize the role of e-banking services perceived value in strengthening the relationship between bank and its customers, both functional quality and technical quality must be emphasized.

The role of ***e-banking services quality*** in explaining perceived value agrees with Cronin *et al*. (1997); Brady and Robertson (1999); Varki and Colgate (2001); Baker *et al*. (2002) and Snoj *et al*. (2004). Moreover, this finding agrees with Chen and Chang (2005), who proved that improving the quality of services reduces perceived risks. Both, service design and reliability are regarded as antecedents for delivering technical value, which is usually attached to service performance (Heinonen 2007).

For others, service quality is a key antecedent for trust, relationship commitment and maintaining successful customer relationships (Wetzels *et al*. 1998; Bloemer *et al.* 1999; Venetis and Ghauri 2004; Gounaris 2005; Zineldin 2005; Osarenkoe and Bennani 2007). Bitner (1995: 248) also, pointed to the reliability of service and its effect on building relationship with customers, stating:

> *"From the customer's perspective, service relationships are built from these encounters; each encounter tests the organization's ability to keep its promises. It is during these encounters or moments of truth that customers receive a snapshot of the organization's quality and each encounter contributes to the customer overall satisfaction and willingness to do business with organization in the future".*

III. External environment in promoting e-banking services

The role of ***external environment in promoting e-banking services*** in explaining the perceived value of e-banking services is highlighted through *the role of intermediaries in promoting the use of e-banking services*. External environmental factors were not considered explicitly in those factors affecting the perceived value of a service or product in previous studies. However, they are recognized among those factors affecting the adoption of technological based services and e-banking services.

The significant effect of such variables might differ among different cultures due to the difference in technological advancement prevailing in this country, or due to the demographic structure and socio-economic status of e-banking users. However, the importance of such factor in explaining the value of e-banking services is emphasized in developing countries. The perceived benefits from using e-banking services are associated with the degree of their acceptance in the external environment where e-banking users experience their daily lives.

The *role of intermediaries in promoting e-banking services* in explaining the perceived value of e-banking services reflects the diffusion of innovation theory. This factor is concerned with the use of e-banking services in transactional exchange with other organizations operating in the Egyptian environment. It introduces the indirect relationship between the acceptance of using e-banking services, in the Egyptian society and the relative advantage perceived through the time or money benefits from using e-banking services in exchange transactions. This finding indicates that the socio-economic and technological nature of the Egyptian environment affects the perceived value of e-banking services. The role of this factor in driving usefulness from using e-banking services, highlights the importance of involving other institutions and systems in the surrounding environment that affect the functioning of e-banking services (Gurau 2002).This finding supports Roy and Dutta's (2003) argument, that the gap between technology applications and a society's ability to perceive the usefulness from that technology affects the rate at which technology is adopted.

10.4 Reflecting on Antecedents of E-Banking services perceived value in Detail

I. Service environment in the bank branch

Service environment in the bank branch is the most influential factor in explaining the perceived value of e-banking services in the Egyptian environment for customers of both public and non-public banks.

This factor reflects the role of face-to-face service environment in minimizing the risks associated with the use of e-banking services. The emergence of this factor in explaining risks associated with e-banking services emerges from the role of face-to-face service environment on trusting the service supplier.

Items measuring this factor are deeply rooted in face-to-face service quality models. The role of employees in shaping the quality of face-to-face services was addressed in several studies (Levesque and McDougall, 1996; Sharma and Patterson 1999; Jamal and Naser 2002; Parasuraman *et al.* 1988; Athanassopoulos 1997; Colgate and Hedge 2001).

Waiting time and/or operating hours, constituents of *service environment in the bank branch*, proved to affect the quality of face-to-face service quality in more than one study (Blanchard and Galloway 1994; Athanassopoulos 1997; Houston *et al.* 1998).

Researchers disagree on the importance and implication of including face-to-face interaction in electronic services. Some studies did not consider the role of face-to-face interaction in addressing the factors affecting the adoption of electronic banking services (Partricio *et al*. 2003). Cox and Dale (2001) viewed that dimensions characterising face-to-face services are inapplicable to the virtual environment. Further, Dobholkar (1996: 44) related the need for interacting with service employees with the poor quality in self-based service technology. However, Durkin *et al*. (2003) concluded that the need for face-to-face interaction in financial services might not necessarily mean low levels of satisfaction with remote banking. Moreover, Herington and Weaven's (2007) concluded that face-to-face service is required to build a strong customer relationship with the service supplier, even with the existence of high quality online services.

The emergence of *service environment in the bank branch* as an antecedents for e-banking services perceived value arise from its role in trusting service supplier and extends to trusting the use of e-banking services. It is argued that, employees' willingness to help is considered one of the main indicators of service encounter success (Bitner 1990; Colgate and Hedge 2001). Similarly, Levesque and McDougall (1996) argued that employees' courtesy, a dimension measuring the relational part of service quality, affects customer satisfaction and word of mouth, both are important in building bank reputation and encouraging trust among projected customers. Further, Yousafazai *et al.* (2003) argued that customer service (front line) employees could infuse trust and build a sound bank reputation, which is reflected in trusting their e- banking services. Face-to-face interaction assists in building a strong relationship between the customer and the bank (Barnes 1997). Also, Morgan and Hunt (1994) argued that employees' behaviour is part of organizational commitment, which is a cornerstone of building relationships.

While face-to-face service environment enforces trust in the service supplier in western cultures, it is of more importance in the Egyptian culture due to the existence of corruption, which drives customer favouritism. This is because employees' behaviour, a main constituent of service environment, is as an output of a cultural system (Paine and Organ 2000: 46). This implies that the economic, political circumstances and corruption prevailing in that culture are reflected on employees' behaviour towards customers. Customer favouritism, an indication of corruption, is embedded in the values of some societies. It usually results from the deteriorated economic and social circumstances, where absence of democracy and accountability prevails (Luo 2004; Diog and Theobald 2000). Customer favouritism raises the issue of interactional justice, which affects both trust and commitment to service provider (Tax *et al.* 1998)

Although, service environment in the bank branch is the most influential in explaining the perceived value of e-banking services, the existence of other alternative channels to handle complaints reduces the risks of e-banking current users by enforcing bank commitment towards customers.

II. Complaints handling through alternative channel

This factor emphasizes the necessity of alternative complaint channels existence besides the bank branch, through which bank customers and e-banking users could report their problems and access immediate help. The emergence of alternative complaint channels in explaining perceived value of e-banking services highlights the need of bank customers and e-banking users for a continuance non-discrete support from the bank, even out of branch operating hours. This factor, also, introduces the role of technology in service recovery. Service recovery refers to those actions taken by the service provider to deal with service failure. Studies in western culture addressed the crucial role of service recovery, complaint channel accessibility and responsiveness on service quality, satisfaction, perceived risks and trust.

Although, e-banking services are considered low-contact services, their users are still in need for alternative channels through which they could access immediate help, which affects both trust and willingness to remain with the service provider (Lovelock and Wirtz 2007: 312). Successful complaints handling was regarded as one of the dimensions affecting the quality of e-banking portals (services) in Bauer *et al.* (2005); Jun and Cai (2001) and Joseph *et al*. (1999). While, it was included implicitly in those factors enforcing trust and minimizing the risks of e-banking services in Mukherjee and Nath (2003). Similarly, Snellman and Vihtkari (2003) argued that customers are reluctant to use self-service technology, if they expect no serious reaction from the service supplier to rectify the source of failure.

If the need to foster uninterrupted feedback and complain raising channels is crucial to face-to-face service and e-banking services context, in western cultures, its importance increases in cultures of new experience with e-banking services especially if opportunistic behaviour dominates that culture.

The role of *complaints handling through alternative channel* in explaining the perceived value of e-banking services agrees with those studies addressed the effect of service recovery on satisfaction in face-to-face or electronic service encounters. Moreover, it agrees with those studies addressed the effect of complaints channels accessibility and responsiveness on trusting and improving relationship with service provider. For example, Bitner *et al.* (2000) emphasized the effect of accessing complaints channels on customer satisfaction with service encounters. Complaints channels accessibility is a

main constituent of face-to-face service quality (Levesque and McDougall 1996; Blanchard and Galloway 1994). Accessibility and responsiveness of complaint channels affect the degree of fairness perceived by customers, which in turn reflected on their perceived trust and commitment to the service provider (Tax *et al*. 1998; Patterson *et al*. 2006)

However, the relative importance of *complaints handling through alternative channel* in explaining the perceived value of e-banking services might vary among e-banking users, depending on the situational context of service usage and the seriousness of service failure (Smith *et al.* 1999: 360; Mattila and Witrz 2004).

III. Information availability

Information availability reflects the role of service provider in satisfying the required information in the right quality and at the right time. The importance of *information availability* in explaining the perceived value of e-banking services arises from being a building block in guiding consumer decision making towards a service offering or being a prerequisite in trusting service provider, and hence, guiding consumer decision making towards services offered.

Transmitting right information at the right time to customers enforces trust by promoting a customer-oriented culture (Berry *et al*. 1985; Morgan and Hunt 1994). Kangis and Passa (1997) proved, in a quantitative study, that failure to communicate a clear message about applicable bank charges affected the perceived quality of banking services negatively.

The relationship between *Information availability* and perceived value of e-banking services resulted in this study, agrees with other studies discussed the importance of information availability on the costs and the perceived risks associated with product or service selection (see: Waite and Harrison 2004; Salaun and Flores 2001; Gatingnon and Robertson 1985).

Findings showed that, the need for information extends beyond the selection, to the usage phase. So that, master/visa card users interest in information increases as they upgrade from moderate to heavy users of these services. This finding agrees with Waite and Harrison (2004: 68) who advocated the need of information, to judge the feasibility of the present situation and to match this new information with the change of usage

context. This finding also agrees with O'Neill and Palmer (2003: 194) who argued that priority of customer needs might change because of changing customer circumstances or attributes. Further, it is in accordance with the belief that future needs could change satisfaction towards the present option, while creating the need for another alternative (Kees *et al*. 2000). The continuous need for information become important in environments experiencing rapid economic changes, where customers are more becoming more sensitive to prices or charges and re-evaluate their choices (Estelami *et al*. 2001).

The significant role of information availability in explaining the perceived value of e-banking services in the Egyptian environment agrees with Schmidt and Spreng (1996) who believed in the increasing need for *information availability* in self-service technological services, because of their intangible nature and unexpected risks.

Communicating timely and accurate information about the nature of internet banking services affected their adoption in western cultures (Shih and Fang 2006; Pikkarainen *et al.* 2004; Sathye 1999; Laforet and Li 2005). Wan *et al.* (2005) asserted that supplying information on the nature of financial services and the e-banking services affected the adoption of different electronic banking channels in Hong Kong. Similarly, Mukherjee and Nath (2003) proved a positive significant relationship between communication measured by information quality and asymmetry, on trusting online banking and their role in developing relationship banking.

IV. Reliability of card usage

Reliability of using cards in the Egyptian environment is the third factor in importance in explaining the perceived value of e-banking services. This is due to their high usage among the sample respondents, as more than 80% of sample respondents used plastic cards for both fulfilling basic needs such as remote access to funds, either through immediate access to cash or through payment for purchases to a third party.

Reliability of card usage emphasizes the role of trust and perceived usefulness in explaining the perceived value of e-banking services in the Egyptian environment. All previous studies agree on the importance of service reliability in shaping the attitudes of customers towards service offering, through perceived quality, perceived risk or trust.

Reliability of card usage is an indication of bank commitment, where visa/master cards users judge the bank's ability to manage other forms of e-banking services. Ultimate financial services customer judges service reliability through perceived outcomes (Levesque and McDougall 1996). Reliability, implies a set of usage outcomes such as dependability, promptness, accessibility and time saving (Parasuraman *et al*. 1988; Rugimbana and Iversen 1994; Coulter and Coulter 2002; Ibrahim *et al.* 2006; Rod *et al*. 2009).

Reliability of card usage introduces both functional and technical quality dimensions in judging ATM service and its related e-product. Technical quality dimension reflects the outcome, while functional quality dimension reflects the way the service is delivered to customers (Gronroos 1984; Gronroos 1994). The importance of reliability as a quality dimension in explaining the perceived riks agrees with Meuter *et al.* (2000) who found that *reliability* is key driver of dissatisfaction from self-service technologies. Moreover, the role of *reliability of card usage* in explaining perceived value agrees with Rotchanakitummuai and Speece (2003) who found that service reliability affects customers' perceived risk of e-banking services.

Although, *reliability of card usage* had the third level of importance in explaining the perceived value of e-banking services, *e-banking services design* proved a significant impact in explaining the perceived value of e-banking services. Both factors emphasize the concept of integrated range e-banking services to infuse trust among users (Peppard 2000). This is because in reality call and internet banking could not substitute the flexibility and convenience expected from the remote access to funds through ATMs and their related e-products.

V. E-banking services' design

E-banking services' design proved a positive significant role in explaining the value of e-banking services. This factor highlights the role of call and internet banking in driving relative advantages and perceived usefulness for their users. The ability of internet banking and call banking to provide the required information and the range of transaction that match users' requirements increases their relative advantage, and hence their perceived usefulness.

The ability of internet banking services to provide the required information is an indicator of its quality in all quality models. Negash *et al.* (2003) found that the information quality perceived in web based customer support systems enhances the overall quality of these systems. Bauer *et al.* (2005) asserted that the ability of e-banking services portals to supply the required information and to enable performing basic and some advanced transactions are constituents of e-banking portals quality. Yang *et al.* (2005) viewed that information quality and adequacy affects overall web portals' service quality and satisfaction. Also, Rod *et al*. (2009) emphasized the role on online information systems quality on overall internet banking service quality, stating:

> *"If the website is not informative, or the design of the website is not user friendly, this will have a negative impact on customers' perceptions of overall internet banking service quality".*

The role of e-banking services design in triggering perceived usefulness and hence improving the perceived value, agrees with Alhudaithy and Kitchen (2009) who argued that the ability of the bank website to provide enough information to support customers' decision-making process in purchasing financial services influences the perceived usefulness of internet banking. The role of e-banking services' design in explaining perceived value (net benefits), agrees with those studies addressed the role of bank website design on internet banking adoption and trust in the service provider (see Cox and Dale 2001; Jun and Cai 2001; Jaruwachirathanakul and Fink 2005; Yousafzai *et al.* 2005).

The same quality requirements could apply to call banking to improve the perceived usefulness represented in time convenience, from its usage. *E-banking services' design* guides the service provider to those antecedents that increase the perceived usefulness and relative advantage of internet banking and call banking services, hence, improve their perceived value. However, the ability to fit information and services offered through the internet and call banking to customer requirements could be bounded by the suppliers' internal and external operating environment, which need to be explored in the next chapter.

VI. Role of intermediaries

Role of intermediaries in promoting e-banking services is the fourth important antecedents in explaining the perceived value of e-banking services in the Egyptian environment. The emergence of this factor highlights the role of external environment in triggering the perceived usefulness and relative advantage in explaining the perceived value of e-banking services. The emergence of this factor emphasizes that e-banking services is considered as an innovation in some and that surrounding environment plays a considerable role in driving usefulness behind the usage of these services.

The role of intermediaries in explaining e-banking services perceived value agrees with Shi *et al*. (2008), who proved that coercive pressures, arising from both formal and informal pressures, affect attitudes towards using internet banking. Also, the role of intermediaries in triggering perceived usefulness and hence shaping the perceived value of e-banking services agrees with Tan and Teo (2000) who pointed out the effect of perceived relative advantage from using e-banking services on internet banking acceptance among customers.

In summary, the above discussion ensures that the perceived value of e-banking services in the Egyptian environment better explained by integrating consumer behaviour theories, rather than depending on one theory or model. Moreover, the above discussion ensures that there are no sharp clear boundaries between theories of consumer using behaviour in e-banking services context.

10.5 Consequence of E-Banking Services Perceived Value (PV)

Running simple linear regression proved a positive significant relationship between perceived value of e-banking services and customer loyalty to banks. This finding proves that e-banking services could strengthen the relationship between banks and customers interested in using these services in the Egyptian environment. It is an indication of the ability of e-banking services to act as a value added marketing tool for the core services offered by banks in the Egyptian environment.

Although, this significant positive relationship is promising for those banks offering e-banking services, yet it places the same degree of risks on banks offering e-banking services, with customers interested in using these services. Those risks depend on the ability of banks to create and deliver the required value of e-banking services to the interested customers.

The relationship between perceived value and loyalty, proved in this study, agrees with previous studies proved a significant direct effect between value and loyalty (Bolton and Drew 1991; Chang and Wildt 1994; Sweeney *et al*. 1999; Sweeney and Soutar 2001; Chen and Dubinsky 2003; Harris and Goode 2004; Yang and Peterson 2004; Pura 2005).

However, the role of perceived value of e-banking services on the ability to improve relationship with customers (an indicator for marketing performance) contradicts with Herington and Weaven (2007) who found that quality of internet banking did not improve the relationship between banks in Australia online bank users. Current study finding partially agrees with Al Hawari and Ward (2006) who proved that the quality of the automated service provided by Australian banks affected their financial performance.

10.6 Factors Affecting the Future Stability of the E-Banking Services Value-Adding Model

The study finding reveals a positive significant relationship between perceived value of e-banking services and their impact on bank loyalty. However, other factors might intervene to affect the stability of this relationship. These factors are highlighted in the next pages.

I. Customer involvement in the service

The extent of bank customer interest in the e-banking usage is known as customer involvement in service and is defined by Bloemer *et al*. (1999: 319) as:

> *"Involvement reflects the inherent interest a consumer has in the service. It means that the service has a heightened relevance to the consumer."*

Customer involvement in the service is judged by usage strength (pattern) or length. The positive significant relationship resulted from a sample whose members show moderate to heavy usage of e-banking services. The effect of time and experience with the service or service provider has an important role in developing an affective commitment (Doney and Cannon 1997; Verhoef 2003; Flavian *et al*. 2005). Usage frequency of e-banking services allows users to judge the quality of e-banking services and the ability of e-banking services to satisfy their financial needs and the commitment of banks in different contexts (Coulter and Coulter 2002). Ravald and Gronroos (1996: 24) pointed to the effect of usage experience developed through time and frequency of transactions with service encounter in building trust, and improving loyalty, stating:

> *"After a few successful transactions (the customer is satisfied) the customer starts to feel safe with the supplier-a trust is developing. The customer knows that this company is able to fulfil his needs and wants and is assured that the company will take care of the commitments it has made".*

Although, not addressed in this study, but could be an area for further research, where two samples of different usage length and strength (patterns) could be compared, where the difference of relationship between perceived value of e-banking services and loyalty might be detected.

In some situations, perceived risks from e-banking services might not necessarily be interpreted in terms of relational risk or distrust, threatening the bank's market share and its relationship with its customers (Sirdeshmukh *et al.* 2002). The reaction of customers to risks or losses of e-banking services might differ according to their involvement and their acceptance of partial responsibility for the loss (Zineldin 1996; Meuter *et al.* 2000). It is argued that customers' orientation whether technology or face-to-face affects their selection to the different services provided by the bank, which might create different reactions to e-banking service failure (Thornton and White 2001). Lang and Colgate (2003) added that the gap resulting from expectations and actual experience for those IT oriented customers affects relationship quality, hence customer commitment.

The relationship between perceived value of e-banking users and customers loyalty to banks, might weaken or turn to be insignificant if e-banking users are not technology oriented. In this case, any increase in the perceived risks or unobserved benefits might drive them to switch to the traditional way of banking and not necessarily result in

complete switching from the bank. Or sometimes, high technology oriented customers might still deal with their banks even after low e-banking services perceived value, because of high switching costs imposed by other banks, or because of habit (Mittal and Lassar 1998; Patterson 2004; Fitzgibbon and White 2005; Rowley 2005). This type of loyalty is an indication of a fragile relationship with the service provider, which might be easily broken in the future in case of any affordable alternative (Eriksson and Vaghult 2000).

II. Socio-demographic characteristics of customers

Findings showed that there is negative trend between age and the perceived value of e-banking services. This finding is in line with Mattila *et al.* (2003) and Zhu *et al*. (2002). Also, the study finding agrees to a large extent with Howcroft *et al*. (2002) who found a negative relationship between age of bank customers and tendency towards using e-banking services.

However, the effect of time and usage experience could change the future relationship between age and the perceived value of e-banking services. The negative trend between age and loyalty shown in the sample, might not last more than 10 years. This is because; in the future, those who are in younger age category and perceive the value of e-banking services favourable will join the higher age categories.

The effect of time and usage experience combined with the banks' efforts to improve the value of e-banking services might flatten the relationship between age and *perceived value of e-banking services*.

Although, most users of e-banking services are bachelor or diploma graduates, Kruskall-Wallis test revealed no significant trend between education levels on the perceived value of e-banking services. However, this might be not generalized to other bank customers, because not all bank customers are university graduates, which is placed in the study as the lowest education category. Thus, diversifying education levels in future samples might show different trend between education levels and perceived value of e-banking services.

Study findings also showed a positive trend between income and perceived value of e-banking services. This might also agree with interviewees argument (in the interview phase) that middle income or limited income e-banking users might find it costly to reach ATMs and use visa/master or ATM cards in satisfying even basic financial needs. Or it could be due to the need of high income customers to manage their funds through a range of integrated channels. However, this trend might flatten with development of e-banking services' design to reflect the financial needs of all income groups. Thus, low income level bank customers might find it less costly, more time convenient (beneficial) to rely on e-banking services for accessing their financial needs, when the e-banking services design reflects the need of those segments. This justification might be in line with Black *et al*. (2002) who found that customers of high income level have higher tendency towards using e-banking services. Also, it agrees with Taddesse and Kidan (2005) who argued that financially well off customers can afford to use visa/master card in paying for purchases in Ethiopia.

10.7 Summary

This chapter justified and validated the findings of the first two research questions, concerned with the demand side of e-banking services, from cultural and theoretical perspectives. The first research question aimed at identifying the antecedents of e-banking services perceived value in the Egyptian environment. While the second research question aimed at exploring the extent to which e-banking services could strengthen the relationship between banks and their customers (the consequence of e-banking services perceived value).

Discussion showed that ***organizational related practices in supporting face-to-face service encounter,*** highlighted through *service environment in the bank branch, complaints handling through alternative channels, and information availability*, emphasizes bank trust and commitment in minimizing the risks associated with the use of e-banking services in the Egyptian environment. This major suggested construct ensures that role of service provider in driving trust and minimizing risks associated with e-banking services.

E-banking Services quality is highlighted through *reliability of card usage* and *e-banking services design*. This major suggested construct with its detailed dimensions

highlights the importance of providing integrated channels through which customers could access their financial services and achieved maximum convenience. This major suggested construct emphasizes that role of quality of e-banking services in driving perceived usefulness, relative advantage and trust whether in the service itself or/and the service provider. Although, dimensions of e-banking services quality form separate factors, conceptually, they cannot be isolated from their service provider. The banks' internal operating and external surrounding environments shape the quality of e-banking services created and delivered to customers. Accordingly, the role of service supplier in supporting the value of e-banking services will be discussed next chapter.

The ***role of external environment in promoting e-banking services*** in explaining the perceived value of e-banking services is highlighted through the role of intermediaries in promoting the use of e-banking services. This factor introduces the importance of involving other institutions and systems in the surrounding environment that affect the acceptance of e-banking services in transactional exchanges. This factor emphasizes that innovation diffusion is a socio-technical phenomena and highlights the role of several parties in the society in driving usefulness and relative advantage from using e-banking services.

The positive significant relationship between the perceived value of e-banking services and customer loyalty to banks ensures that e-banking services succeed to act as a defensive marketing tool. However, the strength of relationship between PV and the customer loyalty to banks depends on the level of customer involvement in the service, socio-economic profile of bank customers and users of e-banking users. Finally, this relationship depends on the ability of the service provider to create and deliver e-banking services value requirements.

While, this chapter discusses and validate findings from the demand side of e-banking services, the next chapter presents and discusses findings from the supply side of e-banking services.

Chapter 11

Factors Shaping the Creation and Delivery of E-Banking Services Value: Supply Side Perspective

11.1 Introduction

This chapter presents factors shaping e-banking services value creation and delivery in the Egyptian environment. These factors are introduced from the process of coding data revealed from semi-structured interviews with practitioners in public and non-public banks. These factors provide insights to the effect of internal operating and external environment of banks on the process of creating and delivery of e-banking services value. **Figure11.1** summarizes the main points dicussed in this chapter.

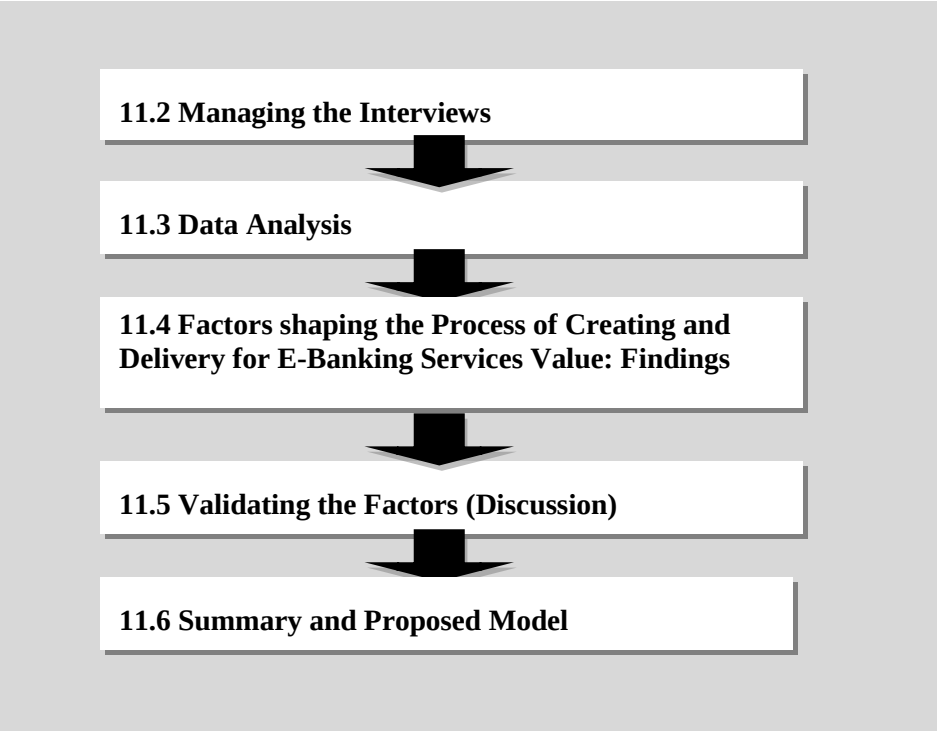

Figure 11.1: Structure of chapter 11

11.2 Managing the Interviews

Interviews were conducted with banks' practitioners to explore and explain how banks' internal operating and external environments shape the value creation and delivery of e-banking services

The interviews were conducted within the banks setting. This affected the quality of recordings, the timing of the interviews, the ability of the researcher to probe, which might have affected the amount of factors extracted.

However, the semi-structured nature of interviews assisted in guiding the interview. It also saved the time of the respondents and affected their cooperation in providing the needed information.

Literature addressed CRM requirements for creating and delivery of e-banking services value guided the formulation of interview questions. Successful implementation of CRM requirements depends on banks' internal operating and external environments. These requirements are: *the ability of banks to manage changes as a result of introducing e-banking services, extent of using IT, ability to foster customer oriented culture and ability to promote teamwork culture and achieve interdepartmental coordination*. **Table 11.1** presents a sample of interview questions directed to front office employees and bank practitioners in the bank office (head office). The mix of questions (the number, the sequence and the depth of questions) used in each interview depends on the respondent managerial level, responsibilities in the bank and the time of the interview.

Data resulted were analyzed, reduced rearranged and categorized to extract factors in answering the third research questions, aiming at exploring and understanding the ability of banks internal and external operating environments in supporting the value of e-banking services and the antecedents of e-banking service perceived value, revealed from the demand side of e-banking services.

Table 11.1: Sample of questions guiding interviews with banks

Questions to front line employees in the bank branches and bank branch managers
➢ To what extent do you see the service environment in your bank encouraging for teamwork? **Bolino *et al*. 2002** ➢ To what extent does the bank management foster the teamwork culture? **Sin *et al*. (2005)** ➢ To what extent do you see customer contact employees responsible for the quality of service environment perceived by customers and how? **Hartline and Ferrel 1996** ➢ To what extent do customer contact employees are satisfied with their jobs? ➢ To what extent do you see payment and reward are encouraging for building a better quality perceived services environment and to what extent is this satisfied by your bank? **Henning-Thurau and Thurau (2003**) ➢ To what extent you see the qualifications of customer contact employees affecting customers perceived quality and trust in ability of employees to provide help when needed? ➢ To what extent you see bank management practices responsible for the qualifications of customer contact employees at the bank branch? ➢ To what extent do you agree with the effect of external environment on shaping the quality of employees brought in the bank branch and how this was controlled by the bank? ➢ Why there might be differences in the perceived quality of between public and non-public banks brnaches? ➢ During the introduction of e-banking services, what might be the factors affect the successful alignment of people, technology in the bank branch**?** **Shah *et al.* 2007** ➢ What are the problems encountered if any in successful alignment of people and technology in this bank branch? **Zablah *et al*. 2004, Zhu *et al*. 2004**
Questions directed to mangers in the head office (back-office)
➢ From your perspective, what are those factors that affect the ability of your bank to manage IT applications to support the full range of e-banking services, as those offered in the western culture? ➢ To what extent does the bank internal environment shape the bank ability to deliver a full range of e-banking services than other banks, in the Egyptian environment? **Avlonitis and Gounaris (1999)** ➢ To what extent does the surrounding external environment intervene in the ability of banks to manage advanced IT applications required to upgrade the services provided by internet banking website or call banking? **Veiga *et al*. 2001, Karimi *et al*. 2001.** ➢ To what extent these factors extend to explain the use of information technology in analyzing customer data? And to what extend are this data utilized to retain customers in terms of managing their complaints and providing better messages about financial products?

11.3 Data Analysis

The process of data analysis aimed at extracting factors reflecting the role banks' internal operating and external environments in shaping the process of creation and delivery of e-banking services value in the Egyptian environment.

Data analysis aimed at answering *what* and *why*. It aimed at knowing **what** factors shape the process of creating and delivery of e-banking services value and **why** such factors emerge, by validating them from theoretical and contextual perspectives.

Through the process of data analysis, secondary data was integrated to validate emerging factors.

To achieve the main aim of data analysis, two sequential stages are required: transcription and translation then creating codes.

11.3.1 Transcription and Translation Processes

Due to the context in which interviews were initiated, careful and repeated listening to recordings was important to ensure an understandable and a complete transcribe as possible.

Interviews were initiated in Arabic. In translating interviews, the focus was on understanding and highlighting the context and emphasizing the meaning behind words rather than taking a word equivalence approach.

Two factors assisted in reaching the most proper transcription. First, the data collector and analyst was the translator. Second, both the interviewees and the interviewer share the same culture and language. This provided a better opportunity for close attention to cross-cultural meanings and making sense of the interviewees' quotations before translating them.

11.3.2 Creating Codes

To arrive to the factors shaping the ability of Egyptian banks to support or add value to e-banking services in the Egyptian environment, transcripts were read through, to obtain a general sense of data. This was repeated. Through the coding process, interviews started as induction, and turns to be deductive during the data analysis phase by relating the data emerging to a prior determined theory. Accordingly, resulting codes (factors) reflected a mix between theoretical and free coding.

At the beginning of coding, data was left to suggest the initial (free) codes through an open coding process by which labels were attached to participants' talk. Codes resulting at this stage are named as descriptive codes. Descriptive codes set the contextual basis for validating the higher order inferential codes.

Detailed descriptive codes were refined and clustered into few abstract conceptual codes through the process of axial coding. During the process of axial coding, related descriptive codes are linked together, and grouped into conceptual and theoretically based codes. For example, target market and risk strategies were linked together to highlight the role of bank positioning strategy on using advanced IT applications to support advanced e-banking services features. Also, restructuring, vertical design and job design were integrated to illustrate the role of bank branch design on the service environment in the bank branch, hence the ability of banks to create and deliver the value of e-banking services.

Codes emerged at the latter stage are inferential (pattern), reflecting concepts rooted in the literature and going beyond actual data. Inferential codes (factors) gain their importance by relating them to economic and organization theories. For example, the validity of some factors in shaping the value of e-banking services was explained by organization and agency theories.

Table **11.2** displays the process of coding and highlights both the inferential codes and the descriptive ones.

Table 11.2: Inferential and descriptive codes

Inferential codes 2nd order		**List of Inferential codes 1st order**	**Example of Descriptive codes**
Organizational context		**Bank positioning strategy**	**Target market: rich customers, busy** **Risk strategies**
	Bank branch related factors	• **Design of Bank branch structure** • **Role of employment scheme** • **Criteria of evaluating front-office employees** • **Criteria for recruiting customer contact employees**	**Vertical design** **Lifetime employment** **Restructuring** **Job design** **Nepotism** **Employees age** **Rewards** **Fair pay** **Customer satisfaction** **Rivals in non-public banks**
External environment		• **The nature of the Egyptian economy** • **Output of education system** • **The development of the legal system**	**Insurance companies** **Legislations** **Formal education system** **Financial capabilities** **IT qualified personnel**

11.4 Factors Shaping Creating and Delivering the Value of E-Banking Services: Findings

Eight factors derived from analyzing and coding data resulted from the semi-structured interviews with bank practitioners in the Egyptian environment. These factors reflect the banks' internal operating and external environment. They shape banks' ability to meet CRM requirements, hence creating and delivering the value of e-banking services in the Egyptian environment. These factors are grouped in two main categories: Organizational context and External environment.

The role of organizational internal operating environment (*Organizational Context*) in shaping the banks' ability to meet CRM requirements is highlighted through positioning strategy and bank branch related factors. The role of bank branch related factors is highlighted through four sub-dimensions. These four dimensions are bank branch design, employment scheme, criteria of evaluating front-office employees' performance and criteria of recruiting front-office employees.

The role of external environment in shaping the banks' ability to meet CRM requirements, hence creating and delivering the value of e-banking services, is highlighted through the nature of the Egyptian economy, output of education system and the development of the legal system.

The eight factors shaping the successful CRM implementation, hence, the creation and delivery of e-banking services value, in the Egyptian environment are presented in **Figure 11.2**.

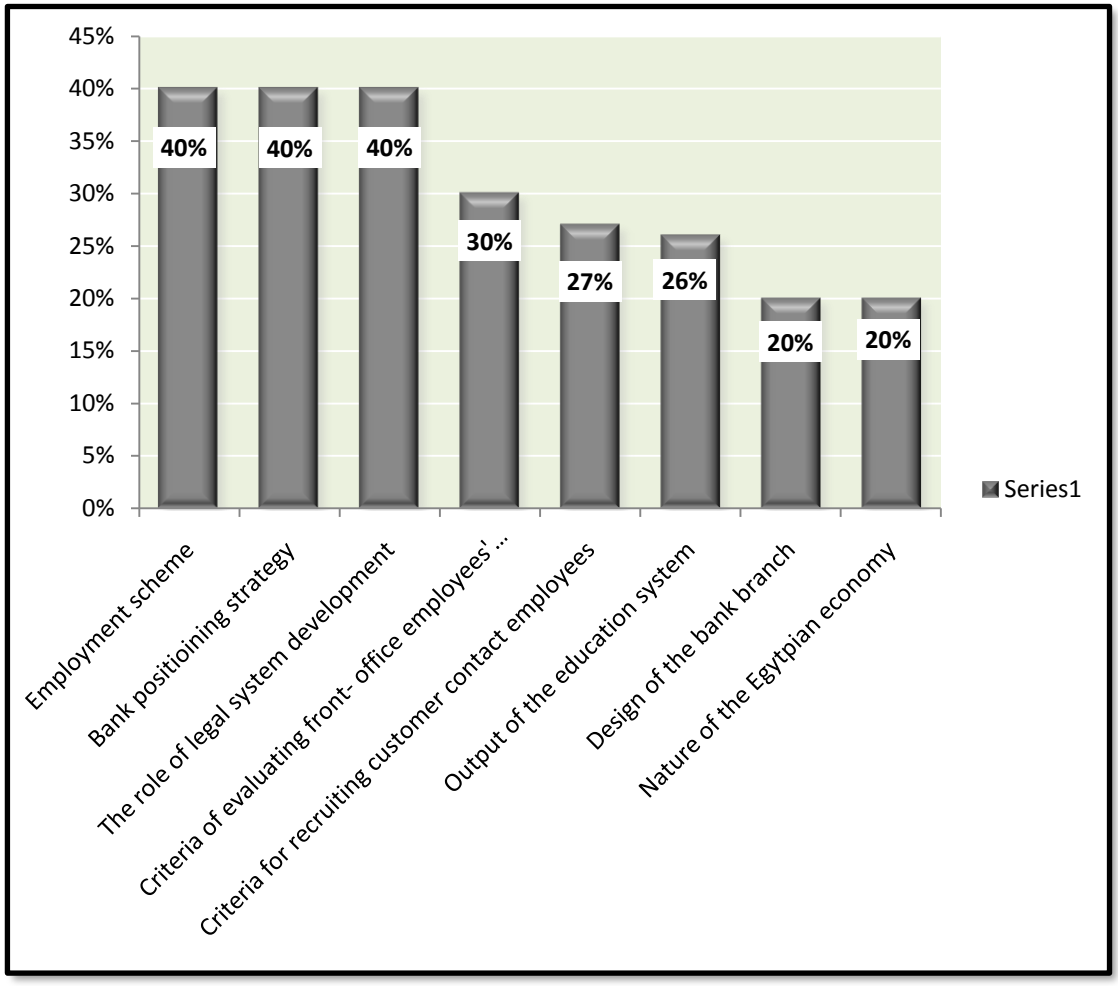

Figure 11.2: Factors shaping the ability of banks to create and deliver value of E-banking services in the Egyptian environment

Findings indicate that *employment scheme, bank positioning strategy and the role of legal system development* are the most important factors in shaping the banks' ability to create and deliver value of e-banking services in the Egyptian environment. While *design of the bank branch* and *nature of the Egyptian economy* are less important compared to other factors.

Although these factors are important in shaping the creation and delivery of f e-banking services value, their relative importance cannot be generalized to the rest of banks in the Egyptian environment. This is due to the type of banks and the level of participants included in the sample.

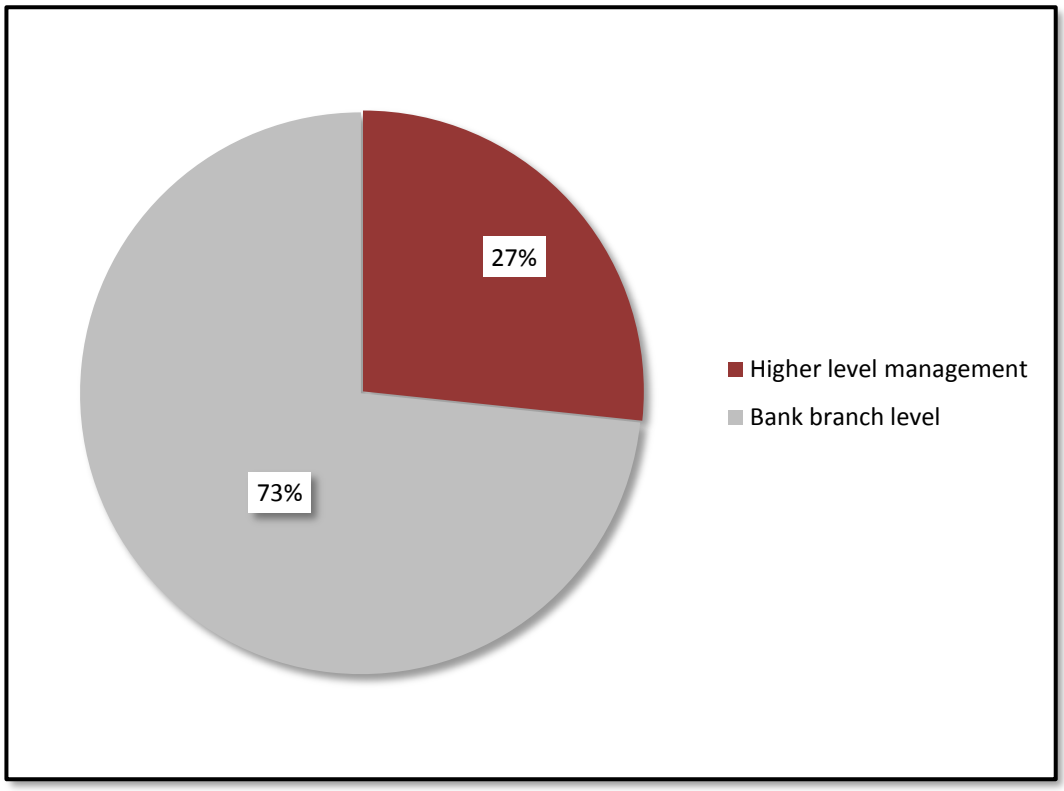

Figure 11.3: level of bank participants in the sample

Figure 11.3 shows that most of the sample participants were from the bank branch level. This might have highlighted some factors while disregard others. On the other hand, these factors emerged from interviews with public banks and non-public banks especially multinational banks. While, other non-public banks were not included due to inaccessibility.

The next section justifies and validates the contribution of the eight factors to the creation and delivery of e-banking services value in the Egyptian environment. Factors extracted supported by interviewees' quotes are presented in **table 11.3**.

Table 11.3: Examples of interviewees' quotes supporting Factors extracted at the supply side of e-banking services

	Inferential codes	Examples of Quotations	Managerial level of respondent	Total number of participants who mention that factor	Importance of the factor[46]
Organizational context	**Bank positioning strategy**	*Our bank has a social target. We cannot restrict ourselves to the rich people in our country. Where other people who have little savings and cannot bear the cost of joining private banks go. However, we try to satisfy rich customers' needs by developing new e-banking product. Our market structure is similar to the Egyptian society structure. You can find those illiterate but rich customers, you can find well educated but limited income customers'.*	PBHO[47]	**6**	**40%**
		'The nature of our customers shapes the nature of our financial services. We have customers who are rich, but not necessarily well educated to deal with internet banking. We face this in rural areas and some places in upper Egypt, where customers use something like a stamp which they consider safer than signature. So how these people will use the internet banking or phone banking. These people represent a considerable percentage of our customers'.	PBHO		
		'Our target here in Egypt is the niche market with both the social and economic status elite which requires giving superior services. This segment do not care too much about small differences in the interest rates on financial products, as long as it is offset by the climate in the bank branch the appearance of employees and of course the reputation of the bank not only here but abroad. Our customers are busy and VIPs. To satisfy this segment all possible electronic services should be there to enable them to manage their money here or abroad as they travel frequently. Our strategy is to go to the customer instead of letting the customer come to us'.	NPBHO[48]		
		'While, public banks had the economic power to attract customer using price strategy by offering certificates of deposit with the highest interest rate, but there is also in the market those segment of customers who prefer advanced forms of e-banking because of their work or business. This is our strategy we offer wide range of electronic banking services because our customers are elite their lifestyles are different. They travel, go shopping abroad, mostly businessmen'.	NPBBM[49]		
		Responding to our customers' requirements, we recognize that keeping our customers is an asset taking in account all competitors. We developed prepaid internet visa card, by which those customers interested in shopping online could use them and it was promoted widely among our well educated and financially well off customers who book airline flights and hotels online'.	PBBM[50]		
		'Of course, non-public banks especially us as multinational banks can manage IT easily than our rivals from public and some non-public banks which are locally owned. They cannot afford IT huge expenses. There are maximum salary ceiling in public banks which might not be enough to recruit and keep professionals and expertise in that area. We have also very qualified employees who know how to use this technology'.	NPBBM		

[46] It is calculated by dividing the total number of participants who mention the factor by the total number of participants who are 15
[47] Public bank head office manager.
[48] Non public bank head office
[49] Non-public bank branch manager
[50] Public bank branch manager

	Bank branch environment	Design of the bank branch	*"Our branches suffer a tall structure, this really created problem when we need to infuse technology and change the operations in the branches. The way jobs are designed in the bank and you know that job description is related to a financial degree, change means redesigning existing jobs and of course a new payment scheme. This is not easy to be done along more than 200 branches".* *'The bank branch development department in the head office started to restructure some branches; we begin with those who have high customer visiting rate. However, a lot of difficulties stop the continuation on restructuring branches. You know the Egyptian employee; it is very difficult to accept changes easily. Such changes will affect the position of some employees who benefit from the present status in the branches'.* *In our branch, usually, there is a separation between customer service employees and between us front-office employees. We as front line office employee, have definite tasks which differ from that of customer service whose number does not exceed two employees in the bank branch. This requires customer to report to more than one employee to get their financial needs fulfilled'. Sometimes the technology and the system break down and this usually happens at peak time. This of course places the whole branch under pressure from the very long queue of customers waiting to be served manually'.*	NPBBM PBHO PBBFOE[51]	**3**	**20%**
		Employment scheme	*''While lifetime employment should provide a person with security which is reflected on his/her performance, but we as Egyptians cannot work like that, we have to be always under stress to achieve success, in our bank we do not offer lifetime employment but rather we provide a contact with say two or three years with a good pay if compared to public banks, and renewal is conditioned to performance in which customer satisfaction plays an important role'.* *We depend on monetary incentives and quick promotions to compensate for the life time employment and at the same time to motivate employees to work.* *The public sector operates with concepts of 20 years later, which is difficult to retain now. This is because ethics and behaviour of Egyptians have changes a lot. From my point of view securing a job for an employee for the whole of his life might not work these days.* *We need really new bolod with new ideas to encourage the development of e-banking services, we still operate with old ideas, every thing has risks but has benefits as well. We need to operate with these concepts.*	PPBM NPPBM NPBBM PBHO	**6**	**40%**
		Criteria for evaluating front-office employees performance	*Our bank branches are evaluated by codes of performance established by the main head office abroad, from which customer satisfaction is a must.* *"how can we satisfy customers and we are not treated fairly, There is unfairness, we the employees at the bank branch who deal directly with customers and bear most of the risks associated with holding, counting or delivering money are paid the same as those in the head office, despite that we are required in some days to stay after formal operating hours".* *"By the nature of our job, customer satsifaction is a main component in the rewarding system or even the promotion, me as a relationship marketing manager is responsible for managing relationship with a number of customers, who should reprt on my performnace on a periodical basis"*	NPBM PBBFOE NPBFOE	**5**	**30%**
		Criteria for recruiting customer contact employees	**"***Employees who work here have to have previous experience in competing banks; they have to have computer skills and communication skills. They know exactly what is required from them. There is no need to train them for new skills. This reduces the cost of training new employees on basic skills and makes us concentrate on other training programs that improve the efficiency of work in our bank".* *"There is no clear criteria for recruiting front office employees in particular. Our bank see front office employee as inferior despite that they are the most important----------of course nepotism plays a role in selecting employees as any public agency, this might bring nonrightemployee in the right place"* *"Public banks still operateds with the cost strategy, therefore they pay less salaries for same jobs compared to nonpublic banks, therefore they cannot impose high quality criteria. In non-public banks, front office employees are paide more compared to front office employees in public banks. These employees are selected by non-public banks with carefulness"*	NPBM PBBFOE NPBBM	**4**	**27%**

[51] Public bank branch front office employee

External Environment	**Output of the education system**	*"The formal education system in Egypt is theoretical based and lacks practicability which really produce output of those graduates with low skills required in jobs. This is also applied to IT and computer science except if they are AUC university graduates, but they are very expensive to recruit".* *"Yes I agree that education in Egypt does not supply employers with the required skills. For example to employ professional IT for data analysis and control IT advanced applications, they are very expensive to employ. If compared to the output it raises the cost of offering e-banking services which might not be feasible if compared to returns from them"* *'We have to accept the fact that we lost teamwork in put culture, between ourselves in daily life, in work, of course pressure daily life pressures contributes to this, but we should not ignore the influence of education, our education system does not develop teamwork in us and this of course is reflected on employees values. Thus you will find conflicts more than cooperation dominating today's work environment"*	NPBM PBHO PBBM	**4**	**26%**
	Legal system development	*'Before introducing any product that will affect the transactions in the economy, there should be rules and regulations organizing transactions. You know, insurance companies have not developed its products to insure us as banks on issuing internet banking and allowing it to the third party* *"It is very risky to extend the design of e-banking services to more advanced features .Up till now the e-signature law is not activated------even if, this is not easy, the market, the customers and our IT applications not prepared for this. This places burden on the bank side and IT applications are changing rapidly"* *"Of course, the delay in the legal environment to absorb development in transactional exchanges using IT applications increases our cost as multinational banks, we have to depend on international insurance companies which of course raise the cost of services but we cannot pass this cost to our customers"*	PBHO PBHO NPBHO	**6**	**40%**
	Nature of the Egyptian economy	*For us as multinational banks, we face difficult in developing the design of e-banking services in a developing host country, this is very costly for us, and we have to depend on international insurance companies. This of course raises the cost of developing the design of these services for payment of to third party. But we need always to keep our image in the eyes of our customers"* *'Egypt is a country importing technology, we do not have the capabilities to modify it, we take it as it is given to us, so when it breaks down we will not be efficient to fix it as its suppliers. The issue is more than just the bank itself, it extends to the degree of tech*nological advancement in this country ". 'We cannot be equalized with those exporting IT know how. It is very expensive for us as banks to develop our own website and secure it without an external help. We don't have the capabilities of doing so. And If we have them, they will increase the costs. At the end, not all customers will use this service; these services might not be longer economic to offer. It is still early for us as an environment to be as the U.K or any developed country'.	NPBHO PBBHO PBBM	**3**	**20%**

11.5 Validating the Factors (Discussion)

This section validates the eight factors derived from the interviews with bank practitioners. The importance of these factors in affecting the implementation of CRM and supporting the value of e-banking services is validated from theoretical and contextual perspectives. Factors are grouped in two main categories: organizational context and external environment.

11.5.1 First Category: Organizational Context

The contribution of organisational related factors to the process of creating and delivering e-banking services value were derived from three main categories: banks' positioning strategy, bank branch related factors.

I. Positioning Strategy

40% of participants mostly from back office, from both types of banks, pointed to the role of positioning strategy in shaping banks' ability to create and deliver e-banking services value. Positioning strategy affects banks' ability to manage IT applications, to allow the advanced features e-banking services features, or to improve the service environment in the bank branch.

Positioning simply refers to the image the organization wants to promote in the mind of its existing customers or the anticipated ones. Zineldin (1996:12) defined positioning in bank as:

> *"Positioning refers to how a bank wishes to be seen in a given marketplace, what its values are, and its overall image. A bank can occupy a position as a large bank, a global bank, a friendly bank, a niche bank, or an efficient bank".*

However, Kalafatis *et al*. (2000: 417) adopted a broader definition of positioning and its effect on the tactical plans of the firm, stating:

> *"The process of positioning can be described as iterative, it necessitates deliberate and proactive actions it involves decisions at conceptual, strategic and operational levels and should reflect the triumvirate deliberations of the company, its competitors and its target market/customers"*

Positioning strategies adopted by both banks is presented below.

- **Strategy adopted by non-public banks**

The contexts surrounded the entry of non-public banks in the Egyptian market dictated concentrating on specific market segment and utilizing all means to retain them and satisfy their needs. To distinguish themselves from their competitors, some non-public banks especially the multinational ones restrict themselves to attract and satisfy the needs of a special target market comprising highly educated and financially well off customers in the Egyptian environment. Those banks position themselves as '*banks of the Elite'.* To put such a positioning strategy in action, a certain amount of deposit is required to be kept in the current account, or certain levels of educational qualifications are required to join these banks. To retain their customers, such banks started to offer services that match the lifestyle of their customers and to distinguish themselves by diversifying and expanding the range of e-banking services offered to meet most of their customers' financial needs. For example, some of non-public banks offer the service of paying mobile bills through their websites. Others have extended the design of internet banking to involve payment to a third party.

It was understood from non-public bank branch manager that the use of IT applications extends to facilitate the process of matching products to customers. This process starts with classifying customers according to their deposits in the bank. This classification facilitates the way these banks manage relationship with their customers, by allocating customers to relationship marketing managers responsible for managing their complaints, offering proper financial advice.

- **Strategy adopted by public banks**

Public banks used to position themselves by employing pricing strategies and offering the highest rate of interest to attract Egyptian customers and survive in the market. However, this strategy started to lose its effectiveness with the reform policies and the restructuring efforts affected the whole financial sector and led to the liberalization of interest rate.

Driven by competitors and the diminishing role of interest rate in defending market share, public banks recognized the urgent need to re-position their image in the market. Thus, they started to expand a large network of ATMs and diversify their related visa/master cards.

Public banks view expanding ATMs and e-product as less risky and the least costly type of e-banking IT applications, if compared to extended advanced internet banking service features.

Interviewees in public banks view that extending the use of IT applications to analytical purposes of customer data or using advanced IT applications to extend features of internet banking or call banking to third party is viewed by public banks as infeasible. This is because; public banks view that the cost of managing IT for analytical purposes to support the value of e-banking services might not necessary be compensated by an increase in number of e-banking users, where not all public bank customers are *elit*e, as those in non-public banks.

Although, positioning strategy affects the tendency to adopt innovation, ownership structure and technological maturity of banks assist in implementing the positioning strategy and assist in explaining the variance in risk attitudes in using advanced IT applications (Speed and Smith 1992). O'Malley and Mitusssis (2002) added that the technological maturity of the organization is a determinant for the success in IT implementation.

II. Bank branch related factors

Bank branches represent the front office, where customers build perceptions towards face-to-face service environment and extend them to expectations about e-banking services. Interviewees pointed to the role of bank branch related factors on accelerating the integration of people and technology to improve the value of e-banking services in the Egyptian environment.

Bank branch related factors were highlighted through *bank branch design, employment scheme, criteria of evaluating front-office employees' performance, criteria of recruiting front-office employees.*

A. Design of bank branch

20% of interviewees, all public bank branch participants, pointed to the role of bank branch design in delivering the value of e-banking services. Interviewees mentioned that the present design of the bank branch design is responsible for the low quality perceived by customers. Also the design of bank branch is seen as delaying the restructuring efforts to improve the service inside the bank branch.

Public bank documents showed that public bank branch design is tall. This tall (vertical) design is associated with long lines of authorities, more than five levels of management and specialization and division of work among front line customer contact employees. Each of whom perform a specialized task, which requires the bank customer to report to more than one front line employee to get his/her financial needs satisfied.

Tall vertical organizational design is viewed by Zeithaml, *et al*. (1988) as inhibiting communication and understanding between consumer expectations of needs and management perceptions of these expectations in face-to-face services. Manandhar and Tang (2002) added that vertical and tall structure increases the waiting time and doubles the effort of customers in the bank branch.

Interviews revealed that launching e-banking services created an urgent need for those decision makers in public banks to involve structural and technological changes. These changes aimed at reducing the levels of authority in the bank branch and creating what is known as a *comprehensive customer service employee*. This was done to improve the service environment by speeding up the timing of serving customers and integrating front line employees with back offices for providing better service recovery. Similarly, Manandhar and Tang (2002) believed in restructuring the bank branch to provide better face-to face service quality by banks.

These structural and technological changes started 6 years ago in one of the public banks under the name of *restructuring of bank branches*. Records showed that Bank Misr succeeded in restructuring 9 branches only from 440 branches over the last 6 years, to operate under the name of *electronic branches*[52].

[52] Secondary sources of data from bank Misr

Public bank branch managers mentioned that restructuring involved redesigning jobs to involve technology. However, this was resisted from those at higher level of management.

Interviews also pointed to the effect of employees' age on slowing down the implementation of changes in the bank branch. It was understood from interviewees at public bank branches that higher levels of management in bank branches are dominated by employees of 50 years and above who are not updated and having no intention to cope with the new technology because they will retire in 10 years or less and see no benefit from restructuring their jobs. Similarly, Iverson (1996) proved a negative relationship between each of employees age, time spent in the organization and the acceptance of change smoothly.

B. Employment scheme

40% of interviewees in both banks pointed to the role of employment scheme in explaining the difference in the quality of service environment between public and non-public bank branches. They viewed employment scheme important in shaping customer oriented culture. It shapes customer contact employees behaviour towards customers and their willingness to engage in the restructuring processes for providing better services at different service encounters.

It was understood from public bank managers that customer contact employees in public banks are offered lifetime employment contract. Lifetime employment scheme implies that employees' jobs are secured regardless their performance or skills. Interviewees view that employment scheme is responsible to some extent, for the delay in the creation of full range of e-banking services through shaping the risk attitudes of the bank. For them, employment scheme dominating the whole bank starting from decision makers and ending at customer contact employees in branches play an important role in putting bank strategies in action and the way they are implemented.

Lifetime employment is seen from the organizational economics to which agency theory belongs, as positively affecting agency costs (Eisenhardt 1989). Agency cost is a reflection of the application of agency theory in organizations, which is concerned with the conflict of interests between owners and agents and how this is reflected on the performance of firms (Donaldson 1990).

The negative effect of lifetime employment on customer satisfaction is emphasized when the bank lacks an objective criterion on which front line customer contact employees' performance could be evaluated.

C. Criteria of evaluating Font-Office employees' performance

30% of interviewees, from both types of banks, highlighted the issue of customer satisfaction in evaluating the performance and establishing the basis for rewarding front-office employees in public bank branches, on promoting customer-oriented culture at service encounters.

Non-public bank participants view that relating employment with performance and customer satisfaction is responsible for customer-oriented culture in the bank branch. Depending on customer satisfaction as a base for incentives, drives front-line employees to improve their skills or their behaviour towards customers. In non-public banks' customers are allocated to relationship marketing managers, for whom they are responsible for solving their problems, passing any information about any new product. Then, those customers are required to evaluate the performance of these employees on periodical basis. However, it was understood from public bank managers that customer satisfaction is not a key for rewarding and promoting customer contact and front-office employees.

It is argued that using customer satisfaction to establish a reward scheme for employees, affects marketing performance positively (Hauser *et al*. 1994; Zablah *et al*. 2004; Sin *et al*. 2005). However, the success of this system depends on the type and structure of the bank customer segment and the extent of customer awareness of his/her rights and values of employees as well. For example, this criterion should be applied with cautious in those public banks suffering bad debts because of the expected opportunistic behaviour from both employees and customers asking for loans.

However, customer satisfaction as a basis for rewarding system provides better results in terms of customer trust and satisfaction at service encounters, if customers are satisfied at their work. It was understood from interviews that front -office customer contact employees, in pubic banks, are dissatisfied with their work environment because of the *fair pay* issue. Front-office employees in the public bank branch view themselves responsible for risky tasks for the same pay and rewards of those back office employees, or even with their rivals in non-public banks.

It is argued that argued that workplace fairness and employee job satisfaction affect customer contact employees' service behaviour (Hartline and Ferrel 1996; Bettencourt and Brown 1997). Also, Kim *et al*. (2004) asserted that distributive justice affect employees' customer oriented behaviour in hospitals. Chebat *et al.* (2002: 327) provided justified the effect of customer contact employees' perception of fairness on their behaviour towards customers, stating:

> *"Service workers who believe their pay is fair are likely to have an increased motivation to perform well. Additionally, when employees perceive their work environment to be fair overall, they are more likely to go beyond the call of duty based on a believe that an extra effort will result in extra rewards".*

Although, psychologically fairness is important for the performance of employees, in the Egyptian environment distributive justice with the monetary aspect, is more important. This is due to the economic environment and the increase in inflation rate in the Egyptian economy, which places employees under psychological and monetary stress. Rynes *et al*. (2005) pointed to the importance of money in fulfilling higher-level needs. However, Masterson (2001) argued that the effect of distributive justice comes to surface in affecting the quality of service environment when there is lack of procedural justice.

The negative effects of perceived unfairness are emphasized in the existence of lifetime employment scheme. This brings both of equity and agency theories under the lens and relates them to quality of service environment inside the bank branch.

D. Criteria of recruiting customer contact employees

27% of interviewees, pointed to the role of front-office employees recruiting standards on shaping customer oriented culture and the perceived quality of service environment in bank branches.

Employees recruiting policies and practices are viewed as responsible for delivering customer value and enhancing customer relationship quality (Payne and Holt 2001; Sin *et al*. 2005). Careful selection of qualified employees is a key to customer satisfaction and loyalty (Tansuhaj *et al*. 1988).

It was understood from interviewees that, private and multinational banks attract those employees with previous experience in public institutions. Such employees are supposed to possess high level of knowledge in banking area, good level of foreign

languages, and they should possess IT skills enabling them to deal with technology. Technical skills of front office and customer service employees is viewed as a key to improving the role of bank branch in delivery of financial services (Durkin and Howcroft 2003).

Although nominations or nepotism might play a role in recruiting employees in multinational banks due to the nature of the Egyptian culture, experience and skills still the main dominant criteria for recruiting skilful employees. Non-public banks employ psychological and monetary incentives to attract these qualified employees.

However, it interviews indicated that dependence on nepotism is the main reason behind bringing unqualified employees in public banks. While, the objective way of recruiting which depends on examining the skills of the applicant is s not dominant in public banks. Moreover, an interview with a front office line employee in one of the public banks, revealed that there are no clear guidelines which separate the qualifications required for those applicants in back-office job post and those in front offices.

Lack of qualified front-office employees might turn to be a serious problem, especially if they are part of the sales team, performing some of the marketing tasks. This problem might be overemphasized in public banks where the number of e-products, visa/master cards[53] is 15 to 20 types. Lack of qualifications might result in inability to communicate the sufficient information and provide the required support for e-banking users at multiple service encounters. For example, providing information about this number of e-products and explaining the differences between them for those interested customers to help them select that best fit his/her needs, requires qualified employees.

11.5.2 Second Category: External Environment

External operating environment forms the external context in which the innovation is used. Zhu *et al*. (2004: 20) defined the external environment in clear few words, as:

'The arena in which a firm conducts its business'

The role of external environment in shaping banks' ability to implement CRM; hence banks' ability to create and deliver e-banking services of required value is highlighted

[53] List of visa/master cards provided by public banks

through: *the nature of the Egyptian economy, output of the education system, the development of the legal system.*

I. The nature of the Egyptian economy

20% of participants mostly from public banks, and one from a non-public bank, pointed to the role of Egyptian economy in shaping the creation and delivery of e-banking services value in the Egyptian environment.

Interviewees indicated that the difference between developed and developing countries in the *IT know-ho,* is responsible for the delay of and the reluctance of most banks to use advanced IT applications in supporting the advanced features of internet and call banking. The absence of an *IT know-how* in the Egyptian environment hampers transferring and/or importing of a full version of IT applications to e-banking services to a developing country like Egypt.

Also, interviewees pointed to the possible effect of *IT know-how* absence in the Egyptian environment, on the relative abundance and the cost of hiring IT professionals to manage and control IT applications supporting the advanced features of self-service technology such as internet banking or call banking.

The ability of countries to exploit the economic potential of IT applications is measured by the *Network Readiness Index* (NRI) (Indjikian and Siegel 2005). The NRI consists of three dimensions related to the development and usage of IT applications. They are: environment, readiness and usage. Although, the network readiness index (NRI)[54], of Egypt increased from 3.13 in 2003 to 3.67 in 2009-1010, the progress is slow (with an improvement of only 2.8% annually[55]). This implies that Egypt is still struggling to improve its situation to have a more advanced rank on the NRI.

It is argued that the level of technology development in the country, affects the effective utilization of information technology in companies indirectly (Indjikian and Siegel 2005; Aldhmour 2009). Similarly, Veiga *et al*. (2001) concluded that national culture affects firms' ability to implement and control IT. This might affect the ability of multinational banks (MNCs) to transfer technology from home country to host country

[54] World economic Forum. www.weforum.org
http://www.weforum.org/pdf/GITR10/TheNetworkedReadinessIndexRankings.pdf

[55] This percentage calculated by the researcher.

(Byun and Wang 1995). In addition, Kedia and Bahgat (1988: 562) pointed out the effect of culture on the ability of the organizations to import IT innovation, stating:

> *"Although the technology transfers among developed nations rely greatly on strategic orientations of transacting organizations, the transfers to developing countries depend on the compatibility of the cultures of the nations involved in such transactions".*

However, the extent to which the level of *IT know how* prevailing in the economy shapes the ability of creating and delivering e-banking services value, depends on the financial capabilities and the bank positioning strategy.

II. Output of education system

26% of participants from both public and non-public banks raised the issue of the Egyptian education system output quality in shaping the creation and delivery of e-banking services value.

The role of the Egyptian education system, on shaping the creation and delivery of e-banking services was highlighted in two settings. **First** is its effect on the abundance of qualified of IT professionals required to control internal IT operations supporting e-banking services. Interviewees pointed to the inability of the Egyptian education system to supply quantity and quality of graduates specialized in information systems and software programming. This is seen by interviewees, as raising the cost of outsourcing IT applications, recruiting IT professionals or training graduates and consequently affects the feasibility of creating and delivering the required value of e-banking services.

The availability of IT expertise able to plan and control the IT operating performance and use IT efficiently to direct the right financial services to the right customers is seen relevant for the value of services offered by the organization (Karimi *et al*. 2001:131; Kimber 2001: 335 Zhu *et al*. 2004: 18). Similarly, Lippert & Volkmar (2007) believed that the ability of technology to function effectively depends on its capabilities and those who run it. Several researchers raised the role of education on the developing of IT knowledge. For example, Ernst and Lundvall (2004: 268) viewed that the education system as well as practical skills developed through learning process are important in developing information technology knowledge. Also, Byun and Wang (1995) pointed to the effect of education on the ability to transfer technology.

Second is the effect of education system was raised by public banks interviewees. The Egyptian education system is seen responsible for supplying the skills required by suppliers. The Egyptian education system is criticized by some interviewees for inhibiting the teamwork spirit necessary in values of employees from childhood. This might affect the responsiveness and empathy of front-office customer contact employees with customers and affect the quality of service environment in bank branches. Similarly, Stanley (2006:13) viewed that cultural subsystems shapes values of teamwork in individual's identity and shown in patterns of behavior.

However, organization practices towards its employees and human resource policies are responsible for fostering or hindering teamwork culture in the service environment. A non-public bank branch manager added that the lack of teamwork spirit is emphasized in the absence of clear criteria for recruiting employees especially in the front office, where the behaviour of employees are reflected on customers' perceived quality of bank branch service environment.

III. Legal system development

40% of participants, from both types of banks, pointed to the role of legal system development on shaping the ability of banks to employ the appropriate IT applications to support advanced features of e-banking services.

Interviewees emphasized the importance of an advanced legal system in driving the whole economy towards accepting the use of internet banking and call banking in transactional exchanges. Also, they pointed to the extended effect of legislations and regulations on delaying the development of insurance industry required to secure financial transactions to the third party using internet or call banking, in the Egyptian environment. Similarly, De Castro and Schulze (1995) argued that governments in developing countries affects the ability of organizations to use and control IT innovation.

It was also understood from interviewees that the slow development of e-signature law is responsible for the reluctance of some banks to develop the design of e-banking services, to include more advanced financial services. Also, this was viewed by participants as delaying the role of intermediaries, such as utilities companies, to engage in e-financial transactional exchanges online or by phone. Frambach and Schillewaert

(2002) emphasized the effect of external network in accelerating the suppliers' adoption of innovation.

The e-signature law[56] (law number 15) was issued in 2004. However, the practical implementation of the law in the Egyptian environment was not fully activated until the beginnings of 2010. The full implementation of this law depends on 4 main axes. **The first axis** is the establishment of a reliable system of information technology maintaining the security of data. **The second axis** is the development of a specialized entity, *the information technology industry development agency* ***ITIDA***[57], which was launched in September 2009. It was established to manage the authorization of digital certifications for those companies and entities wishing to be involved in e-commerce. Also, this agency is responsible by law to improve the security of information technology, and offers technical consultations to all those involved in e-commerce. **The third axis** depends on the development of specialized courts to accelerate the process of solving economic and financial disputes. **The fourth axis** is the performance and conditions that should be met by those applicants wishing a license for digital certificates on which they are authorized to launch advanced e-banking services. Thus, the full activation of the e-signature law is a complicated process, as it involves the commitment of several parties and requires sufficient time for those involved to be well prepared to secure their systems to involve more advanced e-business interactions.

The role of legislations extends to affect the perceived value of e-banking services through institutional based trust. Institution based-trust refers to the role of regulations, guarantees and legal sources to infuse trust among users in transactional and social exchanges (Yousafazi *et al.* 2005). Institution based trust is indispensible in e-commerce because of the expected unfamiliarity among parties involved in exchange transactions, where opportunistic behavior might occur (Pavlou and Gefen 2004).

[56] Secondary source: a book published and specialized in discussing e-signature law and AL-Wakaye Al-Masreya, a government bulletin-Issue No. 115(supplement) Date 25 May 2005

[57] http://www.itida.gov.eg/En/OURServices/E-signature/Pages/default.aspx

11.6 Summary and Proposed Model

This chapter presented factors shaping the ability of Egyptian banks to create and deliver the value of e-banking services, in the Egyptian environment. These factors were derived from the process of coding data resulted from semi-structured interviews with practitioners at public and non-public banks. **Figure 11.4** presents these factors grouped in two categories: the organizational context and the external environment.

The role of organizational internal operating environment (*Organizational Context*) in shaping banks' ability to create and add value to e-banking services is highlighted through positioning strategy and bank branch related factors. The role of bank branch related factors in shaping banks' ability to deliver the value of e-banking services is highlighted through four sub-dimensions. These five dimensions are *bank branch design, employment scheme, criteria of evaluating front-office employees' performance and criteria of recruiting front-office employees*. The role of external environment in shaping the banks' ability to manage people and technology, hence creating and delivering the value of e-banking services, is highlighted through *the nature of the Egyptian economy, output of education system and legal system development.*

Although, factors representing the external environment and those reflecting the organizational context are presented in separate dimensions, they are conceptually related. External environment are involved indirectly in shaping the internal operating environment of the bank. On the other hand, the ability of banks to overcome or cope with external environment factors depends on their financial capabilities, technological maturity, risk attitudes, and the structure of their market segment.

Factors introduced, ensure that creating and delivering value of e-banking services is a shared responsibility between banks and the rest of the Egyptian environment subsystems, such as the education system and the legal system. It also implies that improving the creation and delivery of e-banking services value, is a complex process that goes sometimes beyond banks' internal capabilities. However, controlling the effect of external environment on banks' ability to create and deliver the required value of e-banking services is a complex process. It requires full commitment from banks to review their internal strategies, if wishing to build a competitive advantage through e-banking services.

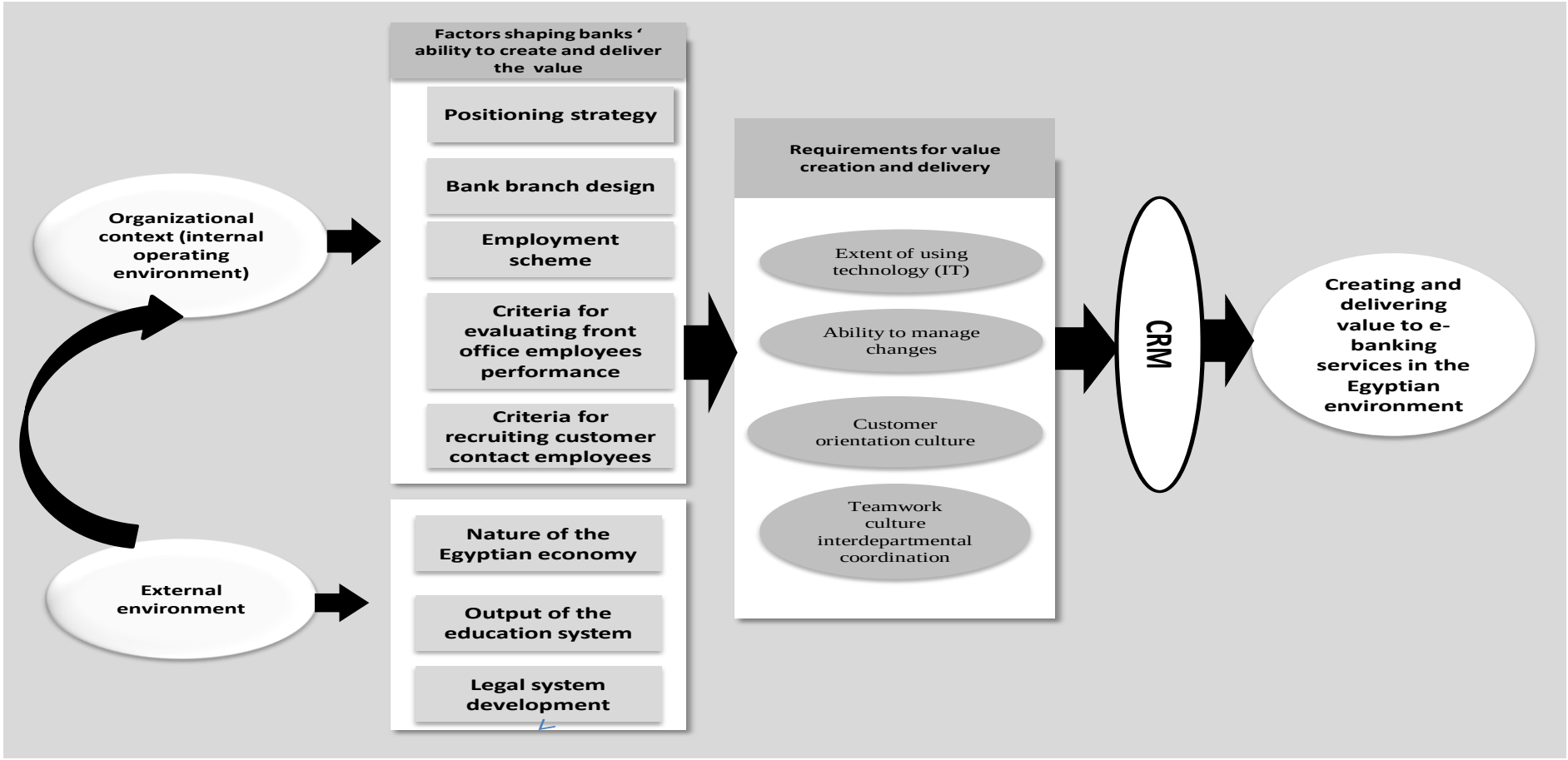

Figure 11.4: Factors shaping banks' ability to create and deliver the value of e-banking services: A proposed model

Chapter 12

Conclusion

12.1 Introduction

The main objective of this final chapter is to summarize the main findings of the study, by presenting an integrated model to guide the value management process of e-banking services, in the Egyptian context. To achieve this aim, the chapter starts by overviewing the research objectives and questions. This is followed by presenting the integrated model. Then, the chapter highlights the research contributions from the theoretical, methodological, and managerial perspectives. Finally, the chapter identifies key limitations, from which recommendations for further research are drawn.

12.2 Research Objectives and Questions: Revisited

This study sought to develop an integrated model for managing the value of e-banking services in the Egyptian environment. In this section, the stages followed to develop the integrated model, are revisited. Within this study, the process of value management in e-banking services context is operationalized by answering the first, second and third research questions.

Managing value is a dynamic process involves sequential interrelated activities: value determination, value creation, and delivery, as well as value assessment (Payne and Holt 2001). This process integrates customer requirements of value with suppliers' current and future capabilities (Brandnburger and Staurt 1996; Woodruff 1997; Gronroos 1997; Khalifa 2004). The way such stages are interrelated ensures that both suppliers and customers are important in the co-creation of value. In **Figure 12.1** the stages of value management are linked to the research questions.

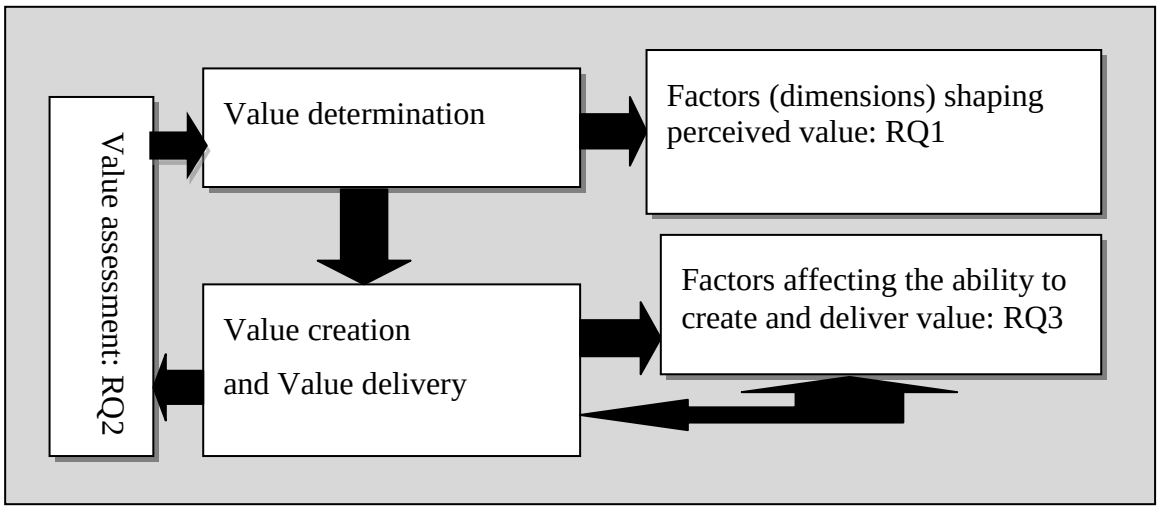

Figure 12.1: Model for managing value (RQ4)

Source: Adapted from Woodruff (1997); Payne and Holt (2001)

The process of value management and creation should start from customers who are the beneficiary of the services (Vargo 2008; Vargo and Lusch 2008). This highlights the importance of value determination stage. Value determination aims at identifying what drives customers to use offerings, and to what extent these requirements or drivers are important in shaping their perceived value from the offering (Payne and Holt 2001). However, value improvement requires linking antecedents with consequences. Thus, value assessment and determination should be linked.

To identify e-banking services value antecedents in the Egyptian context, consumer buying behaviour literature was investigated. However, empirical studies addressing the value of e-banking services in terms of antecedents and consequence (loyalty) in general and in the Egyptian environment, are limited.

To identify the antecedents and consequence of e-banking services perceived value in the Egyptian environment, an exploratory sequential research strategy, in which in-depth interviews preceded the survey phase, was conducted. Survey with bank customers aimed at identifying value requirements, assessing the value of e-banking services, exploring its effect on customer loyalty to banks. The e-banking services value assessment and determination stages are reflected in the ***e-banking services value-adding model***, provided in **chapter 9**. In this model, perceived value of e-banking services is a process having inputs represented in requirements (antecedents) of value leading to an output, which is customer loyalty to bank.

This means that any improvement to the requirements of value should be evaluated from two perspectives: the perceived value of e-banking services, and customer loyalty to banks. Identifying antecedents and consequence of e-banking services value through establishing the ***e-banking services value-adding model*** answered the **first** and **second research question**, and hence, the **first** and **third objectives** were achieved.

Improving the value of e-banking services requires involving service suppliers for their crucial role in value creation and delivery. At the stage of value creation and delivery, suppliers should review their current strategies and re-address their abilities to improve value requirements. Payne and Frow (2005: 170) referred to value creation activity as:

> *"Value creation Process transforms the outputs of the strategy development process into programs that both extract and deliver value"*

Value creation involves turning resources to benefits perceived by service beneficiary (Lusch *et al*. 2008). At the stage of value creation, suppliers should translate customers' requirements into resources and internal organizational processes (Payne and Holt 2001: 175). Value creation and delivery process is a challenge for service suppliers. This stage involves translating customer requirements of value to strategies and resources (Woodruff 1997). Creating and delivering the value of e-banking services requires successful customer relationship management to improve customers' experience with service delivery encounters (Payne and Frow 2005). In this study, CRM was defined as:

> **CRM is the strategy of managing and integrating people and technology to improve the process of creating and delivering the best possible accepted value of e-banking services, to improve their role in strengthening the relationship between bank and their customers**

Successful CRM implementation depends on the internal operating environment of the organization, and the external environment in which the organization operates. However, customer relationship management (CRM) literature disagrees on the factors reflecting the role of the internal operating environment. Moreover, it overlooks the role of the external environment in shaping the ability of service suppliers to create and deliver the value of e-banking services. Little is known about factors reflecting the ability of banks in developing countries to manage the value of e-banking services. Accordingly, semi-structured interviews were conducted with practitioners in Egyptian banks, to explore factors shaping banks' ability to create and deliver the value of e-banking services value. The outcome of this stage was highlighted in the chapter 11, where ***a proposed model for factors shaping banks' ability to create and deliver the***

value of e-banking services was established. This model, answered the **third research question**, and achieved the **second** and **fourth objectives**.

Based on these two models, the ***integrated model for managing the value of e-banking services in the Egyptian environment*** was developed. This model assists improves the understanding of the value management process of e-banking services in the Egyptian context. Thus, the **fifth objective** was achieved**,** and the **fourth research question** was answered.

Table 12.1 summarizes the contribution of research objectives and questions to the study outcome and value management activities. This table shows that the outcomes achieved at the demand and the supply sides of e-banking services are the basis of the ***integrated model for managing the value of e-banking services in the Egyptian environment***, the main aim of the study.

Table 12.1: Research objectives, questions value management activity and study outcomes

<table>
<tr><th>Research Objectives</th><th>Research Questions</th><th>Value management activity</th><th>Study Outcome</th><th>The main aim of this study</th></tr>
<tr><td>1st: To review and evaluate consumer buying behavior theories to understand customer usage of e-banking services.</td><td>What are the factors shaping customers' perceived value of e-banking services offered in the Egyptian environment? (antecedents of e-banking services perceived value) RQ1</td><td>Value determination</td><td rowspan="2">E-banking services value-adding model
Chapter 9</td><td rowspan="4">An integrated model for managing the value of e-banking services in the Egyptian environment
4th Research Question</td></tr>
<tr><td>3rd Objective: To identify antecedents and consequence of e-banking services perceived value in the Egyptian environment.</td><td>To what extent can e-banking services strengthen the relationship between banks and customers in the Egyptian environment? (consequence of e-banking services perceived value) RQ2</td><td>Value assessment</td></tr>
<tr><td>2nd Objective: To understand the role of customer relationship management (CRM) in creating and delivering the value to e-banking service offering.</td><td rowspan="2">What are the factors shaping the ability of banks to create and deliver the value of e-banking services in the Egyptian environment? RQ3</td><td rowspan="2">Value creation and delivery</td><td rowspan="2">Factors shaping banks' ability to create and deliver the value of e-banking services: A proposed model
Chapter 11</td></tr>
<tr><td>4th Objective: To explore factors shaping the ability of banks to create and deliver the value of e-banking services offered in the Egyptian environment.</td></tr>
</table>

12.3 Managing the Value of E-Banking Services: An Integrated Model

Figure 12.2 presents an integrated model for managing the value of e-banking services in the Egyptian environment, from an empirical perspective. This model shows that improving the value of e-banking services is a dynamic process between service users or service suppliers.

Value assessment and determination are important in maximizing the role of e-banking services in strengthening the relationship between banks and customers interested in using these services. Value assessment involves evaluating the perceived value of current offering from a target customer segment, while value determination involves identifying the antecedents of value. This guides the process of resource allocation and that of establishing priorities required for value creation and delivery.

Figure 12.2 shows that, requirements of e-banking services perceived value are *service environment in the bank branch, complaints handling through alternative channel, information availability, reliability of card usage, e-banking services' design* and *the role of intermediaries in promoting e-banking services.* E-banking services value antecedents are a combination of the explicit involvement of service suppliers in supporting face-to-face service encounters, e-banking services quality, and the role of external environment in promoting e-banking services.

Figure 12.2 shows that several parties rather than merely the beneficiary and the provider of the e-banking services, are involved in the value creation process. The collaborative effort for value creation is known by Lusch *et al*. (2008) as ***Resourcing.***

Findings showed that the ability of banks to create and deliver value is driven by organizational context (internal operating environment) and external environment. The ability of banks to create and deliver the value of e-banking services is driven by; *banks' positioning strategy, bank branch design, employment scheme, criteria of evaluating front-office employees' performance and criteria of recruiting front-office employees*. While the role of external environment intervenes in the value creation and delivery through *the nature of the Egyptian economy, output of education system and legal system development.* Factors reflecting external environment might intervene to

shape the quality and the way resources are managed on the organizational level. They might affect the improvement efforts on the organizational level which is reflected on the perceived value of e-banking services.

For example, the nature of the Egyptian economy might intervene to shape the skills of employees. However, the ability to overcome challenges brought by the external environment depends on the human resource strategies adopted by each bank.

Improvements on the key drivers of value creation and delivery on the organizational context enhance the performance of people and technology (CRM). This is in turn, should be reflected on perceived improvements of e-banking services value requirements.

For example, value determination showed that *service environment in the bank branch*, is the most influential factor in shaping the perceived value of e-banking services. To improve the quality of *service environment in the bank branch*, banks should devote more resources to improve the design of their branches, in order to improve the work flow and reduce waiting time of customers in the branches. Also, banks should review their recruitment strategies, criteria of evaluating customer contact employees' performance, and to review the employment strategies. Moreover, banks should allocate more resources for training to improve front-office employees' technical and communication skills, if changing the recruiting strategies is impossible on the short run. On the other hand, to improve *the reliability of card usage* and *e-banking services design*, two important value requirements, banks should review their positioning strategies. Positioning strategies shape the level of technology and risk strategies adopted by banks, which are reflected on the range of services offered by e-banking services.

However, the extent to which banks should devote resources to improve the performance of one or more value antecedents depend on the current contribution of e-banking services perceived value to explain customer loyalty to banks, and the desired level of contribution. Moreover, the resource allocation decision should consider characteristics of bank customers and their preference in accessing their financial needs. This highlights the importance of customer segmentation. The process of segmentation provides right direction to the resource allocation efforts (Speed and Smith 1992; McDougall and Levesque 1994).

At each stage of improving the performance of value requirement(s), banks should conduct value assessment of e-banking services from the same customer segment. This facilitates tracking of the effect of development strategies in people and technology (CRM strategy) on the perceived value of e-banking services and its reflection on customer loyalty. Value assessment guides the process of detecting gaps between what is offered and what target customers require. It also, improves the process of value creation.

To sum up, the process of e-banking services value management starts with and ends at the users of these services. People and technology, are the key influential factors in creating and delivering the value of e-banking services.

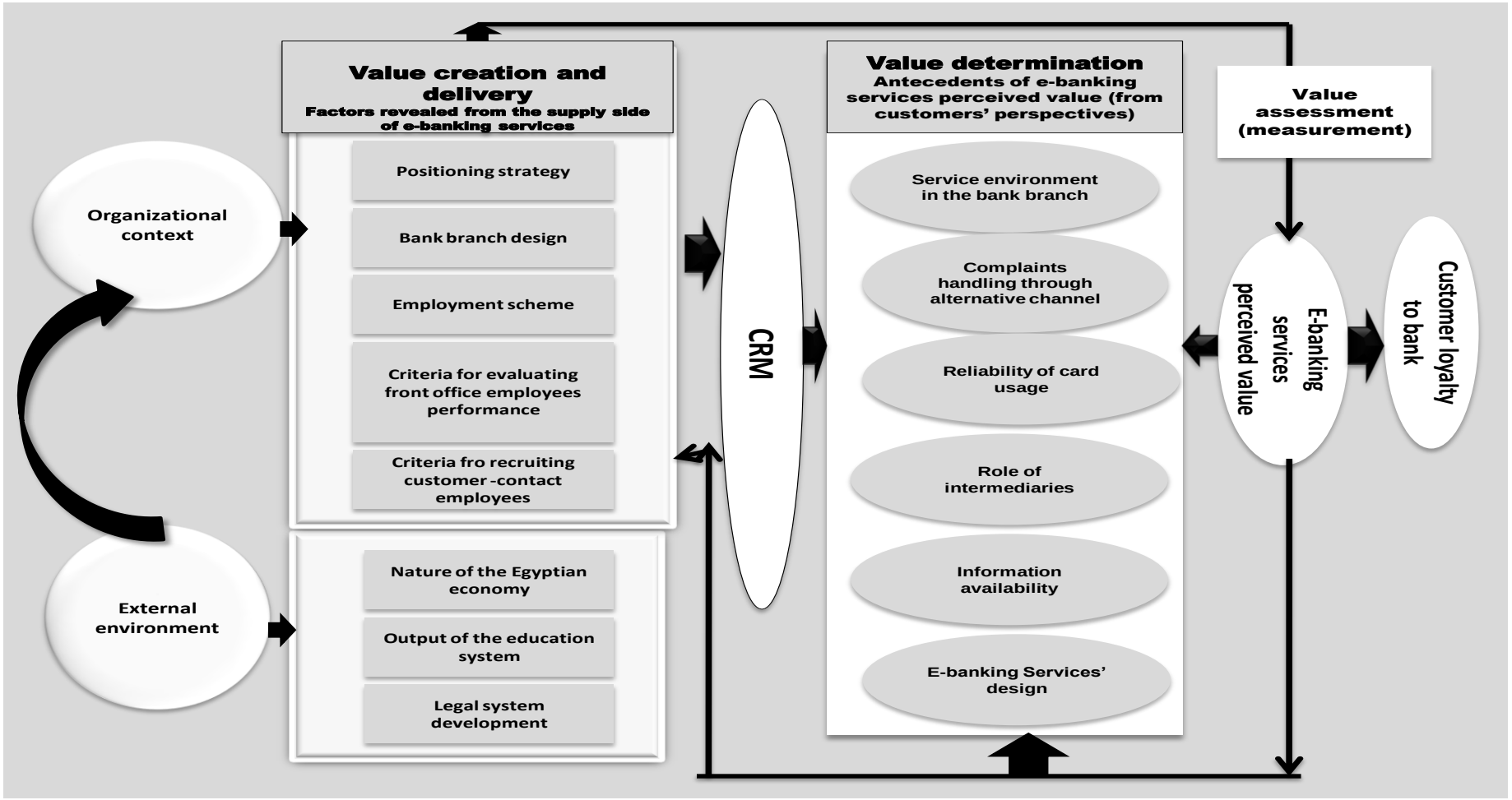

Figure 12.2: Managing the value of e-banking services in the Egyptian environment: An integrated model

12.4 Study Contribution

The contributions of this study are discussed from three perspectives: theoretical, methodological, and managerial.

12.4.1 Theoretical Contribution

This study extends the literature of value, consumer buying behaviour and CRM to the e-banking services in the Egyptian context. The way this study contributed theoretically to the literature is discussed below.

Contributions to the consumer buying behaviour literature:

While, there is a considerable knowledge gap in understanding consumer usage behaviour of e-banking services in the Egyptian environment, this study was an attempt to close this knowledge gap. It provides new insights into those factors shaping Egyptians usage behaviour in e-banking services context.

Literature revealed the importance of perceived value in understanding consumer buying behaviour, this study showed how perceived value could be operationalized to understand customers' usage in e-banking services context, by identifying value requirements (antecedents) and consequence.

Antecedents of value were identified to be a combination of the explicit involvement of service suppliers in supporting face-to-face service encounters, e-banking services quality, and the role of external environment in promoting e-banking services. This ensures that the context, in which services are offered and used is important in shaping consumer behaviour.

Value antecedents of e-banking services go beyond the expected dimensions appeared in previous studies. They ensure that the quality of service alone is not enough to explain the value of e-banking services in the Egyptian environment. This highlights the complex and unique nature of the value concept. Moreover, value antecedents ensure that combining consumer behaviour theories provides a better understanding for consumer behaviour in e-banking services context.

Contribution to the value literature

Value improvement requires linking antecedents to consequences. However, literature lacks empirical studies addressing the antecedents and consequence of value in e-banking services context. This study was an attempt to close the knowledge gap in the area of e-banking services value determination and assessment, by establishing *e-banking services value-adding model* (chapter 9). This model viewed the concept of perceived value from a multidimensional perspective. In this model, perceived value is seen as a process having inputs (antecedents), leading to an output (consequence).

Moreover, extant literature lacks an integrated model of value management relevant to e-banking services. This study contributed to the value literature by presenting a model that guides banks to manage the value of e-banking services through following systematic stages. This model might be transferable to similar environments in which e-banking services are not yet well developed. Or the model could be transferable to manage the value of services in general.

Contribution to customer relationship management (CRM) literature

While, previous studies addressing CRM in e-banking services are limited, this study extends the area of CRM to the value literature. This study suggested a conceptual definition of CRM relevant to e-banking services value management, which was not considered explicitly in the literature **(see chapter 4, section 4.6**).

Moreover, this study extends the implementation of CRM to the reality of developing countries in general and the Egyptian environment in particular. This was done by presenting factors shaping banks' ability to manage people and technology in the process of value creation and delivery (**chapter 11**). Factors introduced, extend beyond the internal operating environment to reflect the role of external environment, which was overlooked in previous studies originating from western culture.

12.4.2 Methodological Contribution

To address the knowledge gaps in the value literature in e-banking services context, this study employed a novel strategy to explore the antecedents of value by adopting an exploratory sequential strategy, which is not popular in the value literature. The in-depth interviews preceded the questionnaire assisted in providing a preliminary

understanding of consumer behaviour towards e-banking services in the Egyptian environment. Interviews provided new insights, which validated and guided the design of the questionnaire in the survey phase. If this stage was ignored, the design of the questionnaire might have overlooked involving the role of face-to-face service quality, which appeared to be important in shaping the value of e-banking services in the Egyptian environment.

Moreover, employing semi-structured interviews at the supply side of e-banking services, to explore factors shaping banks' ability to create and deliver the value of e-banking services, highlighted new factors, not considered in western cultures. These factors reflect the nature of developing countries and the Egyptian environment in particular.

12.4.3 Managerial Contribution (Implications)

Findings from this study provide helpful guide for banks wishing to benefit from e-banking services, in the Egyptian environment. Although, the value e-banking services showed significant positive effect on strengthening customer relationship with banks, this relationship places the same degree of risk on banks offering e-banking services. Banks should recognize that the relationship between perceived value of e-banking services and customer loyalty to banks might not necessarily go in a linear direction. This depends on the preference of bank customers to e-banking services and their degree of involvement in these services. Thus, banks should segment their customers based on their degree of involvement in e-banking services and their orientation (preferences) to technology-oriented customers and traditional oriented customers. This helps allocating resources and direct improvements of services offered to the right direction.

Value antecedents introduced from bank customers and e-banking users, showed that *service environment in the bank branch* accounts for the most variance in the perceived value of e-banking services. Banks should be aware that introducing a full range of e-banking services do not undermine the role of the physical existence of bank branch, in the Egyptian environment. Multi-branch bank emphasizes bank commitment towards their customers and reinforcing integrated channels (Rotchanakitumual and Speece 2003).

Thus, to gain, maintain customers' trust and direct them to adopt e-banking services, banks have to expand their network of branches, and devote efforts and resources to improve service encounter at these branches. This could be done by improving their bank branch design, reviewing the recruitment and selection criteria, in addition to the overall work environment in the bank branch.

Findings showed that *Card usage reliability* is important in explaining the perceived value of e-banking services in the Egyptian environment. Thus, to improve the value of e-banking services, and encourage customers to use other e-banking services, banks should devote extra resources to expand their network of ATMs and the design of the visa/master cards offered to meet all financial needs and to provide more flexibility in accessing financial needs. The ability of banks to offer a reliable and accessible network of ATMs and secured cards could be a basis for strengthening relationship with customers (Berry 1995). Thus, considering the locations and number of ATMs in addition to the design of visa/master cards, enable banks to add value to their core services (McDougall and Levesque 1994; Meuter *et al.* 2000).

Although, *e-banking services' design* had the least impact on the value of e-banking services, but significant and positive. This implies that improving the design and functionality of phone and internet banking improves the value of e-banking services, by raising their benefits. Thus, to benefit from e-banking services on improving loyalty to banks, banks should review their positioning strategies to offer the possible range of e-banking services.

12.5 Study Limitations

The present study followed the systematic research methodology starting from identifying the research problem until validating and reporting the findings. However, limitations are there. Limitations of this study were driven by time and accessibility constraints. Moreover, they were driven by the holistic nature of the area under investigation. These limitations are:

Sample characteristics:

The sample profile at the survey phase, was mostly e-banking services users, enjoyed a relatively high income than the average per capita income reported by the World Bank

(see chapter 9, section 9.3), mostly university graduates as the minimum level of education set in the questionnaire. Sample participants' length of relationship with their banks falls in two categories; 5 to 6 years and 7 years and above. Moreover, sample participants were moderate to high users of e-banking services.

The study sample profile might create difficulty in generalizing the value-adding model to other samples with different profiles. However, e-banking services value-adding model was not validated to different samples, due to time constraints.

Scope of the study

Factors explaining the ability of banks to create and deliver the value of e-banking services, were introduced from semi-structured interviews with practitioners in four banks out of 40 banks, two public and two multinational banks. However, private banks, which are part of the non-public bank sector, were not considered in this study due to accessibility constraints.

Snapshot Findings

Findings at the supply and the demand sides of e-banking services were driven at one point in time. However, it was impossible to conduct longitudinal study on both sides, because of time constraints at the PhD level.

Lack of clear dimensions to measure main concepts included in the study:

Lack of a quality model that fit e-banking services defined in this study (see chapter 1); made the process of selecting and inventing items to measure the quality of e-banking services in the survey phase a difficult task. However, the process of developing a quality scale to match the nature of e-banking services defined was beyond the scope of this study. Developing a scale for measuring the quality of services in general is a complicated process that requires time not available to this study.

Literature showed no consensus on a single definition for CRM. The definition of CRM developed by this study was validated on the conceptual level, but not on the empirical level.

The integrated model developed, showed the association between value creation and delivery, value assessment and value determination in e-banking services context. However, the model did not go deeply to illustrate detailed activities of value creation and delivery. The process of value creation and delivery is multi-dimensional and wide

to be addressed in this study. Moreover, the integrated model did not go deeply to establish relationships between each of the factors shaping the ability of banks' to create and deliver value, and value antecedents.

12.6 Recommendations for Further Research

The exploratory nature of this study, the sampling strategy employed, and the topic under investigation, all provide rich areas for further research. Areas of further research are identified below.

Exploring other realities:

In the value-adding model, the six antecedents explain 53.2% of the variance in the perceived value of e-banking services, while 46.8% of the variance in perceived value is still unexplained by the model. These six factors presents only part of the reality, while other realities exist there, and need to be explored.

While perceived value of e-banking services explained 21% of customer loyalty to the bank. Further study might be directed towards exploring other factors explain customer loyalty to their banks on a similar sample profile.

Factors affecting the ability of banks to create and deliver the value of e-banking services were derived from public and multinational banks. However, further research might be directed towards involving all ownership forms of non-public banks and public banks to allow for new insights that add depth to the process of value creation and delivery of value.

Confirming the results of the study:

The e-banking services value-adding model emerges from an exploratory study. It was validated in the Egyptian environment. Thus, further research should be confirmatory oriented. To confirm these findings, resulting factors should be expanded and tested in another questionnaire to another sample (Sweeney and Soutar 2001; Featherman and Pavlou 2003). Confirming the model with different sample, with different socio-economic characteristics and/or e-banking services usage pattern, assists in understanding the extent to which the model could be generalized in different contexts

in the Egyptian environment. Further research could also, be directed towards testing the model in two distinct environments, to allow for comparing findings.

Future research might be directed to confirm the six value antecedents to the three suggested constructs presented in **figure 10.2** (**chapter 10**).

While, this study aimed at exploring factors shaping banks' ability to create and deliver e-banking services in the Egyptian environments. Future research could be directed towards confirming the factors resulted in this study to banking sectors in other environments.

Extending the dimensions of e-banking services value-adding model:

It would be interesting to extend the present study by employing a multi-item scale to provide more detailed insight on the components of e-banking value antecedents. This assists in addressing the complex nature of each antecedents and its role in explaining perceived value.

Future research might be directed towards the area of developing e-banking quality scale to fit the nature of e-banking services in the Egyptian environment or similar environments. The value antecedent titled *e-banking services' design* needs to be expanded by operationalizing a measuring scale for *e-banking services design* relevant in the Egyptian context.

Longitudinal evaluation:

E-banking services value-adding model was derived from opinions of a sample of Egyptian bank customers at one point in time. However, in value determination and assessment, longitudinal studies might be more effective. Thus, a future study might begin with evaluating the perceived value of the service from similar samples at two different points in time, and then proceeds with interviews to justify changes.

Testing the effect of perceived value of e-banking services on the financial performance:

This study was concerned with the marketing performance of e-banking services. Further research might be concerned with testing the role of e-banking services on the financial performance of banks.

Operationalizing CRM definition in e-banking services context

CRM implementation requirements were driven from literature. However, future research could be directed towards operationalizing a measurement scale for CRM in e-banking services context.

The links between the variables:

Previous studies discussed the conceptual relationship between relationship marketing concepts and CRM. However, few studies were concerned with testing the relationship between relationship marketing concepts and CRM requirements. Thus, further research should be directed towards testing the relationship between CRM requirements for value creation and delivery and both of trust and perceived value of e-banking services.

Moreover, while this study establishes a model for managing the value of e-banking services in the Egyptian environment, links between factors reflecting banks' ability to create and deliver value and both CRM requirements and e-banking value antecedents were justified conceptually. Further study should test these links statistically to ensure the robustness of the whole model.

References

Aaker, D. Kumar, V. & Day, G. (1998), *Marketing Research*, 6th edition, New York: John Wiley& Sons, Inc.

Abbott, J. Stone, M. & Buttle, F. (2001), 'Customer Relationship Management in Practice: A Qualitative Study', *Journal of Database Management*, **9**(1): 24-34.

Abu-Musa, A. (2003), 'Egyptian Banking Industry: Its History and Future', *Journal of American Academy of Business Cambridge*, **3** (1/2, September):44-52.

Ahmad, R. & Buttle, F. (2001), 'Customer Retention: A Potentially Potent Marketing Management Strategy', *Journal of Strategic Marketing*, **9**: 29-45.

Ahmed, Pervaiz Rafiq, Mohammed & Saad, Norizan (2003), 'Internal Marketing and the Mediating Role of Organizational Competencies', *European Journal of Marketing*, **37**(9): 1221-1241.

Ajzen, I. (2001), 'Nature and Operation of Attitudes', *Annual Review of Psychology*, **52**:27-58.

Ajzen, I. (1989), 'Attitude Structure and Behavior', in Pratkanis, A. Breckler, S. & Greenwald, A. (editors), *Attitude Structure and Function*, New Jersey: Lawrence Erlbaum Associates Inc., pp. 241-267.

Akinci, S. Aksoy, S. and Atilgan, E. (2004), 'Adoption of Internet Banking among Sophisticated Consumer Segments in An Advanced Developing Country', *International Journal of Bank Marketing*, **22**(2/3): 212-232.

Al-Baaly, M. (2005), 'Cairo: The Future Amsterdam of the Middle East?', World Bank Essay Competition.
http://www.essaycompetition.org/docs/essays2005/al%20baaly.pdf Accessed on 04/11/2008.

Albinsson, M. & Hansemark, O. (2004), 'Customer Satisfaction and Retention: The Experiences of Individual Employees', *Managing Service Quality*, **14**(1):40-57

Aldas-Manzano, J. Lassala-Navarre, C. Ruiz-Mafe, C. & Sanz-Blas, S. (2009), 'The Role of Consumer Innovativeness and Perceived Risk in Online Banking Usage', *International Journal of Bank Marketing*, **27**(1): 53-75.

Aldhmour, F. (2009), 'Towards Understanding the Relationship between Information and Communication Technology and Competitive Advantage in a Developing Economy', *International Review of Business Research Papers*, **15**(1/January): 307-320.

Al-Gahtani, S. (2001), 'The Applicability of TAM Outside North America: An Empirical Test in the United Kingdom', *Information Resources Management Journal*, **14**(3): 37-46.

Al-Hawari, M. & Ward, T. (2006), 'The Effect of Automated Service Quality on Australian Banks' Financial Performance and the Mediating Role of Customer Satisfaction', *Marketing Intelligence & Planning*, **24**(2): 127-147.

Alhudaithy, A. & Kitchen, P. (2009), 'Rethinking Models of Technology Adoption for Internet Banking: The role of Website Features', *Journal of Financial services Marketing*, **14** (1): 56-69.

Allen, E. & Fjermestad, J. (2001), 'E-Commerce Marketing Strategies: An Integrated Framework and Case Analysis', *Logistics Information Management*, **14**(1/2): 14-23.

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

Anderson, R. & Srinivasan, S. (2003), 'E-Satisfaction and E-Loyalty: A Contingency Framework', *Psychology & Marketing,* **20**(2): 123-138.

Anderson, E.W. Fornell,C. & Lehmann, D.R. (1994), 'Customer Satisfaction, Market Share, and Profitability: Findings from Sweden', *Journal of Marketing,* 58(3): 53-66.

Anderson, W. & Sullivan M. (1993), 'The Antecedentss and Consequences of Customer Satisfaction for Firms', *Marketing Science,* **12** (2): 124-143.

Andreassen, T. & Lindestad, B. (1998), 'Customer Loyalty and Complex Services: The Impact of Corporate Image on Quality, Customer Satisfaction and Loyalty', *International Journal of Service Industry Management,* **9**(1): 7-23.

Andrews, F. (1984), 'Construct Validity and Error Components of Survey Measures: A Structural Modeling Approach', *Public Opinion Quarterly,* **48**: 409-442.

Antonides,G. Amesz, H.& Hulscher, I. (1999), ' Adoption of Payment Systems in Ten Countries: A Case Study of Diffusion of Innovations', *European Journal of Marketing,* **33**(11/12): 1123-1135.

Appleton, J. (1995), 'Analyzing Qualitative Interview Data: Addressing Issues of Validity and Reliability', *Journal of Advanced Nursing,* **22**: 993-997.

Assael, H. & Keon, J. (1982), 'Non-Sampling vs Sampling Errors in Survey Research', *Journal of Marketing,* **46**(2/Spring): 114-123.

Asubonteng, P. McClearly,K. & Swan J. (1996), 'SERVQUAL Revisited: A critical Review of Service Quality', *The Journal of Services Marketing,* **10**(6):62-81.

Athanassopoulos, A. (1997), 'Another Look into the Agenda of Customer Satisfaction: Focusing on Service Providers' Own and Perceived Viewpoints', *International Journal of bank Marketing,* **15**(7): 264-278.

Athanassopoulos, A. (2000), 'Customer Satisfaction Cues to Support Market Segmentation and Explain Switching Behavior, *Journal of Business Research,* **47**: 191–207.

Attewell, P. (1992), 'Technology Diffusion and Organizational Learning: The Case of Business Computing', *Organization Science,* **3**(February/1): 1-20.

Avlonitis, G. & Gounaris, S. (1999), 'Marketing Orientation and Its Determinants: An Empirical Analysis*', European Journal of Marketing,* **33**(11/12): 1003-1037.

Babakus, E. & Boller, G. (1992), 'An Empirical Assessment of the SERVQUAL Scale', *Journal of Business Research,* **24** (May): 253-268.

Bagozzi, R. Yi, Y. & Phillips, L. (1991), 'Assessing Construct Validity in Organizational Research', *Administrative Science Quarterly,* **36**: 421-458.

Baker, J. Parasuraman, A. Grewal, D. & Voss G. (2002), 'The Influence of Multiple Store Environment Cues on Perceived Merchandise Value and Patronage Intentions', *Journal of Marketing,* **66** (April/2): 120-141.

Ballantyne, David Christopher, Martin & Payne, Adrian (1995), 'Improving the Quality of Services Marketing: Service (Re) Design is the Critical Link', *Journal of Marketing Management,* **11***:* 7-24.

Barnes, J. (1997), 'Closeness, Strength, and Satisfaction: Examining the Nature of Relationships between Providers of Financial Services and their Retail Customers', *Psychology& Marketing,* **14**(Dec./18): 765-790.

Barnes, S. & Vidgen, R. (2002), 'An Integrative Approach to the Assessment of E-Commerce Quality', *Journal of Electronic Commerce Research,* **3**(3): 114-127.

Bart, Y. Shankar, V. Sultan, F. & Urban, G. (2005), 'Are the Drivers and Role of Online Trust the Same for all Web Sites and Consumers? A Large-Scale Exploratory Empirical Study', *Journal of Marketing,* **69** (October): 133-152.

Bauer, H. Hammerschmidt, M. & Falk, T. (2005), 'Measuring the Quality of E-Banking Portals', *International Journal of Bank Marketing,* **23**(2): 153-175.

Bauer, K. and Hein, S.(2006), 'The Effect of Heterogeneous Risk on the Early Adoption of Internet Banking Technologies', *Journal of Banking and Finance,* **30**: 1713- 1725.

Beatty,P. Hicks,W. Schmeidler, E. & Kirchner, C. (2004), 'Investigating Question Meaning and Context through In-Depth Interviews', *Quality & Quantity,* **38:** 367-379**.**

Beaven, M. & Scotti, D. (1990), 'Service-Oriented Thinking and Its Implications for the Marketing Mix', *Journal of Services Marketing,* **4**(4): 5-19.

Bebko, C. (2000), 'Service Intangibility and Its Impact on Consumer Expectations of Service Quality', *Journal of Services Marketing,* **14**(1): 9-26.

Becker, Jan Greve, Goetz and Albers, Sonke (2009), 'The Impact of Technological and Organizational Implementation of CRM on Customer Acquisition, Maintenance and Retention', *International Journal of Research in Marketing,* **26**: 207-215.

Beckett, A. (2000), 'Strategic and Marketing Implications of Consumer Behaviour in Financial Services', *The Services Industries Journal,* **20**(July/3): 191-208.

Belk, R. (1975), 'Situational Variables and Consumer Behavior', *Journal of Consumer Research,* **2**(December): 157-164.

Bell, S. Auh, S. Smalley, K. (2005), 'Customer Relationship Dynamics: Service Quality and Customer Loyalty in the Context of Varying Levels of Customer Expertise and Switching Costs', *Journal of the Academy of Marketing Science,* **33**(2): 169-183.

Benamati, J. & Serva, M. (2007), 'Trust and Distrust in Online Banking: Their Role in Developing Countries', *Information Technology for Development,* **13**(2): 161-175.

Bendall-Lyon, D. & Powers, T. (2004), 'The Impact of Structure and Process Attributes on Satisfaction and Behavioral Intentions', *Journal of Services Marketing,* **18**(2): 114-121.

Berkley, B. & Gupta, A. (1995), 'Identifying the Information Requirements to Deliver Quality Service', *International Journal of Service Industry Management,* **6**(5): 16-35.

Berry, L. (1995), 'relationship marketing of services: growing interest, emerging perspectives', *Journal of the Academy of Marketing Science,* **23**(4): 236-245.

Berry, L. Zeithaml, V. & Parasuraman, A. (1985), 'Quality Counts in Services, Too', *Business Horizons,* **May-June**: 44- 52.

Berry,L. Seiders, K.& Grewal, D. (2002), 'Understanding Service Convenience', *Journal of Marketing,* **66**(3): 1-17

Bertrand, M. Mullainathan, S. & Shafir,E. (2004), 'a behavioral economic view of poverty', *The American Economic Review*, **49**(May/2): 419-423.

Bettencourt, L. & Brown, S. (1997), 'Contact employees: Relationships among workplace fairness, job satisfaction and prosocial service behaviors', *Journal of Retailing*, **73**(1): 39-61.

Bian, X. (2006), *An Examination of Factors Influencing the Formation of the Consideration Set and Consumer Purchase Intention in the Context of Non-Deceptive Counterfeiting*. PhD, U.K.: University of Glasgow.

Bick, G. Brown, A. and Abratt, R. (2004), 'Customer perceptions of the Value Delivered by Retail Banks in South Africa', *International Journal of Bank Marketing*, **22**(5): 300-318.

Bin, Q. Chen, S. Sun, Q., (2003), 'Cultural Differences in E-Commerce: A Comparison between the U.S. and China', *Journal of Global Information Management*, **11**(2): 48-55.

Birgelen, M. Ruyter, K. & Wetzels, M. (2002), 'Customer Evaluations of After-Sale Service Contact Modes: An Empirical Analysis of National Culture's Consequences', *International Journal of Research in Marketing*, **19**: 43-64.

Bitner, M. Brown; S. & Meuter, M. (2000), 'Technology Infusion in Service Encounters', *Journal of the Academy of Marketing Science*, **28**(1/Winter): 138-149.

Bitner, M. (1990), 'Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses', *Journal of Marketing*, **54**(April): 69-82.

Bitner, M. (1995), 'Building Service Relationships; It's All About Promises', *Journal of The Academy of Marketing Science*, **23**(4): 246-251.

Black, N. Lockett, A. Christine, E. Winklofer,H. & McKechnie, S. (2002), 'Modelling Consumer Choice of Distribution Channels: An Illustration from Financial Services', *International Journal of Bank Marketing*, **20**(4): 161-173.

Blackwell, R. Miniard, P. & Engel, J. (2001), *Consumer Behavior*, Florida: Harcourt College Publishers.

Blanchard, R.F. & Galloway, R.L. (1994), 'Quality in Retail Banking', *International Journal of service Industry Management*, **5**(4): 5-23.

Bloemer, J. & Kasper, H.(1995), 'The Complex Relationship Between Consumer Satisfaction and Brand Loyalty', *Journal of Economic Psychology*, **16**: 311-329.

Bloemer, J. & Ruyter, K. (1999), 'Customer Loyalty in High and Low Involvement Service Settings: The Moderating Impact of Positive Emotions', *Journal of Marketing Management*, **15**: 315-330.

Bloemer, J. Ruyter, K. & Wetzels, M. (1999), 'Linking Perceived Service Quality and Service Loyalty: A Multi-Dimensional Perspective', *European Journal of Marketing*, **33**(11/12): 1082-1106.

Bobbitt, L. & Dabholkar, P.(2001), 'Integrating Attitudinal Theories to Understand and Predict Use of Technology-Based Self Service', *International Journal of Service Industry Management*, 12(5): 423-450.

Bolbol, A. Fatheldin, A. & Omran, M. (2005), 'Financial Development, Structure and Economic Growth: The Case of Egypt: 1974- 2002', *Research in International Business and Finance*, 19: 171- 194.

Bolino, M. Turnley, W. and Bloodgood, J. (2002), 'Citizenship Behaviour and the Creation of Social Capital in Organizations', *Academy of Management Review*, **27**(4): 505-522.

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

Bonoma, T. (1985), 'Case Research in Marketing: Opportunities, Problems, and A Process', *Journal of Marketing Research*, **XXII** (May): 199-208.

Boulding, W. Staelin, R. Ehret, M. & Johnston, W. (2005), 'A Customer Relationship Management Roadmap: What is Known, Potential Pitfalls, and Where To Go', *Journal of Marketing*, **69**(October): 155-166.

Brace, I (2004), *Questionnaire Design: How to Plan, Structure and Write Survey Material For Effective Market Research*, London: Kogan Page.

Bradley, N. (2007), *Marketing Research*: *Tools & Techniques*, Oxford: Oxford University Press.

Brady, M. & Cronin, J. (2001), 'Some New Thoughts on Conceptualizing Perceived Service Quality: A Hierarchal Approach', *Journal of Marketing*, **65**(July/3): 34-49

Brady, M. & Robertson, C. (1999), 'An Exploratory Study of Service Value in The U.S.A. and Ecuador', *International Journal of Service Industry Management*, **10**(5): 469-486.

Brandenburger, A.M. & Stuart, H.W. (1996), 'Value Based Business Strategy', *Journal of Economics and Management Strategy*, **5**(1): 5-24.

Brodie, R. Coviello, N. Brookes, R. & Little, V. (1997), 'Towards A Paradigm Shift in Marketing? An Examination of Current Marketing Practices', *Journal of Marketing Management*, **13**: 383-406.

Brown, J. (1997), 'Questions and Answers about Language Testing Statistics: Skewness and Kurtosis', *Shiken: JALT testing and evaluation SIG Newsletter*, **1**(1/April): 20-23. http://jalt.org/test/PDF/Brown1.pdf

Brown, I. Hoppe, R. Muggera, P. Newman, P & Stander, A. (2004), 'The Impact of National Environment on The Adoption of Internet Banking', *Journal of Global Information Management*, **12**(2):1-26.

Brown, L. (1990), 'Convenience in Service Marketing', *Journal of Services Marketing*, **4**(1): 53-59.

Brown, S. (2000), *Customer Relationship Management*, Ontario: John Wiley & Sons Canada Limited.

Bryman, A. & Bell, E. (2003), *Business Research Methods*, Oxford: Oxford University Press.

Bryman, A. (1984), 'The Debate About Quantitative and Qualitative Research: A Question of Method or Epistemology', *The British Journal of Sociology*, **35** (91): 75-92.

Bryman, A. (2004), *Social Research Methods*, New York: Oxford University Press.

Bryman, A. (2006), 'Integrating Quantitative and Qualitative Research: How Is It Done?', *Qualitative research*, **6**(1): 97-113.

Bryman, A. and Cramer, D. (2005), *Quantitative Data Analysis with SPSS 12 and 13*: *A Guide for social scientists*, East Sussex: Routledge.

Bull, C. (2003), 'Strategic Issues in Customer Relationship Management (CRM) Implementation', *Business Process Management Journal*, **9**(5): 592-602.

Burton (2010), 'Can Firms Develop A Service-Dominant Organizational Culture to Improve CRM?, *International Journal of Customer Relationship Marketing and Management*, **1**(January-March/1): 48-68.

Buttle, Francis (1996), 'SERVQUAL: Review, Critique, Research Agenda', *European Journal of Marketing*, **30**(1): 8-32.

Buttle, Francis (2004), *Customer Relationship Management: Concepts and Tools*, Oxford: Elsevier Butterworth-Heinemann

Buttle, Francis (2009), *Customer Relationship Management: Concepts and Technologies*, Oxford: Elsevier Butterworth-Heinemann.

Byun, H. & Wang, Y. (1995), 'Technology Transfer and Multinational Corporations: The Case of South Korea', *Journal of Asian Economics*, **6**(2): 201-216.

Calhoun, K. Teng, J. & Cheon, M. (2002), 'Impact of National Culture on Information Technology Usage Behaviour: An Exploratory Study of Decision Making in Korea and the USA', *Behaviour & Information Technology*, **21**(4):293-302.

Calisir, F. & Gumussoy, C. (2008), 'Internet Banking versus Other Banking Channels: Young Consumers' View', *International Journal of Information Management*, **28**: 215-221.

Camarero, C. (2007), 'Relationship Orientation or Service Quality?', *International Journal of Bank Marketing*, **25**(6): 406-426.

Campo, K. Gijsbrechts, E. & Nisol, P. (2000), 'Towards Understanding Consumer Response to Stock-Outs', *Journal of Retailing*, **76**(2): 219-242.

Caracelli, V. & Greene, J. (1993), 'Data Analysis Strategies for Mixed Method Evaluation Designs', *Educational Evaluation and Policy Analysis*, **15**(2): 195-207.

Carson, D. Gilmore, A. & Walsh, S. (2004), 'Balancing Transaction and Relationship Marketing in Retail Banking', *Journal of Marketing Management*, **20**: 431-455.

Caruana, A. Money, A. & Berthon, P. (2000), 'Service Quality and Satisfaction-The Moderating Role of Value', *European Journal of Marketing*, **34**(11/12): 1338-1352.

Central Bank of Egypt (2002), '*Annual Economic Review*', Cairo: CBE.

Chang, T. & Wildt, A. (1994), 'Price, Product Information, and Purchase Intention: An Empirical', *Journal of the Academy of Marketing Science*, **22**(1): 16-27.

Chapman, R. Murray, P. & Mellor, R. (1997), 'Strategic Quality Management and Financial Performance Indicators', *International Journal of Quality & Reliability Management*, **14**(4): 432-448.

Chebat, J. Babin, B. & Kollis, P. (2002), 'What makes contact employees perform? Reations to employees Perceptions of managerial practices', *International Journal of Bank Marketing*, **20**(7): 325-332.

Chen, I. & Popovich, K. (2003), 'Understanding Customer Relationship Management', *Business Process Management Journal*, **9**(5): 672-688.

Chen, T.& Chang, H. (2005), 'Reducing Consumers' Perceived Risk through Banking Service Quality Cues in Taiwan', *Journal of Business and Psychology*, **19**(4): 521- 540.

Chen, Z. & Dubinsky, A. (2003), 'A Conceptual Model of Perceived Customer Value in E-Commerce: A Preliminary Investigation, *Psychology & Marketing*, **20**(4): 323-347.

Chetwynd, E. Chetwynd, F. & Spector, B. (January 2003), 'Corruption and Poverty: A Review of Recent Literature', *Management Systems International*, Washington. Available at: http://www.u4.no/document/literature/corruption-and-poverty.pdf Accessed on 20/04/2010.

Chrisptopher, M. Payne, A. & Ballantyne, D. (1991), *Relationship marketing: Bringing Quality, customer service and marketing together*, Oxford, Butterworth-Heinemann.

Churchill, A.G. & Surprenant, C. (1982), 'An Investigation into the Determinants of Customer Satisfaction', *Journal of Marketing Research*, **19**(November/4): 491-504.

Churchill, G. & Peter, J. (1984), 'Research Design Effects on the Reliability of Rating Scales: A Meta-Analysis', *Journal of Marketing Research*, **21** (4/November); 360-375.

Churchill, G. (1979), 'A Paradigm for Developing Better Measures of Marketing Constructs', *Journal of Marketing Research*, **16** (1/February): 64-73.

Clark, A. (1998), 'The Qualitative-Quantitative Debate: Moving from Positivism and Confrontation to Post- Positivism and Reconciliation', *Journal of Advanced Nursing*, **27**: 1242-1249.

Cleassens, S. & Leaven, L. (2004), 'What Drives Bank Competition: Some International Evidence', *Journal of Money, Credit and Banking*, **36**(3): 563- 583.

Clemons, E. & Row, M. (1991), 'Sustaining IT Advantage: The Role of Structural Differences', *MIS Quarterly*, **15**(2/September**)**: 275- 292.

Colgate, M.& Hedge, R. (2001), 'An Investigation into the Switching Process in Retail Banking Services', *The International Journal of Bank Marketing*, **19**(4/5);201-212.

Collier, J. & Bienstock, C. (2006), 'Measuring Service Quality in E-Retailing', *Journal of Service Research*, **8**(3): 260-275.

Collis, J. & Hussey, R. (2003), *Business Research: A practical guide for undergraduate and postgraduate students*, Basingstoke: Palgrave Macmillan.

Conduit, J. & Mavondo, F. (2001), 'How Critical is Internal Customer Orientation to Market Orientation', *Journal of Business Research*, **51**: 11-24.

Corbin, J. & Strauss, A. (2008), *Basics of Qualitative Research*: *Techniques and Procedures for Developing Grounded Theory*, 3rd edition, London: Sage Publications.

Corbitt, B. Thanasankit, T. & Yi, H. (2003), 'Trust and E-Commerce: A Study of Consumer Perceptions', *Electronic Commerce Research and Applications*, **2**: 203-215.

Cord, L. Verhoeven, M. Blomquist, C. and Rijkers, B., (2008) *The global economic crisis: Assessing the vulnerability with a poverty lens* http://siteresources.worldbank.org/NEWS/Resources/WBGVulnerableCountriesBrief.pdf Accessed on 25/06/2009.

Corner, I. & Hinton, M. (2002), 'Customer Relationship Management Systems: Implementation Risks and Relationship Dynamics', *Qualitative Market Research*: *An International Journal*, **5**(4): 239-251.

Costello, A. and Osborne, J. (2005), 'Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting The Most from Your Analysis', *Practical Assessment Research & Evaluation: A peer Reviewed Electronic Journal*, **10**(7): 1-9.

Coulter, K. & Coulter, R. (2002), 'Determinants of Trust in A Service Provider: The Moderating Role of Length of Relationship', *The Journal of Services Marketing*, **16**(1): 35-50.

Country Report on Economic Policy and Trade, (2001), 'Egypt: Key Economic Indicators'. http://www.state.gov/documents/organization/8184.pdf. Accessed on 13/06/2006.

Cowton, C. (1998), 'The Use of Secondary Data in Business Ethics Research', *Journal of Business Ethics*, **17**(4): 423-434.

Cox III, E. (1980), 'The Optimal Number of Response Alternatives for A Scale: A Review', *Journal of Marketing Research*, **17** (4/November): 407-422.

Cox, J.& Dale, B.G. (2001), 'Service Quality and E-Commerce: An Exploratory Analysis', *Managing Service Quality*, **11** (2): 121-131.

Coyne, I. (1997), 'Sampling in Qualitative Research: Purposeful and Theoretical Sampling; Merging or Clear Boundaries', *Journal of Advanced Nursing*, **26**: 623-630.

Craver, C. & Scheier, M. (1990), 'Origins and Functions of Positive and Negative Affect: A Control-Process View', *Psychological Review*, **97**(1): 19-35.

Creswell, J. Clark, V. Gutman, M. & Hanson, W. (2003), 'Advanced Mixed Methods Research Design', in Tashakkori, A. & Teddlie, C. (editors), *Handbook of Mixed Methods in Social & Behavioral Research*, London: Sage Publications, pp. 209-240.

Creswell, J. & Clark, V. (2007), *Designing and Conducting Mixed Methods Research*, London: Sage Publications.

Creswell, J. (2003), *Research Design: Qualitative, Quantitative and Mixed Methods Approach*, Thousand Oaks, Calif.: Sage.

Creswell, John, W. (1998), *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*, London; Sage Publications.

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

Cronin, J. Brady, M. Brand, R. Hightower, R. & Shemwell, D. (1997), 'A Cross-Sectional Test of the Effect and Conceptualization of Service Value', *Journal of services marketing*, **11**(6): 375-391.

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

Curry, A. & Kkolou, E. (2004), 'Evaluating CRM to Contribute to TQM Improvement-A Cross Case Comparison', *The TQM magazine*, **16**(5): 314-324.

Dabholkar, P. & Bagozzi, R. (2002), 'An Attitudinal Model of Technology-Based Self-Service: Moderating Effects of Consumer Traits and Situational Factors', *Academy of Marketing Science*, **30**(Summer/3): 184-201.

Dabholkar, P. (1996), 'Customer Evaluations of New Technology-Based Self Service Options: An Investigation of Alternative Models of Service Quality', *International Journal of Research in Marketing*, **13**: 29-51.

Danemark,B. Ekstrom, M. Jakobsen, L. & Karlsson,J. (2002), *Explaining Society: Critical Realism in the Social Sciences*, Oxon: Routledge.

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

Darlington, Y. & Scott, D. (2002), *Qualitative Research in Practice: Stories from the Field*, Maidenhead: Open University Press.

Datt, G. Jolliffe, D. & Sharma, M. (2001), 'A Profile of Poverty in Egypt', *African Development Review*, **13**(2): 202-237.

Davis, F.D. (1989), 'Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology', *MIS Quarterly*, **1**(September): 319-339.

Davis, F.D. Richard, P. Bagozzi, R. & Warshaw, P. (1989), 'User Acceptance of Computer Technology: A Comparison of Two Theoretical Models', *Management Science*, **35**(8): 982-1003.

De Castro, J. & Schulze, W. (1995), 'The Transfer of Technology to Less Developed countries: A Model From the Perspective of the Technology Recipient', *The Journal of High Technology Management Research*, **6**(1): 113-126.

Decrop, A. (1999), 'Triangulation in Qualitative Tourism Research', *Tourism Management*, **20**: 157-161.

Dennis, C. Merrilees, B. Jayawardhena, C. & Wright, L. (2009), 'E-Consumer Behaviour', *European Journal of Marketing*, **43**(9/10): 1121-1139.

Denzin, Norman, K. (1978), *The Research Act: A Theoretical Introduction to Sociological Methods*, U.S.A.: Mc Graw-Hill Inc.

Desai, D. & Sahu, S. (2008), 'CRM Change Management in An Emerging Country Context: An Exploratory Study in India', *Global Journal of Flexible systems Management*, **9**(2/3): 41-54.

Deshpande, Farley & Jr. Webster (1993), 'Corporate Culture, Customer Orientation and Innovativeness in Japanese Firms: A Quadrate Analysis', *Journal of Marketing*, **57**(1/January): 23-37.

Deshpande, R. (1983), 'Paradigms Lost: On Theory and Method in Research in Marketing', *Journal of Marketing*, **47** (Fall): 101- 110.

Desimone, L. & Le Floch, K. (2004), 'Are We Asking the Right Questions? Using Cognitive Interviews to Improve Surveys in Education Research', *Educational Evaluation and Policy Analysis*, **26**(1): 1-22.

Detert, J. Schroeder, R. & Mauriel, J. (2000), 'A Framework for Linking Culture and Improvement Initiatives in Organizations', **25**(4): 850-863.

Devlin, James (1998), 'Adding Value to Service Offerings: The Case of U.K. Retail Financial Services', *European Journal of Marketing*, **32**(11/12): 1091-1109.

Devlin, Jim & Ennew, Christine, T. (1997), 'Understanding Competitive Advantage in Retail Financial Services', *The International Journal of Bank Marketing*, **15**(3): 73-82.

Dibb, S. (2001), 'Banks, Customer Relationship Management and Barriers to the Segment of One', *Journal of Financial Services Marketing* , **6**(1): 10-23.

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

Dimitriadis, S. & Kyrezis, N. (2008), 'Does Trust in the Bank Build Trust in Its Technology-Based Channels?', *Journal of Financial Services Marketing*, **13**(1);28-38.

Diog, A. & Theobald, R. (2000), 'Why Corruption', in Diog, A. & Theobald, R. (editors) *Corruption and Democratisation*, London: Frank Cass & Co. Ltd., pp.1-12

Dishaw, M. & Strong, D.(1999), 'Extending the Technology Acceptance Model with Task-Technology Fit Constructs', *Information& Management*, **36**; 9-21.

Dobronogov, A. and Lqbal, F. (October 2005), '*Economic growth in Egypt: Constraints and Determinants*', The World Bank. Middle East and North Africa Working Paper. Series no. 42.
http://siteresources.worldbank.org/INTMENA/Resources/WP42SEPTEMBER2006.pdf
Accessed on the 5th of March 2010.

Donaldson, L. (1990), 'The Ethereal Hand: Organizational Economics and Management Theory', *Academy of Management review*, **15**(3): 369-381.

Doney, P. Cannon, J. & Mullen, M. (1998), 'Understanding the Influence of National Culture on the Development of Trust', *Academy of Management Review*, **23**(3):601-620.

Doney, P. & Cannon, J. (1997), 'An Examination of the Nature of Trust in Buyer-Seller Relationships', *Journal of Marketing*, **61**(2/April): 35-51.

Donthu, N. & Yoo, B. (2001), 'Cultural Influences on Service Quality Expectations', *Journal of service research*, **1**(2/ November): 178-186.

Drolet, A. & Morrison, D. (2001), 'Do We Really Need Multiple-Item Measures in Service Research?, *Journal of Service Research* , **3**(3): 196-204.

Durgee, J. (1985), 'Depth- Interview Techniques for Creative Advertising', *Journal of Advertising Research*, **25**(6): 29-37.

Durkin, M. and Howcroft, B. (2003), 'Relationship marketing in the Banking Sector: The Impact of New Technologies', *Marketing Intelligence & Planning*, **21**(1): 61-71.

Durkin, M. Howcroft, B. O'donnell, A.& Mc-Quinn,D. (2003), 'Retail Bank Customer Preferences: Personal and Remote Interactions', *International journal of Retail and Distribution Management*, **31**(4/5): 177-189.

Dye, K. Millis, A. & Weatherbee, T. (2005), 'Maslow: Man Interrupted: Reading Management Theory in Context', *Management Decision*, **43**(10): 1375-1395.

Easingwood, C.& Storey, C.(1996), 'The Value of Multi-Channel Distribution Systems in the Financial Services Sector', *The Service Industries Journal*, **16**(2/April): 223-241

Eastin, M. (2002), 'Diffusion of E-Commerce: An Analysis of the Adoption of Four E-Commerce Activities', *Telematics and Informatics*, **19**: 251-267. http://home.hia.no/~fwahid01/ic/Diffusion%20of%20e-commerce.pdf. Accessed on 7/07/2006.

Easton, G. (2002), 'Marketing: A critical Realist Approach', *Journal of Business Research*, **55**: 103-109.

Eggert, A. & Ulaga, W. (2002), 'Customer Perceived Value: A Substitute for Satisfaction in Business Markets', *Journal of Business and Industrial Marketing*, **17**(2/3): 107-118.

Egypt Trade Summary, (2004) http://www.ustr.gov/assets/Document_Library/Reports_Publications/2004/2004_National_Trade_Estimate/2004_NTE_Report/asset_upload_file82_4764.pdf. Accessed on 03/06/2006.

El-Ramly, H. & Haleim , S. (2008), 'The effect of Devaluation on Output in the Egyptian Economy: A Vector Auto Regression Analysis', *International Research Journal of Finance and economics*, **14**: 82-99

El Said, G. and Hone, K. (2005), 'Culture and E-Commerce: An Exploration of the Perceptions and Attitudes of Egyptian Internet Users', *Journal of computing and information Technology*, **13**(2): 107-122.

El-Shazly, A. (2001), 'Incentive-based Regulations and Bank Restructuring in Egypt', Available at http://www.sba.luc.edu/orgs/meea/volume3/elshazly.htm Accessed on 05/06/2006.

Ennew, C. & Binks, M. (1999), 'Impact of Participative Service Relationships on Quality, Satisfaction, and Retention: An Exploratory Study', *Journal of Business Research*, **46** (2): 121-132.

Eid, R. (2007), 'Towards A Successful CRM Implementation in Banks: An Integrated Model', *The Services Industries Journal*, **27**(8): 1021-1039.

Eisenhardt, K.M., (1989), 'Agency Theory: An Assessment and Review', *Academy of Management Review*, **14**(1): 57-74.

Eriksson, K. & Vaghult, A. (2000), 'Customer Retention, Purchasing Behaviour and Relationship Substance in Professional Services', *Industrial Marketing Management*, **29**(4):363-372.

Ernst, D. & Lundvall, B.A. (2004), 'Information Technology in the Learning Economy: Challenges for Developing Countries', in Reinert, E.S. (editor): *Globalization, Economic Development and Inequality: An Alternative Perspective*, Cheltenham: Edward Elgar Publishing Limited, pp.258-2870

Espinoza, M. (1999), 'Assessing the Cross-Cultural Applicability of A Service Quality Measure', *International Journal of Service Industry Management*, **10**(5): 449-468.

Estelami, H. (2000), 'Competitive and Procedural Determinants of Delight and Disappointment in Consumer Complaint Outcomes', *Journal of Service Research*, **2**(3): 285-300.

Estelami, H. Lehmann, D. & Holden, A. (2001), 'Macro-Economic Determinants of Consumer Price Knowledge: A Meta-Analysis of Four Decades of Research', *International Journal of Research in Marketing*, **18**: 341-355.

Evans, M. Jamal, A. & Foxall, G. (2009), *Consumer Behaviour*, 2nd Edition, West Sussex: John Wiley & Sons Ltd.

Fabrigar, L. MacCallum, R. Wegener, D. & Strahan, E. (1999), 'Evaluating the Use of Exploratory Factor Analysis in Psychological Research', *Psychological Methods*, **4**(3): 272-299.

Faugier, J.& Sargeant, M. (1997), 'Sampling Hard to Reach Populations', *Journal of Advanced Nursing*, **26**(4): 790-797.

Featherman, M. Pavlou, P. (2003), 'Predicting E-Services Adoption: A Perceived Risk Facets Perspective', *International Journal of Human-Computer Studies*, **59**(October): 451-474.

Field, A. (2009), *Discovering Statistics using SPSS*, London: Sage Publication.

Fielding, N. & Thomas, H. (2001), 'Qualitative Interviewing', in Gilbert, N. (editor), *Researching Social Life*, 2nd edition, London: Sage, pp. 123-144.

Fitzgibbon, C. & White, L. (2005), 'The Role of Attitudinal Loyalty in the Development of Customer Relationship Management Strategy Within Service Firms', *Journal of financial services marketing*, **9**(3): 214-230.

Flavian, C. Guinaliu, M. & Torres, E. (2005), 'The Influence of Corporate Image on Consumer Trust', *Internet Research*, **15**(4): 447-470.

Flick, U. (1998), *An Introduction to Qualitative Research*, London: Sage Publications.

Flick, U. (2002), *An Introduction to Qualitative Research*, London: Sage Publications.

Floh, A. & Treiblmaier, H. (2006), 'What Keeps the E-Banking Customer Loyal?', *Journal of Electronic Commerce Research*, **7**(2); 97-110.

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

Foss, B. & Stone, M. (2003), *CRM in Financial Services*, London, Kogan Page Limited.

Fournier, S. Dobscha, S. & Mick, D. (1998), 'Preventing the Death Premature Death of Relationship Marketing', *Harvard Business Review*, **January-February**: 42-51.

Frambach, R. & Schillewaert, N. (2002), 'Organizational Innovation Adoption: a Multi-Level Framework of Determinants and Opportunities for Future Research', *Journal of Business Research*, **55**(2): 163-176.

Frambach, R. Barkema, H. Nooteboom, B. & Wedel, M. (1998), 'Adoption of A Service Innovation in The Business Market: An Empirical Test of Supply Side Variables', *Journal of Business Research*, **41**(2): 161-174.

Fraser, N. Fraser, J. & McDonald, F. (2000), 'The Strategic Challenge of Electronic Commerce', *Supply Chain Management: An International Journal*, **5**(1):7-14.

Fullerton, G. (2003), 'When Does Commitment Lead to Loyalty?', *Journal of Service Research*, **5**(4): 333-344.

Furrer, O. Liu, B. & Sudharshan, D.(2000), 'The Relationships Between Culture and Service Quality Perceptions', *Journal of Service Research*, **2**(May/4): 355-371.

Gabott, M. & Hogg, G. (1994), 'Consumer Behaviour and Services: A Review', *Journal of Marketing Management*, **10**: *311-324*

Galal, A. (March 2002), 'The Paradox of Education and Unemployment in Egypt, The Egyptian Center for Economic Studies (ECES). http://www.worldbank.org/wbi/mdf/mdf4/papers/galal.pdf Accessed at 20/01/2008.

Gallouj, G. (1997), 'Asymmetry of Information and the Service Relationship: Selection and Evaluation of the Service Provider', *International Journal of Service Industry Management*, **8**(1): 42-64.

Garbarino, E. & Johnson, M. (1999), 'The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships', *Journal of marketing*, **63**(2): 70-87.

Gatignon, H. & Robertson, T.R. (1985), 'A Propositional Inventory for New Diffusion Research', *Journal of Consumer Research*, **11**(March): 849-867.

Gefen, D. Karahanna, E. & Straub, D. (2003), 'Trust and TAM in Online Shopping: An Integrated Model', *MIS Quarterly*, **27** (March/ 1): 51-90.

George, J. (2004), 'The Theory of Planned Behavior and Internet Purchasing', *Internet Research*, **14**(3): 198-212.

Gerrard, P.& Cunningham,J.(2003), 'The Diffusion of Internet Banking Among Singapore Consumers', *International Journal of Bank Marketing*, **21**(1): 16-28.

Gerson, K. & Horowitz, R. (2002), 'Observations and Interviewing: Options and Choices in Qualitative Research', in May, T. (editor), *Qualitative Research in Action*, London: Sage, pp. 199-224.

Getz, K. & Volkema, J. (2001), 'Culture, Perceived Corruption and Economics', *Business and Society*, **40**(1): 7-30.

Ghauri, P. & Grounhaug, K. (2005), *Research Methods in Business Studies: A Practical Guide*, England: Pearson Education Limited.

Ghosh, A. & Swaminatha, T. (2001), 'Software Security and Privacy Risks in Mobile E-Commerce', *Communications of the ACM*, **44**(February/2): 51

Gibbs, J. Kraemer, K. & Dedrick, J. (2003), 'Environment and Policy Factors Shaping Global E-Commerce Diffusion: A Cross- Country Comparison', *The Information Society*, **19**: 5-18.

Gillham, B. (2005), *Research Interviewing: The range of techniques*, Maidenhead: Open University Press.

Gima, K. (1996), 'Market orientation and Innovation', *Journal of Business Rese*arch, **35**: 93-103.

Gonzalez, M. Quesada, G. Picado, F. & Eckelman, C. (2004), 'Customer Satisfaction Using QFD: An E-Banking Case', *Managing Service Quality*, **14**(4): 317-330.

Goodhue, D. & Thompson, R. (1995), 'Task-Technology Fit and Individual Performance', *MIS Quarterly*, **June**: 213-236.

Gorsuch, R. (1997), 'Exploratory Factor Analysis: Its Role in Item Analysis', *Journal of Personality Assessment*, **68**(3): 532-560.

Gounaris, S. & Koritos, C. (2008), 'Using the Extended Innovation Attributes Framework and Consumer Personal Characteristics as Predictors of Internet Banking Adoption', *Journal of Financial Services Marketing,* **13**(1): 39–51

Gounaris, S.P. (2005), 'Trust and Commitment Influence on Customer Retention: Insights from Business-to-Business Services', *Journal of Business Research,* **58**; 126-140.

Grandon, E. & Pearson, J. (2004), 'Electronic Commerce Adoption: An Empirical Study of Small and Medium U.S. Businesses', *Information and Management,* **42**: 197-216.

Grewel, D. Gotlieb, J. & Marmorstein, H. (2000), 'The Moderating Effect of the Service Context on the Relationship between Price and Post-Consumption Perceptions of Service Quality', *Journal of Business and Psychology,* **14**(4): 579- 591.

Gronroos, C. (1978), 'A Service-Orientated Approach to Marketing of Services', *European Journal of Marketing,* **12** (8): 588- 601.

Gronroos, C. (1984), 'A Service Quality Model and Its Marketing Implications', *European journal of Marketing,* **18**(4); 36-44

Gronroos, C. (1990), 'Relationship Approach to Marketing in Service Contexts: The Marketing and Organizational Behavior Interface', *Journal of Business Research,* **20**(1):3-11.

Gronroos, C. (1994), 'From Marketing Mix to Relationship Marketing. Toward A Paradigm Shift in Marketing', *Management Decision,* **32**(2): 4-32.

Gronroos, C. (1997), 'Value Driven Relational Marketing: From Products to Resources and Competencies', *Journal of Marketing Management,* **13**: 407-419.

Gronroos, C. (2001), 'The Perceived Service Quality Concept-A Mistake?', *Managing Service Quality,* **11**(3); 150-152.

Guba, E. (1990), 'The Alternative Paradigm Dialog', in Guba, E. (editor), *The Paradigm Dialog,* London: Sage, pp. 17-27.

Guba, E. & Lincoln, Y. (1994), 'Competing Paradigms in Qualitative Research', in Denzin, Norman. & Lincoln, Yvonna. (editors), *Handbook of Qualitative Research,* Thousand Oaks: Sage Publications, pp.105-117.

Guest,G. Bunce, A. & Johnson, L. (2006), 'How Many Interviews Are Enough?', *Field Methods,* **18**(1): 59-82.

Guiltinan, J. (1999), 'Launch Strategy, Launch Tactics and Demand Outcomes', *Journal of Product Innovation Management,* **16**: 509-529

Gummesson , E. (2004), 'Return on Relationships (ROR): The Value of Relationship Marketing and CRM in Business to Business Contexts', *The journal of business & Industrial Marketing,* **19**(2): 136-148.

Gummesson, E. (1997), 'Relationship Marketing as A Paradigm Shift: Some Conclusions from the 30R Approach', *Management Decision,* **35**(4): 267-272.

Gummesson, E. (2002), *Total Relationship Marketing,* Oxford: Butterworth-Heinemann.

Gunes, E. & Aksin, O. (2004), 'Value Creation in Service Delivery: Relating Marketing Segmentation, Incentives and operational Performance', *Manufacturing & Service Operations Management,* **6**(4/Fall):338-357.

Gurau, C. (2002), 'E- Banking in Transition Economies: The Case of Romania', *Journal of Financial Services Marketing*, **6**(4):362-378.

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

Hair, J. Black, W. Babin, B. Anderson,R. & Tatham, R. (2006), *Multivariate Data Analysis*, 6th ed., Upper Saddle River, New Jersey: Pearson Prentice Hall.

Hair, Joseph Black, William Babin, Barry Anderson, Rolph (2010), *Multivariate Data Analysis: A Global Perspective,* 7th ed., Upper Saddle River, New Jersey: London: Pearson Education

Halliday, S. (2003), 'Which Trust and When? Conceptualizing Trust in Business Relationships Based on Context and Contingency', *International Review of Retail, Distribution and Consumer Research*, **13**(4): 405-421.

Hallowell, R. (1996), 'The Relationships of Customer Satisfaction, Customer Loyalty, and Profitability: An Empirical Study', *International Journal of Service Industry Management,* **7**(4): 27-42.

Hansen, H. Sandvik, K. & Selnes, F. (2003), 'Direct and Indirect Effects of Commitment to A Service Employee on the Intention to Stay', *Journal of Service Research* ,**5** (May/ 4): 356-368.

Harden, G. (2002), 'E-Banking Comes to Town: Exploring How Traditional U.K. High Street Banks are Meeting The Challenge of Technology and Virtual Relationships', *Journal of Financial Service Marketing,* **6**(4):323-332.

Harker, M. (1999), 'Relationship Marketing Defined? An Examination of Current Relationship Marketing Definitions', *Marketing Intelligence & Planning,* **17**(1): 13-20.

Harkness, J. Pennel, B. & Schoua-Glusberg, A. (2004), 'Survey Questionnaire Translation and Assessment', in Presser, S. Rohgeb, J. Couper, M. Lessler, J. Martin, J. & Singer, E.(editors), *Methods for testing and Evaluating Survey Questionnaire,* New York: John Wiley & Sons, Inc., pp. 453-474.

Harness, D. & Harness, T. (2004), 'The New Customer Relationship Management Tool-Product Elimination', *The service Industries Journal*, **24**(20): 67-80.

Harris, L.C. & Goode, M. (2004), 'The Four Levels of Loyalty and the Pivotal Role of Trust: A Study of Online Services Dynamics', *Journal of Retailing,* **80(2)**: 139-158.

Harris, Lloyd C. (1996), 'Cultural Obstacles to Market Orientation', *Journal of Marketing Practice,* **2**(4): 36-52.

Harrison, T. (2000), *Financial Service Marketing*, Essex: Pearson Education.

Hartline, M. & Ferrel, O. (1996), 'The Management of Customer-Contact Employees: An Empirical Investigation', *Journal of Marketing,* **60**(October): 52-70.

Hassan, A. & Kamel, S. (2003), 'Assessing the Introduction of Electronic Banking In Egypt Using the Technology Acceptance Model', *Annals of Cases on Information,* **5**:1-25.

Hauser, J. Simester, D. & Wernerfelt, B. (1994), 'Customer Satisfaction Incentives', *Marketing Science*, **13**(4): 327-250.

Hawkins, D. & Tull, D. (1994), *Essentials of Marketing Research*, New York: Macmillan Publishing Company.

Heinonen, K. & Strandvick, T. (2009), 'Monitoring Value-in-Use of E-Service', *Journal of Service Management*, **20**(1): 33-51.

Heinonen, K. (2004), 'Reconceptualizing Customer Perceived Value: The Value of Time and Place', *Managing Service Quality*, **14**(2/3): 205-215.

Heinonen, K. (2007), 'Conceptualizing Online Banking Service Value', *Journal of Financial Services Marketing*, **12**(1): 39-52.

Hennig-Thurau, Thorsten. (2000), 'Relationship Quality and Customer Retention through Strategic Communication of Customer Skills', *Journal of Marketing Management*, **16**(February/1-3): 55-79.

Henning- Thurau, Thorsten & Klee, Alexander (1997), 'The Impact of Customer and Retention Quality on Customer Retention: A Critical Reassessment and Model Development', *Psychology& Marketing*, **14**(December/18): 737-764.

Henning- Thurau, Thorsten & Thurau, Claudia (2003), 'Customer Orientation of Service Employees–Toward A Conceptual Framework of A Key Relationship Marketing Construct', *Journal of Relationship Marketing*, **2**(1/2): 23-41.

Henson, R. & Roberts, K. (2006), 'Use of Factor Analysis in Published Research: Common Errors and Some Comment on Improved Practice', *Educational and Psychological Measurement*, **66**(3): 393-416.

Herche, J. & Engelland, B. (1996), 'Reversed-Polarity Items and Scale Uni-Dimensionality', *Journal of the Academy of Marketing Science*, **24**(4): 366-374.

Herington, C. & Weaven, S. (2007), 'Can Banks Improve Customer Relationships with High Quality Online Services?', *Managing Service Quality*, **17**(4): 404-427.

Herington, C. & Weaven, S. (2009), 'E-Retailing by Banks: E-Service Quality and Its Importance to Customer Satisfaction', *European Journal of Marketing*, **43**(9/10): 1220-1231.

Hernandez, J. and Mazzon, J. (2007), 'Adoption of Internet Banking: Proposition and Implementation of An Integrated Methodology Approach', *International Journal of bank marketing*, **25**(2): 72-88.

Hernon, D. Nitecki, D. & Hman, E. (1999), 'Service Quality and Customer Satisfaction: An Assessment and Future Directions', *The Journal of Academic Librarianship*, **25**(1): 9-17.

Hillebrand, B. Kok, R. & Biemans, W. (2001), 'Theory-Testing Using Case Studies: A Comment on Johnston, Leach and Liu', *Industrial Marketing Management*, **30**: 651-657.

Hinkin, T., (1998), 'A Brief Tutorial on the Development of Measures for Use in Survey Questionnaires', *Organizational Research Methods*, **1**(1/January): 104-121

Hofstede, G. (1994), 'Management Scientists are Humans', *Management Science*, **40**(1): 4-13.

Hofstede, G. (2001), *Cultural Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations*, Thousand Oaks, Sage.

Hoffman, D. Novak, T. and Peralta, M. (1999), 'Building consumer Trust Online', *Communications of the ACM*, **42**(4): 80-85.

Holland, S. Gaston, K. & Gomes, J. (September, 2000), ' Critical Success Factors for Cross Functional Teamwork in New Product Development', *International Journal of Management Reviews*, **2**(3): 231-259.

Holmlund, M. & Kock, S. (1996), 'Relationship Quality: The importance of Customer-Perceived Service Quality in Retail Banking', *The service industries journal*, **16**(July/3): 287-304.

Houston, M. Bettencourt, L. & Wenger, S. (1998), 'A Relationship between Waiting in A Service Queue and Evaluations of Service Quality: A Field Service Perspective', *Psychology & Marketing*, **15**(8); 735-753.

Howcroft, B. (1992) 'Contemporary Issues in UK Bank Delivery Systems', *International Journal of Service Industry Management*, **3**(1): 39-56.

Howcroft, B. Hamilton, R. & Hewer, P. (2002), 'Consumer Attitude and the Usage and Adoption of Home-Based Banking in the United Kingdom', *International Journal of Bank Marketing*, **20**(2/3):111-121.

Hsu, M.& Chiu, C. (2004), 'Predicting Electronic Service Continuance with a Decomposed Theory of Planned Behaviour', *Behaviour & Information Technology*, **23**(Sep.-Oct./5): 359-373.

Huff, L. & Kelley, L. (2005), 'In Collectivism A Liability? The Impact of Culture on Organizational Trust and Customer Orientation: A Seven-Nation Study', *Journal of Business Research*, **58**: 96-102.

Huges, T. (2002), 'Marketing Principles in the Application of E-Commerce', Qualitative *Market Journal: An International Journal*, **5**(4): 252-260.

Hui, M. & Au, K. (2001), 'Justice Perceptions of Complaint Handling: A Cross-Cultural Comparison between PRC and Canadian Customers', *Journal of Business Research*, **52**: 161-173.

Hutcheson, G. & Sofroniou, N. (1999), *The Multivariate Social Scientist*, 1st edition, London: Sage Publication.

Ibrahim, E. Joseph, M. & Ibeh, K. (2006), 'Customers' Perception of Electronic Service Delivery in the U.K. Retail Banking Sector', *International Journal of Bank Marketing*, **24**(7): 475-493.

Ikram,K. (2006), *The Egyptian Economy: 1952-2000, Performance, Policies and Issues*, Milton Park, Oxon: Routledge.

Indjikian, R. & Siegel, D. (2005), 'The Impact of Investment in IT on Economic Performance: Implications for Developing Countries', *World Development*, **33**(5): 681-700.

Iverson, R. (1996), 'Employee Acceptance of Organizational Change: The Role of Organizational Commitment', *The International Journal of Human Resource Management*, **7**(1/February): 122-149.

Jamal, A.& Naser, K. (2002), 'Customer Satisfaction and Retail Banking: An Assessment of Some of the Key Antecedents of Customer Satisfaction in Retail Banking', *International Journal of Bank Marketing*, **20**(4/5): 146-160.

Janda, S. Trocchia, P. Gwinner, K. (2002), 'Consumer Perceptions of Internet Retail Service Quality', *International Journal of Service Industry Management*, **13**(5): 412-431.

Jarratt, Denise, G. (1996), A Comparison of Two Alternative Interviewing Techniques Used Within an Integrated Research Design: A Case Study in Out Shopping Using Semi-Structured and Non Directed Interviewing Techniques', *Marketing Intelligence & Planning*, **14**(6): 6-26

Jaruwachirathanakul, B. & Fink, D. & (2005), 'Internet Banking Adoption Strategies for a Developing Country: The case of Thailand', *Internet Research*, **15**(3): 295-311.

Jaworski, B. & Kohli, A. (1993), 'Market Orientation: Antecedents and Consequences', *Journal of Marketing*, **57**(3): 53-70.

Jayawardhena, C. (2004), 'Measurement of Service Quality in Internet Banking: The Development of an Instrument', *Journal of Marketing Management*, **20**; 185-207.

Jayawardhena, C.& Foley, P. (2000), 'Changes in the Banking Sector: The Case of Internet Banking in The U.K.', *Internet Research*, **10**(1): 19-31

Johnson, D. and Grayson, K. (2005), 'Cognitive and Affective Trust in Service Relationships', *Journal of Business research*, **58**: 500-507.

Johnston, R. (1995), 'The Determinants of Service Quality: Satisfiers and Dissatisfies', *International Journal of Service Industry Management*, **6**(5): 53-71.

Johnston, W. Leach, M. & Liu, A. (1999), 'Theory Testing Using Case Studies in Business-to-Business Research', *Industrial Marketing Management*, **28**(3): 201-213.

Jones, G. and George, J. (1998), 'the experience and evolution of trust: implications for coordination and teamwork', *Academy of Management Review*, **23**(3): 531-546.

Joseph, M. Sekhon,Y. Stone, G. & Tinson, M.(2005), ' An Exploratory Study on the Use of Banking Technology in The U.K.', *International Journal of Bank Marketing*, **23**(5): 397-413.

Joseph, M. McClure, C. & Joseph, B. (1999), 'Service Quality in the Banking Sector: The Impact of Technology on Service Delivery', *International Journal of Bank Marketing*, **17**(4): 182-191.

Jun, M. & Cai, S. (2001), 'The Key determinants of Internet Banking Service Quality: A Content Analysis, *International Journal of Bank Marketing*, **19**(7): 276-291.

Kalafatis, S. Tsogas, M. & Blankson, C. 'Positioning strategies in business markets', *Journal of Business & Industrial Marketing*, **15**(6): 416-437.

Kale, Sudhir H. (2004), 'CRM Failure and the Seven Deadly Sins', *Marketing Management*, **13** (September-October): 42-46.

Kamakodi, N. & Khan, B. (2008), 'Looking Beyond Technology: A Study of E-Banking Channel Acceptance by Indian Customers', *International Journal of Electronic Banking*, **1**(1): 73-94.

Kamel, S. & Hassan, A. (2003), 'Assessing the Introduction of Electronic Banking in Egypt Using the Technology Acceptance model', *Annals of Cases on Information Technology*, **5**: 1-26.

Kandampully, J. (1998), 'Service Quality to Service Loyalty: A Relationship which Goes Beyond Customer Services', *Total Quality Management*, **9**(6): 431-443.

Kang, Gi-Du& James, J. (2004), 'Service Quality Dimensions: An Examination of Gronroos's Service Quality Model', *Managing Service Quality*, **14**(4): 266-277.

Kangis, P.& Passa, V. (1997), 'Awareness of Service Charges and Its Influence on Customer Expectations and Perceptions of Quality in Banking', *The Journal of Services Marketing*, **11**(2); 105-117.

Kanousi, A. (2005), 'An Empirical Investigation of the Role of Culture on Service Recovery Expectations', *Managing Service Quality*, **15**(1): 57-69.

Karahanna, E. & Straub, D. (1999), 'The Psychological Origins of Perceived Usefulness and Ease-of-Use', *Information and Management*, **35**: 237-250.

Karami, A. Rowley, J. Analoui, F. (2006), 'Research and Knowledge Building in Management Studies: An Analysis of Methodological Preferences', *International Journal of Management*, **23**(1): 43-52.

Karimi, J. Somers, T. & Gupta, Y. (2001), 'Impact of Information Technology Management Practices on Customer Services', *Journal of Management Information Systems*, **17**(4/ *Spring*):125-158.

Karjaluoto, H. Mattila, M. & Pento, T. (2002), 'Factors Underlying Attitude Formation Towards Online Banking in Finland', *The International Journal of Bank Marketing*, **20**(6): 261-272.

Karjaluoto, H. Mattila, M.& Pento, T. (2002), 'Factors Underlying Attitude Towards Online Banking in Finland', *International Journal of bank marketing*, **20**(6): 261-272.

Kassim, N. Abdulla, A. (2006), 'The Influence of Attraction on Internet Banking: An Extension to the Trust-Relationship Commitment Model, *International Journal of Bank Marketing*, **42**(6): 424-442.

Kaynak, E. & Harcar, T. (2005), 'Consumers Attitudes towards Online Banking: A New Strategic Marketing Medium for Commercial Banks', *International Journal of Technology Marketing*, **1**(1): 62-78.

Kaynak, E. & Harcar, T. (2005*), 'American Consumers' Attitudes towards Commercial Banks, *International Journal of Bank Marketing*, **23**(1): 73-89.

Kaynak, E. & Harcar,T. (2001), 'Consumers' Attitudes and Intentions towards Credit Card Usage in An Advanced Developing Country', *Journal of Financial Services Marketing*, **6**(1): 24-39.

Kedia, B. & Bahgat, R. (1988), 'Cultural Constraints on Transfer of Technology Across Nations: Implications for Research in International and Comparative Management', *Academy of Management Review*, **13**(4): 559-571.

Kees, V. Enno, M. & Ingrid, V. (2000), 'Service Satisfaction: An Empirical Analysis of Consumer Satisfaction in Financial Services', *The Financial Industries Journal*, **20**(3); 81-94.

Keiningham, T. & Munn, T. (2003), 'The Impact of Customer Satisfaction on Share of Wallet in Business to Business Environment', *Journal of Service Research*, **6**(1): 37-50.

Keiningham, T. Cooil, B. Aksoy, L. Andreaseen, T. & Weiner, J. (2007), 'The Value of Different Customer Satisfaction and Loyalty Metrics in Predicting Customer Intention, Recommendation and Share of Wallet', *Managing Service Quality*, **17**(4): 361-384

Kevork, E. and Vrechopoulos, A. (2009), 'CRM literature: Conceptual and Functional Insights by keyword Analysis', *Marketing Intelligence and planning*, **27**(1): 48-85.

Khalifa, A. (2004), 'Customer Value: A Review of Recent Literature and an Integrative Configuration', *Management Decision*, **42**(5/6): 645-666.

Kim, J. Moon, J. Han, D. & Tikoo, S. (2004), 'Perceptions of Justice and Employee Willingness to Engage in Customer-Oriented Behavior', *Journal of Services Marketing*, **18**(4/5): 267-275.

Kim, Jonghyeok Suh, Euiho And Hwang, Hyunseok (2003), 'A Model for Evaluating the Effectiveness of CRM using the Balanced Scorecard', *Journal of Interactive Marketing*, **17**(Spring/2): 5-19.

Kim, K. & Prabhakar, B. (2000), 'Initial Trust, Perceived Risk and the Adoption of Internet Banking', *International Conference on Information Systems: Proceedings of the Twenty First International Conference on Information Systems*, Brisbane, Association for Information Systems, Australia.

Kimber, C. (2001), 'Strategic Integration of Customers and Channels', *Journal of Financial Services Marketing*, **5**(4): 332-336.

Kirkman, B. & Shapiro, D. (1997), 'The Impact of Cultural Values on Employee Resistance to Teams: Toward A Model of Globalized Self-Managing Work Team Effectiveness', *Academy of Management Review*, **22**(3): 730-757.

Kline, P. (2005), *An Easy Guide to Factor Analysis*, Sussex: Routledge

Kogut, B. & Singh, H. (Fall 1988), 'The Effect of National Culture on the Choice of Entry', *Journal of International Business Studies*, **19**(3): 411-432.

Kolodinsky, J. Hogarth, J. & Hilgert M. (2004), 'The Adoption of Electronic Banking Technologies by U.S Customers', The *International Journal of Bank Marketing*, **22**(4): 238-259.

Kotler, P. & Armestrong, G. (2004), *Principles of Marketing*, 10th edition, Upper Saddle River, Pearson/Prentice Hall.

Kotler, P. & Keller, K. (2006), *Marketing Management*, 12th edition, New Jersey, Pearson Education, Inc.

Koufaris, M. (2002), 'Applying the TAM and Flow Theory to Online Consumer behavior', *Information Systems Research*, **13**(2): 205-223.

Kramer, R. & Tyler, T. (1996), *Trust in Organizations: Frontiers of Theory and Research*, London: Sage

Krishnan, M. Ramaswamy, V. Meyer, M. & Damien, P. (1999), 'Customer Satisfaction for Financial Services: The Role of Products, Services and Information Technology', *Management Science*, **45**(9): 1194-1209.

Kuisma, T. Laukkanen, T. and Hiltunen, M. (2007), 'Mapping the reasons for Resistance to Internet Banking: A Means-End Approach', *International journal of Information Management*, **27**: 75-85.

Kuo, F. Tseng, F. & Liou, D. (2007), 'Understanding the Effects of Relationships on the Intention of A Firm to Adopt E-Banking', *International journal of electronic finance*, **1**(4): 484-501.

Laforet, S.& Li, X. (2005), 'Consumers' Attitudes Towards Online and Mobile Banking in China', *International Journal of Bank Marketing*, **23**(5):362-380.

Lai, V. & Li, H. (2005), 'Technology Acceptance Model for Internet Banking: An Invariance analysis', *Information & Management*, **42**: 373-386.

Lam, Shun Shankar, Venkatesh Erramilli, A. & Murthy, B. (2004), 'Customer Value, Satisfaction, Loyalty, and Switching costs: An Illustration from a business-to-business Service Context', *Journal of the Academy of Marketing Science*, **32**(3): 293-311.

Lang, B. & Colgate M. (2003), 'Relationship quality, Online Banking and Information Technology Gap', *International Journal of Bank Marketing*, **21**(1): 29-37.

Lanjananda, P. & Patterson, P. (2009), 'Determinants of Customer-Oriented Behavior in A Health Care Context', *Journal of Service Management*, **20**(1): 5-32.

Lappierre, J. (1997),'What Does Value Mean in Business-to-Business Professional Services?', *International Journal of Service Industry Management*, **8**(5): 377-397.

Laroche, M. Mc Dougall, G. Bergeron, J. & Yang, Z. (2004), 'Exploring How Intangibility Affects Perceived Risk', *Journal of Service Research*, **6**(4): 373-389.

Lassar, W. Manolis, C. & Lasser, S. (2005), 'The Relationship between Consumer Innovativeness, Personal Characteristics, and Online Banking Adoption', *International Journal of Bank Marketing*, **23**(2): 176-199.

Leal, R. & Pereira, Z. (2003), 'New Search: Service Recovery at A Financial Institution', *International Journal of Quality & Reliability Management*, **20**(6): 646-663.

Leana, C. and Buren, H. (1999), 'Organizational Social Capital and Employment practices', *Academy of Management Review*, **24** (3): 538-555.

Lee, J. (2002), 'A Key to Marketing Financial Services: The Right Mix of Products, Services, Channels and Customers', *The Journal of Services Marketing*, **16**(2/3): 238-258.

Lee, M. & Turban, E. (2001), 'A Trust Model for Consumer Internet shopping', *International Journal of Electronic Commerce*, **6**(Fall/1): 75-91.

Lee, T. & Jun, J. (2007), 'Contextual Perceived Value?', *Business Process Management Journal*, **13**(6): 798-814.

Lehtinen, U. & Lehtinen, J. (1991), 'Two Approaches to Service Quality Dimensions', *The Service industries Journal*, **11** (3/July): 287-303

Lensink, R. & Hermes, N. (2004), 'The Short Term Effects of Foreign Bank Entry on Domestic Bank Behaviour: Does economic development matter?', *Journal of banking and finance*, **28**: 553-568.

Lertsatwatana, B. (2003), *The Adoption of Technology Based Service Delivery in Financial Service; Electronic banking in Thailand*, PhD, U.K.: University of Nottingham.

Leverin, A. & Liljander, V. (2006), 'Does Relationship Marketing Improve Customer Satisfaction and Loyalty', *International Journal of Bank Marketing*, **24**(4); 232-251.

Levesque, T. & Mc Dougall, G. (1996), 'Determinants of Customer Satisfaction in Retail Banking', *International Journal of Bank Marketing*, **14**(7): 12-20.

Lewicki, R. Mcallister, D. & Bies, R. (1998), 'Trust and Distrust: New Relationships and Realities', *Academy of Management Review*, **23**(3): 438-458.

Liao, Z.& Cheung, T. (2002), 'Internet Based E-Banking and Consumer Attitudes: An Empirical Study', *Information and Management*, **39**: 283-295.

Lichtenstein & Williamson (20060, 'Understanding Consumer adoption of Internet Banking: An interpretive study in the Australian banking context', *Journal of Electronic Commerce Research*, **7**(2): 50-66.

Light, B. (2003), 'CRM packaged software: A study of Organizational Experiences', *Business Process Management Journal*, **9**(5): 603-616.

Lim. N. (2003), 'Consumers' Perceived Risk: Sources versus Consequences', *Electronic Commerce Research and Applications*, **2**: 216-228.

Lin, C. Sher, P. & Shih, H. (2005), 'Past Progress and Future Directions in Conceptualizing Customer Perceived Value', *International Journal of Service Industry Management*, **16**(3/4): 318-336.

Lindgreen, A. (2001), 'A Framework for Studying Relationship Marketing Dyads', *Qualitative Market Research: An International Journal*, **42**(2):75-87.

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

Lippert, S. & Volkmar, J. (2007), 'Cultural Effects on Technology Performance and Utilization', *Journal of Global Information Management*, **15**(2):56-90.

Liu, S. Luo, X. & Shi, Yi-Zheng (2002), 'Integrating Customer Orientation, Corporate Entrepreneurship and Learning Orientation in Organizations-in Transition: An Empirical Study', *International Journal of Research in Marketing*, **19**(4): 367-382.

Liu, X. & Wei, K. (2003), 'An Empirical Study of Product Differences in Consumers' E-Commerce Adoption Behavior', *Electronic Commerce Research and Applications*, **2**(3): 229-239.

Lotayif, M. (2004), 'Factors that Affect the Selection of Defensive Marketing Strategies: Evidence from the Egyptian Banking Sector', *The Journal of Academy of Business Cambridge*, **March**: 152-158.

Lovelock, C. & Gummesson, E. (2004), 'Whither services Marketing: In Search a New Paradigm & Fresh Perspectives', *Journal of Service Research*, 7(1): 20-41.

Lovelock, C. (1983), 'Classifying Services to Gain Strategic Marketing Insights', *Journal of Marketing*, **47**(Summer): 9-20.

Lovelock, C. Wirtz, J. (2007), 'Services Marketing: People, Technology, Strategy', 6th edition, Upper Saddle River, NewJersy: Pearson Prentice Hall

Lowe, A. & Corkindale,D. (1998), 'Differences in Cultural Values and Their Effects on Responses to Marketing Stimuli', *European Journal of Marketing*, **32**(9/10): 843-867.

Luo, Y. (2004), 'An Organizational Perspective of Corruption', *Management and Organization Review*, **1**(1): 119-154.

Lusch. R. F. Vargo, S.L. & Wessels, G. (2008), 'Towards a Conceptual Foundation for Service Science', IBM Systems Journal, **47**(1): 5-14.

Luran, P. & Lin, Husin-Hui (2003), 'A Customer Loyalty Model for E-Service Context', *Journal of Electronic Commerce Research*, **4**(4): 156-167

Maas, A. & Graf, A. (2008), 'Customer Value Analysis in Financial Services', *Journal of financial Services Marketing*, **13**(2): 107-120.

MacCallum, R. Widaman, K. Preacher, K. & Hong, S. (2001), 'Sample Size in Factor Analysis: The Role of Model Error', *Multivariate Behavioral Research*, **36**(4): 611-637.

Mackenzie, B. Podsakoff, P. & Jarvis, C. (2005), 'The Problem of Measurement Model Misspecification in Behavioural and Organizational Research and Some Recommend Solutions', *Journal of Applied Psychology*, **90**(4): 710-730.

Malhotra, N. & Birks, D. (2003), *Marketing Research: An Applied Approach*, Essex: Pearson Education limited.

Malhotra, N. (2006), 'Questionnaire Design & Scale Development', in Grover, R. & Vriens, M. (editors), *The Handbook of Marketing Research: Uses, Misuses and Future Advances*, Thousand Oaks, California: Sage, pp. 83-94.

Malhotra, N. Agarwal, J. & Peterson, M., (1996) Methodological Issues in Cross-Cultural Marketing Research: A state-of-the-art review', *International Marketing Review*, **13**(5): 7-43.

Malhotra, P. & Singh, B. (2009), 'The Impact of Internet Banking on Bank Performance and Risk: The Indian experience', *Eurasian Journal of Business and Economics*, **2**(4): 43-63.

Manandhar, R. & Tang, J. (2002), 'The Evaluation of Bank Branch Performance using Data Envelopment Analysis: A framework', *The Journal of High Technology Management Research*, **13**(1): 1-17.

Markus, Lynne M. & Soh, C. (2002), 'Structural Influences on Global E-Commerce Activity', *Journal of Global Information Management*, **10**(1/Jan-March): 5-12.

Marsh, H. Hau, K. Balla, J. & Grayson, D. (1998), 'In More Ever Too Much? The Number of Indicators per Factor in Confirmatory Factor Analysis', *Multivariate Behavioral Research*, **33**(2): 181-220.

Marshall, C. & Rossman, G. (1989), *Designing Qualitative Research*, London: Sage Publications.

Marshall, C. & Rossman, G. (1999), *Designing Qualitative Research*, 3rd edition, London: Sage.

Mason, C. & Perreault, W. (1991), 'Collinearity, Power, and Interpretation of Multiple Regression Analysis', *Journal of Marketing Research*, **28**(August/3): 268-280.

Mason, J. (1996), *Qualitative Researching*, London: Sage Publications.

Massad, N. Heckman, R. & Kevin Crowston,K. (2006), 'Customer Satisfaction with Electronic Service Encounters', *International Journal of Electronic Commerce*, **10** (4/Summer): 73–104.

Masterson, S. (2001), 'A Trickle-Down Model of Organizational Justice: Relating Employees' and Customers' Perceptions of and Reactions to Fairness', *Journal of Applied Psychology*, **86**(4): 594-604

Mathieson, K. (1991), 'Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior', *Information Systems Research*, **2**(3): 173-191.

Mattila, A. (1999), 'The Role of Culture in the Service Evaluation Process', *Journal of Service Research*, **1**(3): 250-261

Mattila, A. & Witrz, J. (2004), 'Consumer Complaining to Firms: The Determinants of Channel Choice', *The Journal of Service Marketing*, **18**(2/3): 147-155.

Mattila, M. Karjaluoto, H. & Pento,T. (2003), 'Internet Banking Adoption Among Mature Customers: Early Majority or Laggards', *Journal of Services Marketing*, **17**(5): 514-528.

Maxwell, J. (2005), *Qualitative Research Design*, London: Sage.

Mayer, M. & Smith A. (2007), 'The Practice of Change: Understanding the Role of Middle Managers, Emotions and Tools', *European Management Journal*, **25**(2): 79-80.

McDougall, G. & Levesque, T. (1994) 'Benefit Segmentation Using Service Quality Dimensions: An Investigation in Retail Banking', *International Journal of Bank Marketing*, **12** (2): 15-23

McDougall. G. & Levesque, T. (2000), 'Customer Satisfaction with Services: Putting Perceived Value into the Equation', *The Journal of Services Marketing*, **14**(5): 392-410

McGorry, S. (2000), 'Measurement in a Cross-Cultural Environment: Survey Translation Issues', *Qualitative Market Research*, **3**(2); 74- 81

McKechnie, S. (1992), 'Consumer Buying Behaviour in Financial Services: An Overview', *International Journal of Bank Marketing*, **10** (5): 4-13.

Meuter, M. Ostrom, A.Roundtree, R. & Bitner, M. (2000), 'Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters', *Journal of Marketing*, **64**(July): 50-64.

Mingers, J. (2000), 'The Contribution of Critical Realism as an Underpinning Philosophy for OR/MS and Systems', *Journal of the Operational Research Society*, **51**: 1256-1270.

Miles, M. & Huberman, A. (1994), *Qualitative Data Analysis: An Expanded sourcebook*, 2nd edition, London: Sage.

Mitchell, V. (1999), 'Consumer Perceived Risk: Conceptualizations and models', *European Journal of marketing*, **33**(1/2): 163-195.

Mittal, B. & Lasser, W. (1998), 'Why do Customers Switch? The Dynamics of Satisfaction versus Loyalty', *The Journal of Service Marketing*, **12**(3):177-194.

Mittal, V. & Komakura, W. (2001), 'Satisfaction, Repurchase Intent and Repurchase behaviour: Investigating the moderating effect of customer characteristics', *Journal of Marketing Research,* **February**: 131-142.

Mitussis, D. O'Mally, L. & Patterson, M. (2006), 'Mapping the Re-engagement of CRM with Relationship Marketing', *European Journal of Marketing,* **40**(5/6): 572-589.

Modell, S. (2009), 'In Defense of Triangulation: A Critical Realist Approach to Mixed Methods Research in Management Accounting', *Management Accounting Research,* **20**: 208-221.

Mohieldin, M. (2006), '*On Bank Market Structure and Competition in Egypt*', http://www.iceg.org/NE/projects/financial/structure.pdf. Accessed on 14/06/2006.

Molla, A. & Licker, P. (2001), 'E-Commerce Systems Success: An Attempt to Extend and Respesify the Delone and Maclean Model of Its Success', *Journal of Electronic Commerce Research,* **2**(4): 131-141.

Moller, K. & Halinen, A. (2000), 'Relationship Marketing Theory: Roots & Direction', *Journal of Marketing Management*, **16:** 29-54.

Moller, K. & Torronen, P. (2003), 'Business Suppliers' Value Creation Potential: A Capability Based Analysis', *Industrial Marketing Management,* **32**: 109-118.

Mols, N. (1999), 'The Internet and the Bank: Strategic Distribution Channel Decisions', *International Journal of Bank Marketing,* **17**(6): 295-300.

Montoya-Weiss, M. Voss, G. and Grewal, D. (2003), 'Determinants of Online Channel Use and Overall satisfaction with a Relational Multichannel Service Provider', *Academy of Marketing Science Journal*, **31**(4): 448-458.

Moorman, C. Zaltman, G. & Rohit, D. (1992), 'Relationships between Providers and Users of Market Research: The Dynamics of Trust within and between Organizations', *Journal of Marketing Research,* **29**(August/3): 314-328.

Mooy, S. & Robben, H. (2002), 'Managing consumers' product evaluations through direct product experience', *Journal of Product & Brand Management*, **11**(7): 432-446.

Moran-Ells, J. Alexanser,V. Cronin, A. Dickinson, M. Fielding, J. Sleney, J. & Thomas, H. (2006), 'Triangulation and Integration: Processes, Claim and Implications', *Qualitative Researc*h, **6**(1): 45-59.

Morgan, G. and Smircich, L. (1980), 'The Case of Qualitative Research', *Academy of Management Review*, **5**(4): 491-500.

Morgan, R.& Hunt, S. (1994), 'The Commitment–Trust Theory of Relationship Marketing', *Journal of Marketing*, **58**(July): 20-38.

Morse, J. (2003), Principles of Mixed Methods & Multi-method Research, in Tashakkori, A. & Teddlie, C. (editors), *Handbook of Mixed Methods in Social & Behavioural Research*, London: Sage, pp.189-208.

Mukherjee, A. & Nath, P. (2003), 'A Model of Trust in Online Relationship Banking', *International Journal of Bank Marketing,* **21**(1): 5-15.

Mulligan, P. & Gordon, S. (2002), 'The Impact of Information Technology on Customer and Supplier Relationships in the Financial Services', *International Journal of Service Industry Management,* **13**(1): 29-46.

Naude, Pete Desai, Jannie & Murphy, John (2003), 'Identifying the Determinants of Internal Marketing Orientation', *European Journal of Marketing*, **37**(9): 1205- 1220.

Neal, C. Quester, P. & Hawkins, D. (2004), *Consumer Behaviour: Implications for Marketing Strategy*, 4th edition, Australia; McGraw Hill.

Negash, S. Ryan, T. and Igbaria, M. (2003), 'Quality and Effectiveness in Web-based Customer Support Systems, *Information and Management*, **40**: 757-768.

Nendapudi, N. & Berry, L. (1997), 'Customers' Motivation for Maintaining Relationships with Service Pprovider', *Journal of Retailing*, **37**(1): 15-37.

Neuman, W. (2003). *Social Research Methods: Qualitative and Quantitative Approaches*. Boston: Allyn & Bacon.

Neuman, W. (2006). *Social Research Methods: Qualitative and Quantitative Approaches*. U.S.A.: Pearson Education, Inc..

Newman, K. & Nollen, S. (1996), 'Culture and Congruence: The Fit between Management Practices and National Culture', *Journal of International Business Studies*, **27**(4):753-779.

Newman, K. (2001), 'Interrogating SERVQUAL: A Critical Assessment of Service Quality Measurement in a High Street Retail Bank', *International Journal of Bank Marketing*, **19**(3): 126-139.

Ngai, E.W.T. (2005), 'Customer Relationship Management Research (1992-2002)', *Marketing Intelligence and planning*, **23**(6/7): 582-605.

Nilsson-Witell, L. & Fundin, A. (2005), 'Dynamics of Service Attributes: A Test of Kano's Theory of Attractive Quality', *International Journal of Service Industry Management*, **16**(2): 152-168.

Oldham, M. And Young, M. (11 August, 2004), 'Egypt: Difficult Times Remain for the Banking Sector', Special Report, *Fitch Ratings.*
http://www.progettonetwork.com/eventi20042005/medilibia/archive/EgyptianBanks.pdf Accessed on 18/10/2007.

Oliver, R. (1999), 'Whence Consumer Loyalty?', *Journal of Marketing*, **63**(Special issue): 33-44.

Oliver, Y. McFetridge, P. Raymond, C. Lee, J. Sin, L. & Tse, A. (2000), 'Is Relationship Marketing for Everyone?', *European Journal of Marketing*, **34**(9/10): 1111-1127.

Oliver, D. Serovich, J.& Mason, T. (2005), 'Constraints and Opportunities with Interview Transcription: Towards Reflection in Qualitative Research', *Social Forces*, **84**(2): 1273-1289.

O'Mally, L. & Mitussis, D. (2002), 'Relationships and Technology: Strategic Implications', *Journal of Strategic Marketing*, **10**(3): 225-238.

Omran, M. (2003), 'Privatization, State Ownership and Bank Performance in Egypt' http://www.irti.org/alex Conf/papers/S5P1.pdf. Accessed on 12/06/2006.

O'Neill, M. & Palmer, A. (2003), 'An Exploratory Study on the Effects of the Experience on Consumer Perceptions of the Service Quality Construct', *Managing Service Quality*, **13**(3): 187-196.

Onwuegbuzie, A. & Leech, L. (2007), 'A Call for Qualitative Power Analyses', *Quality & Quantity*, **41**: 105-121.

Opoku, R. Atuobi-Yiadom, N. Chong, C. & Abratt, R. (2009), 'The Impact of Internal Marketing on the Perception of Service Quality in Retail Banking: A Ghanaian Case', *Journal of Financial services marketing*, **13**(4): 317-329.

Oppenheim, A.N. (1992), *Questionnaire Design, Interviewing and Attitude Measurement*, London: Printer Publishers Ltd.

Osarenkhoe, A. and Bennani, A. (2007), 'An Exploratory Study of Implementation of Customer Relationship Management Strategy', *Business Process Management Journal*, **13**(1):139-164.

Paine, J. & Organ, D. (2000), 'The Cultural Matrix of Organizational Citizenship Behavior: Some Preliminary Conceptual and Empirical Observations', *Human Resource Management Review*, **10**(1); 45-59.

Pallant, J. (2005), *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows*, 3rd edition, Maidenhead: Open University Press.

Pallant, J. (2007), *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 12*, Maidenhead: Open University Press.

Palmer, A. (1995), 'Relationship Marketing: Local Implementation of a Universal Concept', *International Business Review*, **4**(4): 471-481.

Palmer, A. (1997), 'Defining Relationship Marketing: An International Perspective', *Management Decision*, **35**(4): 319-321

Parasuraman, A. & Grewal, D. (2000), 'The Impact of Technology on the Quality-Value-Loyalty Chain: A Research Aagenda', *Journal of the Academy of Marketing Science*, **28**(1): 168-174.

Parasuraman, A. Berry, L. & Zeithaml, V. (1991), 'Refinement and Reassessment of the SERVQUAL Scale', *Journal of Retailing*, **67**(Winter/4): 420-450.

Parasuraman, A. Grewel, D. & Krishnan, R. (2004), *Marketing Research*, U.S.A.: Houghton Mifflin Company.

Parasuraman, A. Zeithaml, V. & Berry, L. (1985), 'A Conceptual Model of Service Quality and Implications for Future Research', *Journal of Marketing*, **49**(4/Autumn): 41-50.

Parasuraman, A. Zeithaml, V. & Berry, L. (1988), 'SERVQUAL: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality', *Journal of Retailing*, **64**(1/Spring): 12-40.

Parasuraman, A. Zeithaml, V. & Malhotra, A. (2005), 'E-S-QUAL: A Multiple Item Scale for Assessing Electronic Service Quality', *Journal of Service Research*, **7**(3): 213-233.

Park, C. & Kim, Y. (2003), 'A Framework of Dynamic CRM: Linking Marketing with Information Strategy', *Business Process Management Journal*, **9**(5): 652-671.

Parnell, J. & Hatem, T. (1999), 'Cultural Antecedentss of Behavioural Differences Between American and Egyptian Managers', *Journal of Management Studies*, **36**(3): 339-418.

Parvatiyar, A. & Sheth, J. (2001), 'Customer Relationship Management: Emerging Practice, Process and Discipline', *Journal of Economic and Social Research*, **3**(2): 1-34.

Patricio,L. Fisk, R. & E- Cunha, J. (2003), 'Improving Satisfaction with Bank Service Offerings: Measuring the Contribution of Each Delivery Channel', *Managing Service Quality*, **13**(6): 471-482.

Patten, M. (2005), *Understanding Research Methods*: *An Overview of the Essentials*, U.S.A: Pyrzak Publishing.

Patterson, P. & Spreng, R. (1997), 'Modelling the Relationship between Perceived Value, Satisfaction and Repurchase Intentions in a Business-to- Business Services Context: An Empirical Examination', *International Journal of Service Industry Management*, **8**(5): 414-434.

Patterson, P. (2004), 'A Contingency Model of Behavioural Intentions in a Services Context', *European Journal of Marketing*, **38** (9/10): 1304-1315.

Patterson, P. Cowley, E. & Prasongsukarn, K. (2006), 'Service Failure Recovery, the Moderating Effect of Individual-Level, Cultural Value Orientation on Perception of Justice', *International Journal of Research in Marketing*, **23**: 263-277.

Patton, M. (1990), *Qualitative Evaluation and Research Methods*, London: Sage Publication.

Pavlou, P. & Gefen, D. (2004), 'Building Effective online Marketplaces with institutional-based trust', *Information systems Research,* Institute for operations Research & the Management Science (INFORMS), Linthicum, Maryland, USA. Available at http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1155&context=icis2002 Accessed on 20/04/2010.

Pavlou, P. (2003), 'Consumer Acceptance of Electronic Commerce: Integrating Trust and Risk with the Technology Acceptance Model', *International Journal of electronic commerce*, **7**(3): 101-134.

Payne, A. & Frow, P. (2005), 'A Strategic Framework for Customer Relationship Management', *Journal of Marketing*, **69** (October/4): 167-176

Payne, A. & Holt, S. (2001), 'Diagnosing Customer Value: Integrating the Value Process and Relationship Marketing', *British Journal of Management*, **12**: 159-182.

Payne, G. & Payne, J. (2004), *Key Concepts in Social Research*, London: Sage Publications.

Peppard, J. (2000), 'Customer Relationship Management in Financial Services', *European Management Journal*, **8**(3): 312-327.

Perry, C. (1998), 'Processes of Case Study Methodology for Postgraduate Research in Marketing', *European Journal of Marketing*, **32**(9/10):785-802.

Peter, P. & Tarpey, L. (1975), 'A Comparative Analysis of Three Consumer Decision Strategies', *Journal of Consumer Research*, **2** (June): 29-39.

Pikkarainen, T. Pikkarainen, K. Karjaluoto, H. & Pahnila, S. (2004), 'Consumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model', *Internet Research*, **14**(3): 224-235.

Plakoyiannaki, E. & Tzokas, N. (2002), 'Customer Relationship Management: A Capabilities portfolio Perspective', *Journal of Database Marketing*, **9**(3): 228-237.

Plakoyiannaki, E. (2002), *Customer Relationship Management (CRM) The Effect of Organizational Culture: A Longitudinal Case Study*, PhD, U.K.: University of StrathClyde.

Polatoglu, V.& Ekin, S. (2001), 'An empirical investigation of the Turkish Consumers' acceptance of Internet Banking Services', *International Journal of Bank Marketing*, **19**(4/5); 156-165.

Pope, C. Ziebland, S. & Mays, N. (2006), 'Analysing Qualitative Data', in Pope, C. Mays, N.,(editors), *Qualitative Research in Health Care*, 3rd edition, London: Blackwell Publishing.

Porter, Michael, E. (1985), *Competitive Advantage: Creating and Sustaining Superior Performance*, New York: The Free Press.

Pries, C. & Stone, M. (2004), 'Managing CRM Implementation with Consultants-CRM or Change Management?', *Journal of Change Management*, **4**(December/4): 351-370.

Punch, K. (1998), *Introduction to Social Research*, London: Sage Publications.

Punch, K. (2005), *Introduction to Social Research: Quantitative and Qualitative Approaches*, London: Sage Publications.

Pura, M. (2005), 'Linking Perceived Value and Loyalty in Location-Based Mobile Services', *Managing Service Quality*, **15**(6): 509-538.

Qin, Su Zhao, Li & Yi, Xu (2009), 'Impacts of Customer Service on Relationship Quality: An Empirical Study in China', *Managing Service Quality*, **19**(4): 391-409.

Quester, P. & Smart, J. (1998), 'The Influence of Consumption Situation and Product Involvement over Consumers' Use of Product Attribute', *Journal of Consumer Marketing*, **15**(3): 220-238.

Rashid, M. Sambasivan, M. & Rahman, A. (2004), 'The Influence of Organizational Culture on Attitudes toward Organizational Change', *Leadership and Organization Development Journal*, **25**(2): 161-179.

Ratchford, B. (1982), 'Cost-Benefit Models for Explaining Consumer Choice and Information Seeking Behavior', *Management Science*, **28**(2): 197- 212.

Ratten, V. & Ratten, H. (2007), 'Social Cognitive Theory in Technological Innovations', *European Journal of Innovation Management*, **10**(1): 90-108.

Ravald, A& Gronroos, C. (1996), 'The Value Concept and Relationship Marketing', *European Journal of Marketing*, **30**(2):19-30.

Reinartz, W. Kraft, M. & Hoyer, W. (2004), 'The Customer Relationship Management: Its Measurement and Impact on Performance', *Journal of Marketing Research*, **41**(3/August): 293-305.

Remenyi, D. Williams, B. Money, A. & Swartz, E. (1998), *Doing Research in Business and Management: An Introduction to Process and Method*, London: Sage Publications.

Rexha, N. Kingshott, R.& Aw, A. (2003), 'The Impact of Relational Plan on Adoption of Electronic Banking', *The Journal of Services Marketing*, **17**(1); 53-67.

Richards,K. & Jones, E. (2008), 'Customer Relationship Management: Finding Value Drivers', *Industrial marketing Management,* **37**: 120-130.

Rivard, S. Raymond, L. and Verreault, D. (2006), 'Resource-Based View and Competitive Strategy: An Integrated Model of the Contribution of Information Technology to Firm Performance', *Journal of strategic Information Systems,* **15**: 29-50.

Rod, M. Ashill, N. Shao, J. & Carruthers, J. (2009), 'An Examination of the Relationship Between Service Quality Dimensions, Overall Internet Banking Service Quality and Customer Satisfaction: A New Zealand Study', *Marketing Intelligence & Planning,* **27**(1): 103-126.

Ronen, S. & Shenkar, O. (1985), 'Clustering Countries on Attitudinal Dimensions', *Academy of Management Review,* **10**(3):435-454.

Rosen, D. & Surpenant, C. (1998), 'Evaluating Relationships: Are Satisfaction and Quality Enough', *International Journal of Service Industry Management,* **9**(2): 103-125.

Rotchanakitumnual, S. & Speece, M. (2003), 'Barriers to Internet Adoption: A Qualitative Study among Corporate Customers in Thailand', *International Journal of Bank Marketing,* **21**(6/7): 312-323.

Rowley, J. (2005), 'The Four Cs of Customer Loyalty', *Marketing Intelligence & Planning,* **23**(6/7): 574-581.

Roy, R.& Dutta, A. (2003) 'Anticipating Internet Diffusion', *Communications of the CAM,* **46**(2/February): 66-71.

Roy, S. & Shekhar, V. (2010), 'Dimensional Hierarchy of Trustworthiness of Financial Services Providers', *International Journal of Bank Marketing,* **28**(1): 47-64.

Rugimbana, R. & Iversen, P. (1994), 'Perceived Attributes of ATMs and their Marketing Implications', *International Journal of Bank Marketing,* **12** (2): 30-35.

Ryals, L. & Payne, A. (2001), 'Customer Relationship Management in Financial Services: Towards Information-Enabled Relationship Marketing', *Journal of strategic Marketing,* **9**(1): 3-27.

Rynes, S. Gerhart, B. & Parks, L. (2005), 'Personnel Psychology: Performance Evaluation and Pay for Performance, *Annual Review of Psychology*, **56**(February): 571-600.

Ryssel, R. Ritter, T. & Gemunden, H. (2004), 'The Impact of Information Technology Deployment on Trust, Commitment, and Value Creation in Business Relationships', *The Journal of Business & Industrial Marketing,* **19**(3): 197-207.

Salaun, Y. & Flores, K. (2001) 'Information Quality: Meeting the Needs of the Consumer', *International Journal of Information Management,* **21**: 21-37.

Sale, J. & Brazil, K. (2004), 'A Strategy to Identify Critical Appraisal Criteria for Primary Mixed –Method Studies', *Quality and Quantity,* **38**: 351-365.

Sanchez-Fernandez, R. & Iniesta-Bonillo, M. (2007), 'The Concept of Perceived Value: A Systematic Review of Literature', *Marketing Theory,* **7** (4): 427-451.

Sandelowski, M. (2000), 'Focus on Research Methods. Whatever Happened to Qualitative Description?', *Research in Nursing and Health,* **23**: 334-340.

Santos, J. (2003), 'E-Service Quality: A Model of Virtual Service Quality Dimensions', *Managing Service Quality,* **13**(3): 233-246.

Sathye, M. (1999), 'Adoption of Internet Banking by Australian Consumers: An Empirical Investigation', *International Journal of Bank Marketing*', **17**(7):324-334.

Saunders, M. Lewis, P. and Thornhill, A. (2003), *Research Methods for business students*, 3rd edition, Harlow: Financial times/Prentice Hall.

Saunders, M. Lewis, P. and Thornhill, A. (2009), *Research Methods for Business Students*, 5th edition, Harlow: Financial times/Prentice Hall.

Schmidt, J. & Spreng, R. (1996), 'A Proposed Model of External Consumer Information Search', *Academy of Marketing Science*, **24**(3/Summer): 246-257.

Schutt, R. (1996), *Investigating the Social World: The process of and Practice of Research*, Thousand Oaks, California: Pine Forge Press.

Scott,J. & Vessey, I. (2002), 'Managing Risks in Enterprise Systems Implementation', *Communications of the ACM*, **45**(4):74-81.

Sekaran, U. (2000), *Research Methods for Business: A skill- Building Approach*, 3rd edition, U.S.A: John Wiley & Sons Inc.

Sekaran, U. (2003), *Research methods for business students: A skill based approach*, U.S.A: John Wiley & Sons Inc

Seleim, A. & Bontis, N. (2009), 'The Relationship Between Culture and Corruption: A Cross-Nation Study, *Journal of Intellectual Capital*, **1**(10): 165-184.

Selnes, F. (1988), 'Antecedentss and Consequences of Trust and Satisfaction in Buyer-Seller Relationships', *European Journal of Marketing*, **32**(3/4); 305-322.

Shah, M. Braganza, A. and Morabito, V. (2007), 'A Survey of Critical Success Factors in E-Banking: An Organizational Perspective', *European Journal of Information Systems*, **16**: 511-524.

Shahin, A.& Wright, P. (2004), 'Leadership in the Context of Culture', *Leadership & Organization Development Journal*, **25**(6):499-511.

Shalhoub, Z. & AlQqasimi, S. (2006), *E-commerce in developing Economies: A Resource based approach*, Cheltenham: Edward Elgar Publishing Limited.

Sharma, N. & Patterson, P. (1999), 'The Impact of Communication and Service Quality on Relationship Commitment in Consumer, Professional Services', *The Journal of Services marketing*, **13**(2): 151-170.

Shemwell, D. Yavas, U. & Bilgin, Z. (1998), 'Customer-Service Provider Relationships: An Empirical Test of A Model of Service Quality, Satisfaction and Relationship-Oriented Outcomes', *International Journal of Service Industry Management*, **9**(2): 155-168.

Sheth, J. & Parvatiyar, A. (1995), 'The Evolution of Relationship Marketing', *International Business Review*, **4**(4): 397-418.

Shi, W. Shambare, N. & Wang, J. (2008), 'The Adoption of Internet Banking: An Institutional Theory Perspective', *Journal of Financial services Marketing*, **12**(4): 272-286.

Shih, Y. & Fang, K. (2004), 'The Use of A Decomposed Theory of Planned Behavior to Study Internet banking in Taiwan', *Internet Research*, **14**(3): 213-223.

Shih, Ya-Yueh & Fang, K. (2006), 'Effects of Network Quality Attributes on Customer Adoption Intentions of Internet Banking', *Total Quality Management*, **17**(1/January): 61–77.

Silverman, D. (1993), *Interpreting qualitative Data: Methods for Analysing talk, text and Interaction*, London: Sage Publications.

Silverman, D. (1998), 'Qualitative Research: Meanings or Practices?' *Information Systems Journal*, **8**(1): 3-20.

Silverman, D. (2005), *Doing Qualitative Research*, London: Sage Publication.

Simon, S. M. Ho & Victor, T.F. (1994), 'Customer's Risk Perceptions of Electronic Payment Systems', *International Journal of Bank Marketing*, **12**(8): 26-38.

Simpson, J. (2002), 'The Impact of the Internet in Banking: Observations and Evidence from Developed and Emerging Markets', *Telematics and Informatics*, **19**: 315-330.

Simpson, P. Siguaw, J. and Baker, T. (2001), 'A Model of Value Creation: Supplier Behaviors and Their Impact on Reseller-Perceived Value', *Industrial Marketing Management*, **30**: 119-134.

Sin, L. Tse, A. & Yim, F. (2005), 'CRM: Conceptualization & Scale Development', *European Journal of Marketing*, **39**(11/12): 1264-1290.

Singh, M. (2002), 'E-services and Their Role in B2C E-Commerce', *Managing Service Quality*, **12**(6): 434-446.

Sirdeshmukh, D. Singh, J. & Sabol, B. (2002), 'Consumer Trust, Value and Loyalty in Relational Exchanges', *Journal of Marketing*, **66**(1/January): 15-37.

Slovic, P. (1993), 'Perceived Risk, Trust and Democracy', *Risk Analysis*, **13**(6): 675-682.

Smith, A. Bolton, R. & Wanger, J. (1999), 'A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery', *Journal of Marketing Research*, **36**(3/August): 356-372.

Snellman,K.& Vihtkari,T. (2003), 'Customer Complaining Behaviour in Technology Based Service Encounter', *International Journal of Service Industry Management*, **14**(2): 217-231.

Snoj, B. Korda, A. & Mumel, D. (2004), 'The Relationships Among Perceived Quality, Perceived Risk and Perceived Product value', *Journal of Product & Brand Management*, **13**(3): 156-167.

Sobh, R. and Perry, C. (2006), 'Research Design and Data Analysis in Realism Research', *European Journal of Marketing*, **40**(11/12):1194- 1209.

Soderlund, M. (2006), 'Measuring Customer Loyalty with Multi-Item Scales', *International journal of service industry management*, **17**(1): 76-98.

Sohail, M. & Shanmugham, B. (2003), 'E-Banking and Customer Preferences in Malaysia: An Empirical Investigation', *Information Sciences*, **150**: 207-217.

Spector, Paul (1992), *Summated Rating Scale Construction: An Introduction*, California: Sage Publications.

Speed, R. & Smith, G. (1992), 'Retail Financial Services Segmentation', *The services Industries journal*, **12**(3): 368-383.

Squires, A. (2008), 'Language Barriers and Qualitative Nursing Research: A Methodological Considerations', *International Nursing Review,* **55**: 265-273.

Stamoulis, D. Kanellis, P. & Martakos, D. (2002), 'An Approach and Model for Assessing the Business Value of E-Banking Distribution Channels: Evaluation As Communication', *International Journal of Information Management,* **22**: 247-261.

Stanley,D. (2006), 'Introduction; The Social Effects of Culture', *Canadian Journal of Communication,* **31**(1):7-15.

Stefanou, C. Sarmaniotis, C. and Stafyla, A. (2003), 'CRM and Customer-Centric Knowledge Management: An Empirical Research', *Business Process Management Journal*, **9**(5): 617-634.

Stewart, D. (1981), 'The Application and Misapplication of Factor Analysis in Marketing Research', *Journal of Marketing Research,* **18** (1/February):51-62

Stikin, S. & Bablo, A. (1992), 'Re-conceptualizing the Determinants of Risk Behavior', *The Academy of Management Review*, **17** (1): 9-38.

Storbacka, K. Strandvick,T. & Gronroos, C. (1994), 'Managing Customer Relationships for Profit: The Dynamics of Relationship Quality', *International Journal of Service Industry Management*, **5**(5):21-38.

Strauss, A. and Corbin, J. (1990), *Basics of Qualitative Research: Grounded Theory Procedures and Techniques,* Newbury Park: Sage.

Suh, B. & Han, I. (2002), 'Effect of Trust on Customer Acceptance of Internet Banking', *Electronic Commerce Research and Applications,***1**: 247-263.

Sullivan, R. (2000), 'How Has the Adoption of Internet Banking Affected Performance and Risk in Banks?', *Financial Industry Perspectives,* **December**: 1-16.

Sureshchandar, G.S. Rajendran, C. & Anantharaman, R.N. (2003), 'Customer Perceptions of Service Quality in the Banking Sector of A Developing Economy: A Critical Analysis', *International Journal of Bank Marketing,* **21**(5): 233-242.

Sutton, C. & David, M. (2004), *Social Research: The Basics,* London: Sage Publications.

Swait, J. & Sweeney, J. (2000), 'Perceived Value and Its Impact on Choice Behavior in a Retail Setting', *Journal of Retailing and Consumer Services,* **7**: 77-88.

Sweeney, J. & Soutar, G. (2001), 'Consumer Perceived Value: The Development of a Multiple Item Scale', *Journal of Retailing,* **77**: 203-220.

Sweeney, J. Soutar, G. & Johnson, L. (1999), 'The Role of Perceived Risk in the Quality-Value Relationship: A Study in A Retail Environment', *Journal of Retailing,* **75**(1): 77-105.

Swidler, A. (1986), 'Culture in Action: Symbols and Strategies', *American Sociological Review,* **51**(2): 273-286.

Syed, J. Mingers, J. & Murray, P. (2009), 'Beyond Rigour and Relevance: A Critical Realists Approach to Business Education', *Management Learning,* **41**(1): 71-85.

Synodinos, N E. (2003), 'the Art of Questionnaire Construction: Some Important Considerations for Manufacturing Studies', *Integrated Manufacturing Systems,* **14**(3): 221-237.

Tabachnick, B.& Fidell, L. (2007), *Using Multivariate Statistics*, 5th edition, Boston, Mass; London: Pearson Education, Inc.

Taddesse, W. & Kidan,T. (2005), 'E-Payment: Challenges and Opportunities in Ethiopia'. http://www.uneca.org/itca/openafrica/resources/ePaymentStudyReportFinal2.pdf. Accessed on 06/07/2006.

Tam, J. (2000), *An Investigation of the Relationships between Service Quality, customer Satisfaction, Perceived Value and Behavioural intentions*. PhD, U.K.: Aston University.

Tan, J. Tyler, K. & Manica, A. (2007), 'Business-to- Business Adoption of E-Commerce in China', *Information & Management*, **44**: 332-351

Tan, M.& Teo, T. (2000), 'Factors Influencing the Adoption of Internet Banking', *Journal of the AIS* , **1**(5/July): 1-44.

Tansuhaj, P. Randall, D. and McCullough, J. (1988), 'A Services Marketing Management Model: Integrating Internal and External Marketing Functions', *The Journal of Services Marketing*, **2**(1): 31-33.

Tapp, A. & Hughes, T. (2004), 'New Technology and the Changing Role of Marketing', *Marketing Intelligence& Planning*, **22**(3): 284-296.

Tashakori, A. & Teddlie, C. (1998), *Handbook in mixed methods in social and behavioural research*, London: Sage.

Tax, S. Brown, S. & Chandrashekaran, M. (1998), 'Customer Evaluation of Service Complaint Experiences: Implications for Relationship Marketing', *Journal of Marketing*, **62**(2/ April): 60-76.

Taylor, S. & Todd, P. (1995), 'Understanding Information Technology Usage: A Test of Competing Models', *Information Systems Research*, **6**(2): 144-176.

Temple, B. & Young, A. (2004), 'Qualitative Research and Translation Dilemmas', *Qualitative Research* **4**(2): 161-178.

Thatcher, A. Shaik, F. & Zimmerman, C. (2005), 'Attitudes of Semi-Literate and Literate Bank Holders to the Use of Automatic Teller Machines (ATMs)', *International Journal of Industrial Ergonomics*, **35**: 115-130.

Thornton, J.& White, L. (2001), Customer Orientations and Usage of Financial Distribution Channels', *The Journal of Services Marketing*, **15**(3): 168-185.

Tourangeau,R. Rasinski, K. & Illinois, C. (1988), ' Cognitive Processes Underlying Context Effects in Attitude Measurement', *Psychological Bulletin*, **103**(3): 299-314.

Triandis, H. Bontempo, R. Villareal, M. Asai, M. & Lucca, M. (1988), 'Individualism and Collectivism Cross-cultural Perspectives on Self-In group Relationships', *Journal of Personality and Social Psychology*, **54**(2): 322-338.

Tull, D. & Hawkins, D. (1993), *Marketing Research: Measurement and Method*, New York: Macmillan Publishing Company.

Tuominene, M. Rajala, A. & Moller, K. (2004), 'Market-Driving versus Market-Driven: Divergent Roles of Market Orientation in Business Relationships', *Industrial Marketing Management*, **33**(3): 207– 217

Twinn, S. (1998), 'An Analysis of the Effectiveness of Focus Groups as A Method of Qualitative Data Collection with Chinese Populations in Nursing Research', *Journal of Advanced Nursing*, **28**(3): 654-661.

Ueno, Akiko (2010), 'What Are the Fundamental Features Supporting Service Quality?', *Journal of Services Marketing*, **24**(1): 74-86.

Ulaga, W. & Chacour, S. (2001), 'Measuring Customer-Perceived Value in Business markets', *Industrial Marketing Management*, **30**: 525-540.

UN Office for the Coordination of Humanitarian Affairs, '*EGYPT: Illiteracy still rife among rural women*', Tuesday 21 August 2007
http://www.irinnews.org/report.aspx?reportid=26179 Accessed on 21/08/ 2007

Vallacher, R. & Wegner, D. (1987), 'What Do People Think They're Doing? Action Identification and Human Behavior', *Psychological Review*, 94(1): 3-15.

Vargo,S. (2008), 'Customer integration and value creation', *Journal of Service Research*, 11(2): 211-215.

Vargo, S. & Lusch, R. (2008), 'Service Dominant Logic: Continuing the Evolution', Journal *of the Academy of Marketing Science*, **36**: 1-10.

Vargo, S. Maglio, P. & Akaka, M. (2008), 'On Value and Value Co-Creation: A Service Systems and Service Logic Perspective', *European Management Journal*, **26**: 145-152.

Varki, S. & Colgate, M. (2001), 'The Role of Price Perceptions in An Integrated Model of Behavioural Intentions', *Journal of service Research*, **3**(3): 232-240.

Varki, S. & Wong, S. (2003), 'Consumer Involvement in Relationship Marketing of Services', *Journal of Service Research*, **6**(1/August): 83-91.

Veiga, J. Floyd, S. & Dechant, K. (2001), 'Towards Modelling the Effects of National Culture on IT Implementation and Acceptance', *Journal of Information Technology*, **16**: 145-158.

Venetis, K. & Ghuri, P. (2004), 'Service Quality and Customer Retention: Building Long-term Relationships', *European Journal of Marketing*, **38**(11/12): 1577-1598.

Venkatesh, Wiswanath and Davis, Fred (2000), 'A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies', *Management Science*, **46**(February/2): 186-204.

Verhoef, P, (2003), 'Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development', *Journal of Marketing*, **67**(October/4): 30-45.

Verplanken, B. Hofestee, G. Janseen, H. (1998), 'Accessibility of Affective versus Cognitive Components of Attitudes', *European Journal of Social Psychology*, **28**: 23-35.

Waite, K. & Harrison, T. (2002), 'Consumer Expectations of Online Information Provided by Bank Website', *Journal of Financial Services Marketing*, **6**(4): 309-322.

Waite, K. & Harrison, T. (2004), 'Online Banking Information: What We Want and What We Got', *Qualitative Market Research*, **7**(1): 67-79.

Waldersee, R. & Griffiths, A. (2004), 'Implementing Change: Matching Implementation Methods and Change Type', *The Leadership & Organization Development Journal*, **25**(5): 424-434.

Walker, H. Craig-Lees, M.; Hecker, R. & Francis, H. (2002), 'Technology-Enabled Service Delivery: An Investigation of Reason Affecting Customer Adoption and Rejection', *International Journal of Service Industry Management*, **13** (1): 91-106.

Wan, W. Luk, C. Chow,C.(2005), 'Customers' Adoption of Banking Channels in Hong Kong', *International Journal of Bank Marketing*, **2**(3): 255-272.

Wang, Y. Po Lo, H. Chi, R. Yang, Y. (2004), 'An Integrated Framework for customer value and customer relationship management performance: A Customer Based Perspective from China', *Managing Service Quality*, **14**(2/3): 169-182.

Wang, Yi-Shun. Wang, Yu-Min. Lin, Hsin-Hui & Tang, Tzung-I. (2003) 'Determinants of User Acceptance of Internet banking: An Empirical Study', *International Journal of Service Industry Management*; **14**(5): 501-519.

Weathers, D. Sharma, S. & Neidrich, R. (2005), 'The Impact of Scale Points, Dispositional Factors and the Status Quo Decision Heuristic on Scale Reliability and Response Accuracy', *Journal of Business Research*, **58**: 1516-1524.

Wenninger, J. (2000), 'The Emerging Role of Banks in E-Commerce', *Current Issues in Economics and Finance*, **6**(3):1-6.

Wetherell, M., Taylor, S. and Yates, S. 2001. *Discourse as Data: A Guide for Analysis*. London: Sage Publications.

Wetzels, M. Ruyter, K. and Birgelen, M. (1998), 'Marketing Service Relationships: The Role of Commitment', *Journal of Business and Industrial Marketing*, **13**(4/5): 406-423.

Wiele, T. Boselie, P. & Hesselink, M. (2002), 'Empirical Evidence for the Relationship Between Customer Satisfaction and Business Performance', *Managing Service Quality*, **12**(3): 184-193.

Willis, G. Bruce. (2005), *Cognitive Interviewing: A tool for improving questionnaire design*, London: Sage publication.

Wilson, M. & Sapsford, R. (2006), Asking Questions, in Sapsford, R. & Jupp, V. (editors), *Data Collection and Analysis*, 2nd edition, London: Sage, pp. 63-122.

Wind, J. & Mahajan, V. (1997), 'Issues and Opportunities in New Product Development', *Journal of Marketing Research*, **34**(1/February):1-12.

Winer, R. (2001), 'A Framework for Customer Relationship Management', *California Management Review*, **43**(4): 89-103.

Winsted, K. (1997), 'The Service Experience in Two Cultures: A Behavioral Perspective', *Journal of Retailing*, **73**(3): 337-360.

Wolfinbarger,M. & Gilly, M. (2003), 'ETailQ; Dimensionalzing, Measuring and Predicting Etail Quality', *Journal of Retailing*; **79**: 183-198.

Wong, N. (2004), 'The Role of Culture in the Perception of Service Recovery', *Journal of Business Research*, **57**: 957-963.

Wong, A. & Sohal, A. (2002), 'An Examination of the Relationship Between Trust, Commitment and Relationship Quality', *International Journal of Retail & Distribution Management*, **30**(1): 34-50.

Woodruff, R. & Gardial, S. (1996), *Know Your Customer; New Approaches to Understanding Customer Value and Satisfaction*, Oxford: Wiley-Blackwell.

Woodruff, R. (1997), 'Customer value: The Next Source for Competitive advantage', *Academy of Marketing Science*, **25**(2): 139-153.

Xian, Huiping (2008), 'Lost in Translation? Language, Culture and the Roles of Translator in Cross Cultural Management Research', *Qualitative Research in Organizations and Management: An International Journal*, **3**(3): 231-245.

Xu, Y. Yen, D. Lin, B. & Chou, D. (2002), 'Adopting Customer Relationship Management Technology', *Industrial management & Data Systems*, **102**(8): 442-452.

Yang, Z. & Peterson, R. (2004), 'Customer Perceived Value, Satisfaction, and Loyalty: The Role of Switching Costs', *Psychology and Marketing*, **21**(10): 799-822.

Yang, Z. Cai, S. Zhou, Z. & Zhou, N. (2005), 'Development and Validation of an Instrument to Measure User Perceived Service Quality of Information Presenting Web Portals', *Information & Management*, **42**: 575–589

Yap, K. Wong, D. Loh, C. & Bak, R. (2010), 'Offline and Online Banking –Where to Draw the Line When Building Trust in E-Banking?', *International Journal of bank marketing*, **28**(1): 27-46.

Yim, F. Anderson, R. & Swaminathan, S. (2004), 'Customer Relationship Management: Its Dimensions and Effect on Customer Outcomes', *Journal of Personal Selling& Sales Management*, **24**(Fall/4): 263-278.

Yoo, B. & Donthu, N. (2001), 'Developing and Validating a Multi-Dimensional Consumer-Based Brand Equity Scale', *Journal of Business Research*, **52**(1): 1-14.

Yoon, C. & Kim, S. (2007), 'Convenience and TAM in A Ubiquitous Computing Environment: The Case of Wireless LAN', Electronic Commerce Research and Applications, **6**: 102–112

Yousafzai, S. Pallister, J. & Foxall, G. (2003), 'A Proposed Model of E-Trust for Electronic Banking', *Technovation*, **23**: 847-860.

Yousafzai, S. Pallister, J. & Foxall, G. (2005), 'Strategies For Building and Communicating Trust in Electronic Banking: A Field Experiment', *Psychology and Marketing*, **22** (February/2): 181-201.

Ypadhyaya, K. (1999), 'Currency devaluation, Aggregate Output and the Long Run: An Empirical study, *Economic letters*, **64**: 197-202.

Yu, C.& Hway-Boon, O. (2003), 'Success Factors in E-Channels: The Malaysian Banking Scenario', *International Journal of Bank Marketing*, **21**(6/ 7): 369-377.

Yvas, U. Karatepe, O. Avcl, T. & Tekinkus, M. (2003), 'Antecedentss and Outcomes of Service Recovery Performance: An Empirical Study of Frontline Employees in Turkish Banks', *International Journal of Bank Marketing*, **21**(4/5): 255-265.

Zablah,A. Bellenger, D. & Johnston, W. (fall 2004), 'Customer Relationship Management Implementation Gaps', *Journal of Personal Selling& Sales Management*,**24**(4): 279-295.

Zeithaml, V. (1988), 'Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence', *Journal of Marketing*, **52**(3): 2-22.

Zeithaml, V. Berry, L. & Parasuraman, A. (1993), 'The Nature and Determinants of Customer Expectations of Service', *Journal of the Academy of marketing science*, **21**(1): 1-12.

Zeithaml, V. Berry, L.& Parasuraman, A. (1988), 'Communication and Control Processes in the Delivery of Service Quality', *Journal of Marketing*, **52**(April); 35-48.

Zeithaml, V. Berry, L.& Parasuraman, A. (1996), 'The Behavioral Consequences of Service Quality', *Journal of Marketing*, **60**(April); 31-46.

Zeithaml, V. Parasuraman, A. & Malhotra, A. (2002), 'Service Quality Delivery through Web Sites: A critical Review of Extant Knowledge', *Journal of the Academy of Marketing Science*, **30**(4): 362-375.

Zhao, A. Lewis, N. Hanmer-lloyd, S. & Ward, P. (2010), 'Adoption of Internet Banking Services in China: Is It All About Trust?', *International Journal of Bank Marketing*, **28**(1): 7-26.

Zhu, F. Wymer, W. and Chen, I. (2002), 'IT-Based Services and Service Quality in Consumer Banking', *International Journal of Service Industry Management*, **13**(1): 69-90.

Zhu, K. Kraemer, K. Xu, S.& Dedrick, J. (2004), 'Information Technology Payoff in E-Business Environments: An International Perspective on Value Creation of E-Business in the Financial Service Industry', *Journal of Management Information Systems*, **21**(Summer/1): 17-54.

Zineldin, M. (1996), 'Bank Strategic Positioning and Some Determinants of Bank Selection', *International Journal of Bank Marketing*, **14** (6): 12-22.

Zineldin, M. (2005), 'Quality and Customer Relationship Management (CRM) as Competitive Strategy in the Swedish Banking Industry', *The TQM Magazine*, **17**(4): 329-344.

Zwass,V. (Fall 1996), 'Electronic Commerce: Structures and Issues', *International Journal of Electronic Commerce*, **1**(1): 3-23.

Appendices

Appendix 1: payment trends 1998 - 2005: Facts and Figures

Transaction volumes in the UK (millions)	1998	1999	2000	2001	2002	2003	2004	2005
Plastic card purchases	3,094	3,537	3,923	4,387	4,821	5,318	5,739	6,094
Debit card [1]	1,736	2,062	2,337	2,696	2,994	3,364	3,690	4,084
Credit and charge card [1]	1,224	1,344	1,452	1,562	1,687	1,822	1,949	1,924
Store card [1,2]	134	131	134	129	140	132	100	83
Plastic card withdrawals at ATMs and counters	1,917	2,030	2,090	2,250	2,342	2,457	2,615	2,807
Direct debits, Standing orders, direct credits and CHAPS sterling	3,055	3,252	3,469	3,706	3,930	4,271	4,827	5,378
Cheques	2,988	2,859	2,702	2,567	2,394	2,251	2,089	1,931
For payment	2,768	2,654	2,526	2,401	2,247	2,110	1,966	1,846
For cash acquisition	219	205	176	165	147	141	122	86
Total non-cash (plastic card, automated and paper)	11,053	11,674	12,176	12,914	13,484	14,296	15,270	16,207
Cash payments (estimate)	25,309	25,596	27,910	27,684	26,622	25,859	24,916	23,968
Post office counter and passbook withdrawals [3]	1,019	962	879	792	687	595	395	257
Total transaction volumes	37,381	38,236	40,966	41,421	40,792	40,748	40,580	40,432

The UK ATM network)	1998	1999	2000	2001	2002	2003	2004	2005
Number of ATMs	24,574	27,379	33,000	36,666	40,825	46,461	54,412	58,286
Banks and building societies	24,574	327,379	29,102	30,072	31,317	32,025	32,729	32,519
Independent deployers	–	–	3,898	6,594	9,508	14,436	21,683	25,767
ATM withdrawals (millions)	1,850	1,968	2,027	2,174	2,268	2,373	2,528	2,699
ATM cards (millions) [4]	66	69	73	78	83	88	90[5]	90

1 UK-issued cards
2 Data supplied by the Finance & Leasing Association, except 2005 which is provisional APACS estimate
3 Excludes withdrawals from bank and building society accounts at post office counters
4 ATM cards are stand-alone ATM cards or debit cards with an ATM functionality. Credit cards with ATM functionality are excluded
5 Revised 2006

Source: APACS : http://www.apacs.org.uk/resources_publications/key_facts.html

Appendix 2: The appendix of the quantitative Data Analysis

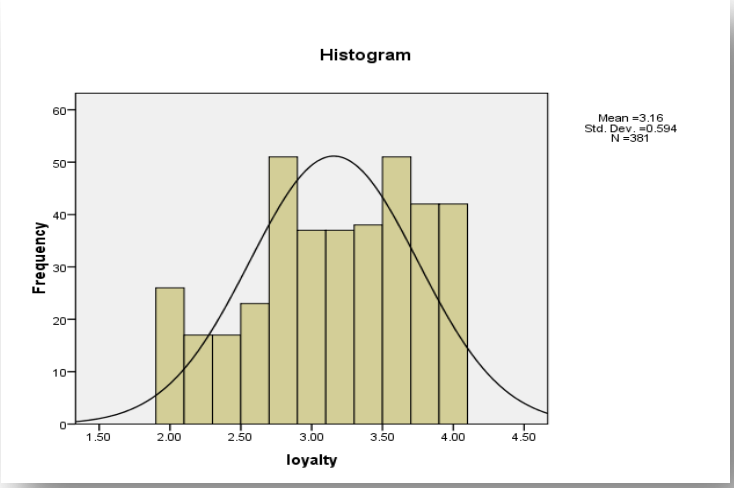

Figure 1: Histogram showing the distribution of The scale measuring loyalty

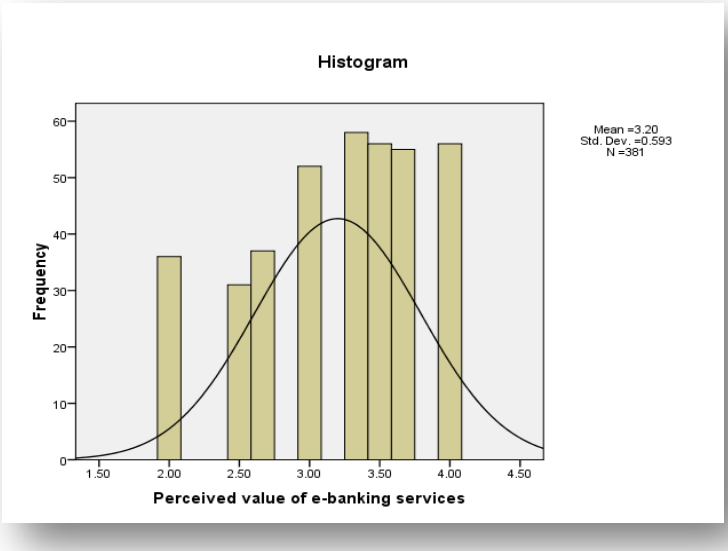

Figure 2: Histogram showing the distribution of the scale measuring the perceived value

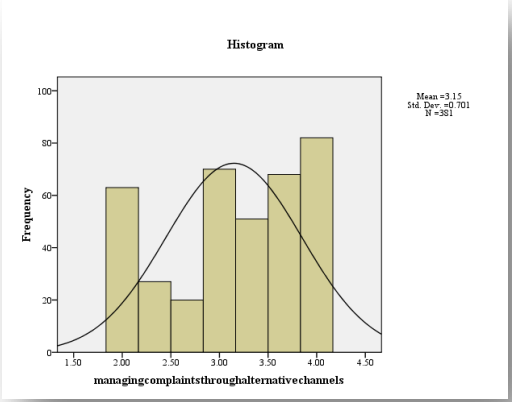

Figure 3: Histogram-showing distribution of the Factor: Managing complaints through alternative channel

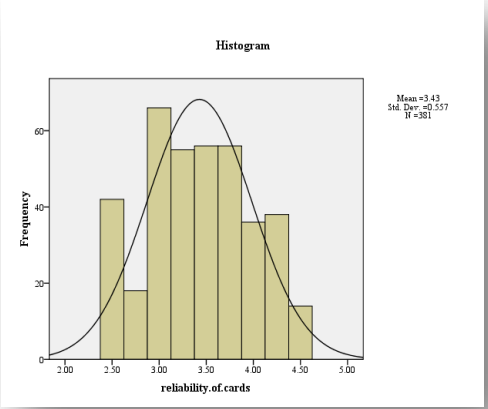

Figure 6: Histogram showing distribution of the factor: Reliability of card usage

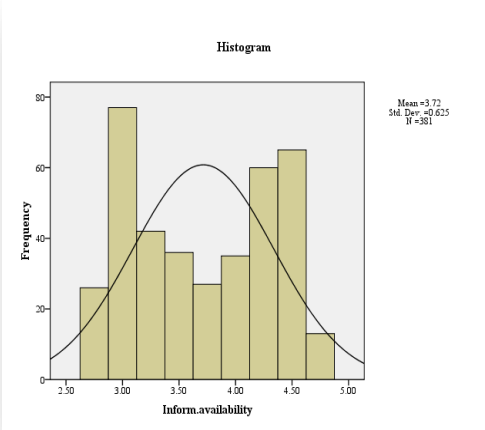

Figure 4: Histogram showing distribution of Information availability

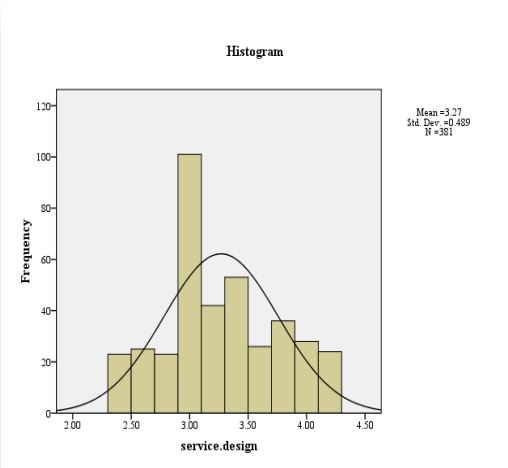

Figure7: Histogram showing the distribution of the factor: E-banking services' design

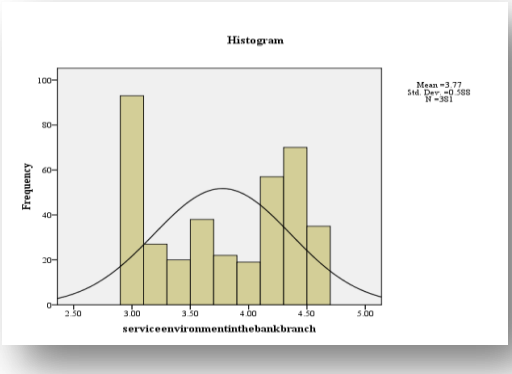

Figure 5: Histogram showing the distribution of the factor: Service environment in the bank branch

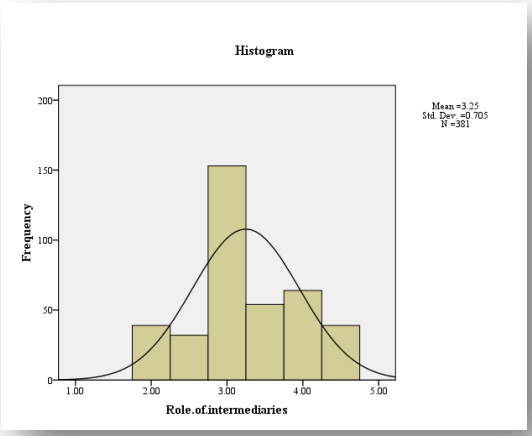

Figure 8: Histogram showing the distribution of the factor: Role of intermediaries

Improving the internal consistency test of the loyalty scale

Table 1: Reliability of 7-items loyalty scale

Cronbach's Alpha	N of Items
.629	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
L1	19.18	9.098	.080	.050	.652
L2	19.72	6.245	.635	.900	.483
L3	19.44	9.273	-.033	.047	.694
L4	19.71	6.166	.655	.902	.474
L5	19.65	7.212	.340	.184	.594
L6	19.76	7.234	.384	.230	.577
L7	19.59	7.579	.331	.204	.595

Table 2: Reliability of 6-items loyalty scale

Cronbach's Alpha	N of Items
.694	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
L1	15.78	8.829	.043	.030	.739
L2	16.32	5.891	.643	.900	.574
L4	16.30	5.802	.667	.902	.564
L5	16.25	6.693	.379	.181	.671
L6	16.36	6.753	.416	.230	.656
L7	16.19	7.038	.378	.195	.668

Table 3: Reliability of 5 items loyalty scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
L2	12.66	5.540	.634	.640
L4	12.65	5.429	.666	.627
L5	12.59	6.190	.404	.732
L6	12.71	6.277	.434	.718
L7	12.53	6.586	.387	.733

Cronbach's Alpha	N of Items
.739	5

Simple Regression Tables

Table 4: Correlation between perceived value of e-banking services and loyalty

		loyalty	value
loyalty	Pearson Correlation	1.000	.461**
	Sig. (2-tailed)		.000
	N	381.000	381
value	Pearson Correlation	.461**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Table 5: correlation between perceived value and service environment

		Average of perceived value	Service .environment
perceived value	Pearson Correlation	1.000	.540**
	Sig. (2-tailed)		.000
	N	381.000	381
Service environment	Pearson Correlation	.540**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Table 6: Correlation between perceived value and information availability

		Information availability	Average of perceived value
Information availability	Pearson Correlation	1.000	.522**
	Sig. (2-tailed)		.000
	N	381.000	381
perceived value	Pearson Correlation	.522**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Table 7: correlation between perceived value and reliability of card usage

		Average of perceived value	Reliability of cards' usage
perceived value	Pearson Correlation	1.000	.496**
	Sig. (2-tailed)		.000
	N	381.000	381
Reliability of cards' usage	Pearson Correlation	.496**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Table 8: correlation between perceived value of e-banking services and complaints handling through alternative channels

		Average of perceived value	Managing complaints through alternative channels
Average of perceived value	Pearson Correlation	1.000	.491**
	Sig. (2-tailed)		.000
	N	381.000	381
Managing complaints through alternative channels	Pearson Correlation	.491**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Table 9: the correlation between the perceived value of e-banking services and their design

		Average of perceived value	Service design
Average of perceived value	Pearson Correlation	1.000	.446**
	Sig. (2-tailed)		.000
	N	381.000	381
Service design	Pearson Correlation	.446**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Table 10: The correlation between the perceived value of e-banking services and the role of intermediaries in promoting them

		Average of perceived value	Role of intermediaries
Average of perceived value	Pearson Correlation	1.000	.446**
	Sig. (2-tailed)		.000
	N	381.000	381
Role of intermediaries	Pearson Correlation	.446**	1.000
	Sig. (2-tailed)	.000	
	N	381	381.000

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

Distribution of Residuals from employing linear regression

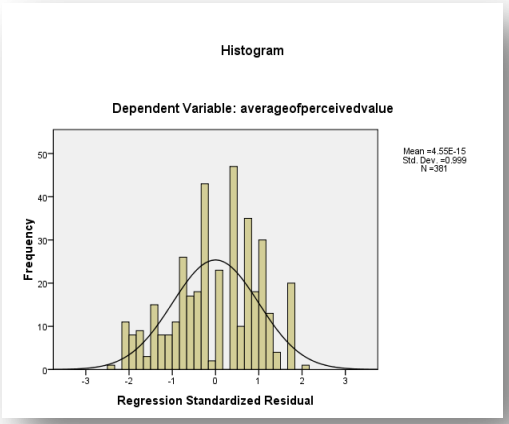

Figure 9: normal distribution of residuals of role of intermediaries

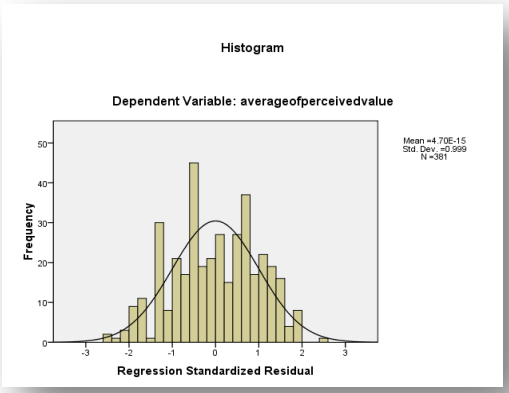

Figure 10: normal distribution of residuals of reliability of cards usage

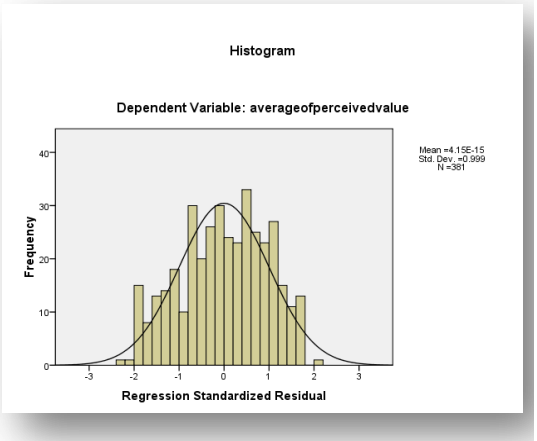

Figure 13: Distribution of residuals for the factor:
E-banking services' design

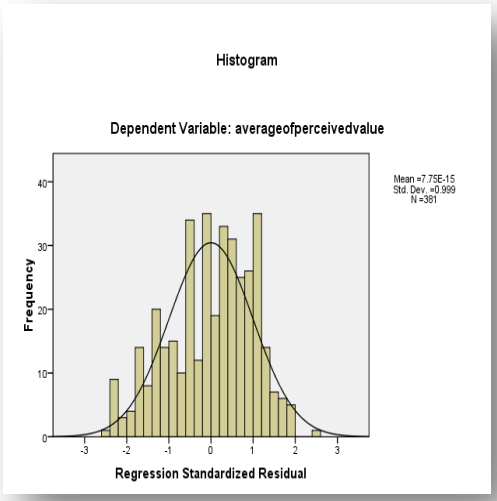

Figure 11: distribution of residuals of managing Complaints through alternative channels

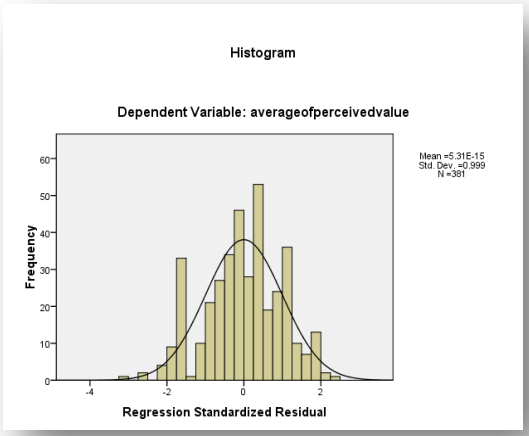

Figure 12: Distribution of residuals for the factor titled:
Service environment in the bank branch

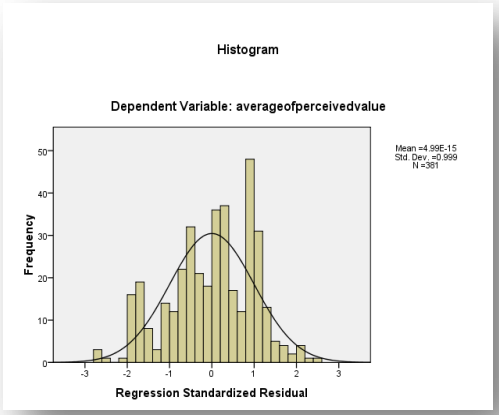

Figure 14: Distribution of residuals of the factor: Information availability

Exploratory Factor analysis supplementary table and figure

Table 11: Component Correlation Matrix

Component	1	2	3	4	5	6
1	1.000	-.269	.125	-.276	.282	.270
2	-.269	1.000	-.113	.384	-.123	-.180
3	.125	-.113	1.000	-.170	.229	.336
4	-.276	.384	-.170	1.000	-.169	-.222
5	.282	-.123	.229	-.169	1.000	.312
6	.270	-.180	.336	-.222	.312	1.000

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

Table 12: Total variance explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.625	28.805	28.805	6.625	28.805	28.805	3.213	13.969	13.969
2	2.685	11.673	40.478	2.685	11.673	40.478	2.699	11.734	25.703
3	1.638	7.122	47.600	1.638	7.122	47.600	2.423	10.536	36.238
4	1.472	6.402	54.002	1.472	6.402	54.002	2.337	10.163	46.401
5	1.282	5.576	59.578	1.282	5.576	59.578	2.179	9.472	55.873
6	1.015	4.415	63.993	1.015	4.415	63.993	1.867	8.119	63.993
7	.951	4.134	68.127						
8	.770	3.349	71.475						
9	.736	3.201	74.676						
10	.723	3.142	77.818						
11	.691	3.005	80.824						
12	.564	2.452	83.276						
13	.510	2.216	85.492						
14	.481	2.093	87.585						
15	.445	1.935	89.519						
16	.413	1.795	91.314						
17	.399	1.735	93.049						
18	.373	1.623	94.672						
19	.318	1.383	96.055						
20	.295	1.284	97.339						
21	.239	1.040	98.380						
22	.232	1.008	99.388						
23	.141	.612	100.000						

Extraction Method: Principal Component Analysis.

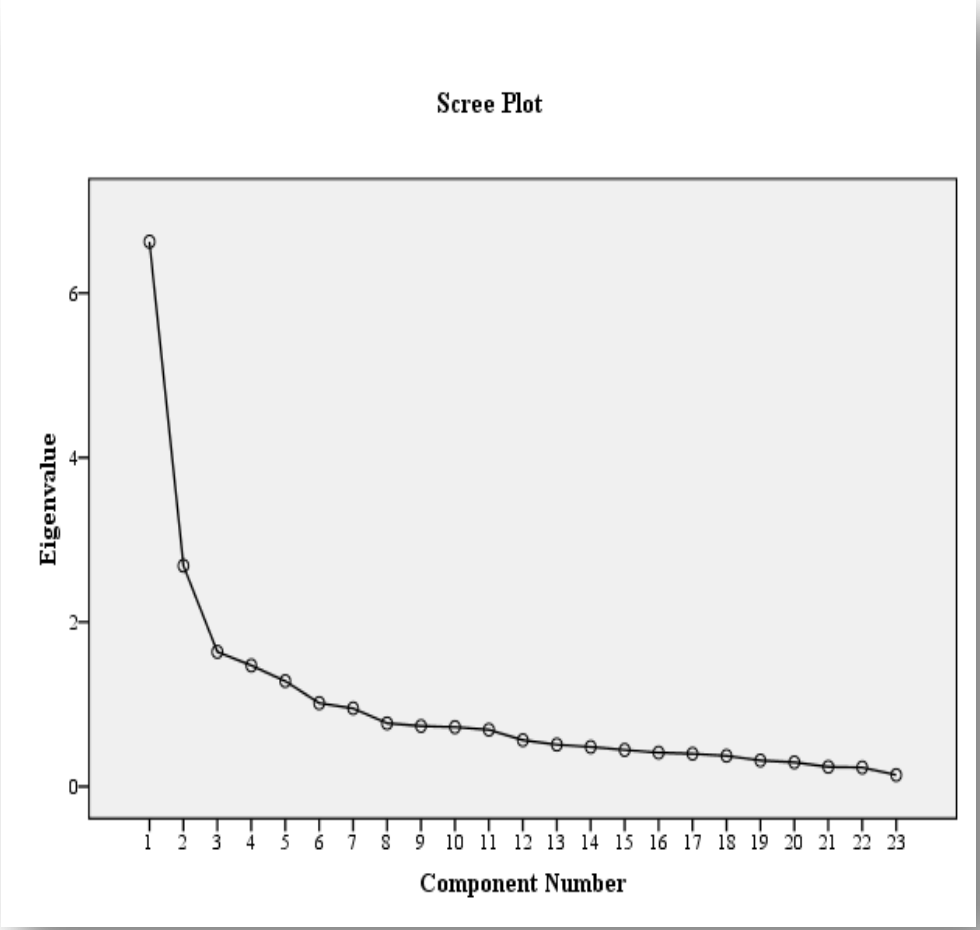

Figure 15: Scree plot test

Table 13: Anti-image matrix[58]

	F1	f5	F8	f11	F13	F16	f20	f21	f23	f24	f25	f28	f31	f32	f37	f38	f42	f44	f45	f47	f50	f57	f60
F1	.892[a]	-.278	-.198	.029	.056	-.270	-.123	.038	.010	-.012	-.050	-.050	.035	-.071	-.020	.038	-.128	.040	-.095	.037	.053	-.003	-.002
f5	-.278	.898[a]	-.145	-.036	-.021	-.035	.045	.064	-.156	.052	.024	-.142	.018	-.047	-.106	-.035	-.023	.036	-.014	.058	-.071	.068	-.028
F8	-.198	-.145	.871[a]	.013	.127	-.143	.050	-.006	-.063	-.060	.065	-.115	.148	-.095	-.016	-.022	-.026	-.235	.025	-.093	-.188	-.085	.080
f11	.029	-.036	.013	.743[a]	-.211	-.005	-.065	-.088	.006	-.025	-.016	.101	.135	-.083	-.112	.116	-.108	.151	-.761	-.015	-.029	-.002	.057
F13	.056	-.021	.127	-.211	.805[a]	-.070	-.013	.109	.060	-.037	-.051	-.151	.003	-.024	.053	-.121	-.049	-.339	.111	.029	-.092	-.144	-.010
F16	-.270	-.035	-.143	-.005	-.070	.868a	.181	-.211	-.009	.000	-.071	.174	-.086	-.072	-.016	-.058	.024	.020	-.067	-.107	.105	-.003	-.056
f20	-.123	.045	.050	-.065	-.013	.181	.873[a]	-.226	.003	-.147	.030	-.122	-.313	-.127	-.030	-.011	-.059	-.033	.056	.008	.004	-.013	.031
f21	.038	.064	-.006	-.088	.109	-.211	-.226	.820[a]	.007	-.027	.000	-.553	-.031	-.132	.076	.019	.090	-.050	.033	.014	.003	-.026	-.055
f23	.010	-.156	-.063	.006	.060	-.009	.003	.007	.846[a]	-.342	-.448	-.029	-.106	-.020	.074	.000	-.078	-.087	.019	.015	.026	-.156	.116
f24	-.012	.052	-.060	-.025	-.037	.000	-.147	-.027	-.342	.881[a]	-.351	.058	.035	-.042	-.021	.017	.058	.017	-.010	-.025	-.012	-.006	-.044
f25	-.050	.024	.065	-.016	-.051	-.071	.030	.000	-.448	-.351	.840[a]	-.066	-.002	.002	-.053	-.014	-.011	.100	.028	.037	-.026	.078	-.066
f28	-.050	-.142	-.115	.101	-.151	.174	-.122	-.553	-.029	.058	-.066	.813[a]	-.082	.000	-.054	-.023	-.014	.106	-.160	.018	.095	-.041	.088
f31	.035	.018	.148	.135	.003	-.086	-.313	-.031	-.106	.035	-.002	-.082	.845[a]	-.304	-.090	.029	-.028	.022	-.080	-.014	-.005	.008	-.035
f32	-.071	-.047	-.095	-.083	-.024	-.072	-.127	-.132	-.020	-.042	.002	.000	-.304	.916[a]	-.019	.018	.087	.042	.033	-.054	-.032	.071	-.073
f37	-.020	-.106	-.016	-.112	.053	-.016	-.030	.076	.074	-.021	-.053	-.054	-.090	-.019	.863[a]	-.315	.036	-.065	.111	-.110	.007	-.072	-.013
f38	.038	-.035	-.022	.116	-.121	-.058	-.011	.019	.000	.017	-.014	-.023	.029	.018	-.315	.853[a]	-.245	.054	-.112	-.204	-.036	.062	-.086
f42	-.128	-.023	-.026	-.108	-.049	.024	-.059	.090	-.078	.058	-.011	-.014	-.028	.087	.036	-.245	.891[a]	-.029	.053	-.242	-.068	-.033	-.054
f44	.040	.036	-.235	.151	-.339	.020	-.033	-.050	-.087	.017	.100	.106	.022	.042	-.065	.054	-.029	.781[a]	-.198	-.114	-.199	.047	-.057
f45	-.095	-.014	.025	-.761	.111	-.067	.056	.033	.019	-.010	.028	-.160	-.080	.033	.111	-.112	.053	-.198	.766[a]	-.077	-.159	.023	-.053
f47	.037	.058	-.093	-.015	.029	-.107	.008	.014	.015	-.025	.037	.018	-.014	-.054	-.110	-.204	-.242	-.114	-.077	.903[a]	.111	-.153	-.062
f50	.053	-.071	-.188	-.029	-.092	.105	.004	.003	.026	-.012	-.026	.095	-.005	-.032	.007	-.036	-.068	-.199	-.159	.111	.855[a]	-.031	.023
f57	-.003	.068	-.085	-.002	-.144	-.003	-.013	-.026	-.156	-.006	.078	-.041	.008	.071	-.072	.062	-.033	.047	.023	-.153	-.031	.787[a]	-.583
f60	-.002	-.028	.080	.057	-.010	-.056	.031	-.055	.116	-.044	-.066	.088	-.035	-.073	-.013	-.086	-.054	-.057	-.053	-.062	.023	-.583	.777[a]

[58] Figures highlighted on the diagonal axis show measure of sample adequacy for each item included in the factor matrix

Table 14: Correlations between items in the factor matrix

	F1	f5	F8	f11	F13	F16	f20	f21	f23	f24	f25	f28	f31	f32	f37	f38	f42	f44	f45	f47	f50	f57	f60
F1	1.000	.509	.465	.314	.127	.480	.290	.307	.342	.303	.307	.343	.218	.357	.234	.224	.303	.154	.363	.252	.147	.203	.183
f5	.509	1.000	.419	.295	.159	.320	.188	.230	.348	.243	.261	.334	.161	.286	.258	.235	.247	.159	.320	.187	.213	.141	.130
F8	.465	.419	1.000	.278	.163	.386	.137	.235	.300	.256	.194	.273	.059	.269	.231	.258	.289	.377	.333	.330	.332	.252	.171
f11	.314	.295	.278	1.000	.363	.295	.217	.275	.202	.227	.183	.268	.106	.276	.211	.229	.311	.270	.828	.309	.355	.204	.176
F13	.127	.159	.163	.363	1.000	.187	.132	.106	.145	.165	.141	.181	.087	.142	.174	.284	.286	.433	.325	.262	.292	.313	.260
F16	.480	.320	.386	.295	.187	1.000	.115	.302	.286	.262	.275	.192	.203	.317	.229	.271	.242	.181	.334	.344	.096	.258	.271
f20	.290	.188	.137	.217	.132	.115	1.000	.555	.335	.372	.300	.525	.553	.479	.177	.117	.141	.067	.210	.133	.055	.159	.122
f21	.307	.230	.235	.275	.106	.302	.555	1.000	.324	.324	.301	.708	.437	.485	.125	.096	.068	.075	.292	.143	.049	.191	.160
f23	.342	.348	.300	.202	.145	.286	.335	.324	1.000	.685	.714	.345	.330	.340	.161	.161	.223	.129	.208	.183	.112	.265	.161
f24	.303	.243	.256	.227	.165	.262	.372	.324	.685	1.000	.678	.302	.290	.341	.173	.143	.160	.102	.219	.178	.113	.236	.194
f25	.307	.261	.194	.183	.141	.275	.300	.301	.714	.678	1.000	.318	.286	.304	.172	.146	.165	.026	.171	.128	.075	.184	.163
f28	.343	.334	.273	.268	.181	.192	.525	.708	.345	.302	.318	1.000	.420	.424	.186	.156	.135	.064	.320	.149	.056	.180	.106
f31	.218	.161	.059	.106	.087	.203	.553	.437	.330	.290	.286	.420	1.000	.521	.195	.111	.105	.020	.154	.140	.010	.154	.160
f32	.357	.286	.269	.276	.142	.317	.479	.485	.340	.341	.304	.424	.521	1.000	.202	.142	.114	.089	.276	.204	.111	.165	.189
f37	.234	.258	.231	.211	.174	.229	.177	.125	.161	.173	.172	.186	.195	.202	1.000	.460	.272	.183	.197	.364	.120	.268	.254
f38	.224	.235	.258	.229	.284	.271	.117	.096	.161	.143	.146	.156	.111	.142	.460	1.000	.468	.232	.289	.482	.189	.280	.315
f42	.303	.247	.289	.311	.286	.242	.141	.068	.223	.160	.165	.135	.105	.114	.272	.468	1.000	.272	.313	.484	.234	.320	.305
f44	.154	.159	.377	.270	.433	.181	.067	.075	.129	.102	.026	.064	.020	.089	.183	.232	.272	1.000	.366	.324	.406	.232	.224
f45	.363	.320	.333	.828	.325	.334	.210	.292	.208	.219	.171	.320	.154	.276	.197	.289	.313	.366	1.000	.354	.404	.225	.220
f47	.252	.187	.330	.309	.262	.344	.133	.143	.183	.178	.128	.149	.140	.204	.364	.482	.484	.324	.354	1.000	.151	.427	.399
f50	.147	.213	.332	.355	.292	.096	.055	.049	.112	.113	.075	.056	.010	.111	.120	.189	.234	.406	.404	.151	1.000	.152	.120
f57	.203	.141	.252	.204	.313	.258	.159	.191	.265	.236	.184	.180	.154	.165	.268	.280	.320	.232	.225	.427	.152	1.000	.670
f60	.183	.130	.171	.176	.260	.271	.122	.160	.161	.194	.163	.106	.160	.189	.254	.315	.305	.224	.220	.399	.120	.670	1.000

Correlation Determinant = 4.18E-005 Measure of sample adequacy= 0.840
Bartlett's test of Sphericity= 3745 Grey Highlighted correlations significant at 0.01
Blue highlighted correlations significant at 0.05

Table 15: Case wise diagnosis

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.1756	4.1172	3.1999	.43552	381
Std. Predicted Value	-2.352	2.106	.000	1.000	381
Standard Error of Predicted Value	.029	.089	.054	.011	381
Adjusted Predicted Value	2.1694	4.1246	3.2001	.43556	381
Residual	-1.08292	.99400	.00000	.40212	381
Std. Residual	-2.672	2.452	.000	.992	381
Stud. Residual	-2.702	2.470	.000	1.001	381
Deleted Residual	-1.10746	1.00827	-.00020	.40963	381
Stud. Deleted Residual	-2.725	2.487	.000	1.003	381
Mahal. Distance	.969	17.318	5.984	2.929	381
Cook's Distance	.000	.027	.003	.004	381
Centered Leverage Value	.003	.046	.016	.008	381

a. Dependent Variable: perceived value

Table 16: detected cases with residuals

Case Number	Std. Residual	Perceived value	Predicted Value	Residual
22	2.098	4.00	3.1497	.85025
126	2.059	3.67	2.8320	.83469
157	2.146	4.00	3.1301	.86989
162	-2.523	2.50	3.5226	-1.02262
178	2.452	4.00	3.0060	.99400
327	-2.672	2.67	3.7496	-1.08292
329	-2.050	2.67	3.4975	-.83079

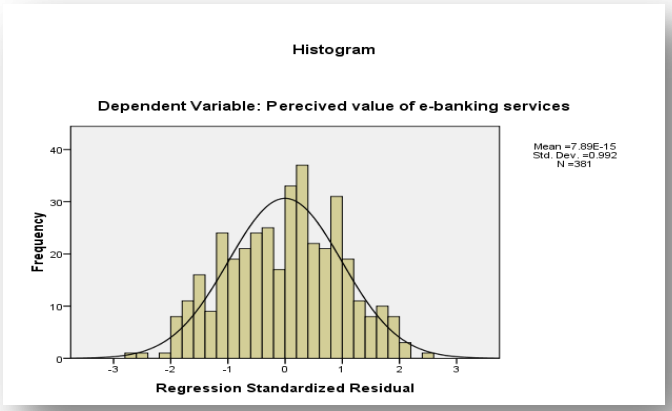

Figure 16: Histogram showing normality of residuals

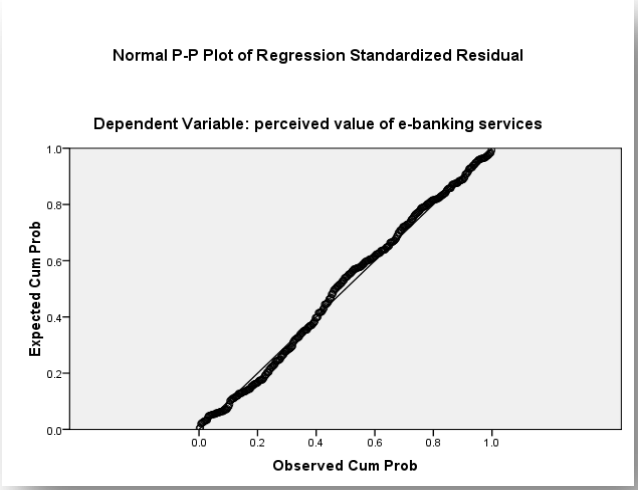

Figure 17: Linearity of residuals

Effect of perceived value of e-banking services on the customers loyalty to banks

Table 17: Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.6015	3.5265	3.1564	.27414	381
Std. Predicted Value	-2.024	1.350	.000	1.000	381
Standard Error of Predicted Value	.028	.061	.037	.010	381
Adjusted Predicted Value	2.5906	3.5349	3.1566	.27402	381
Residual	-1.37229	1.16727	.00000	.52725	381
Std. Residual	-2.599	2.211	.000	.999	381
Stud. Residual	-2.605	2.218	.000	1.001	381
Deleted Residual	-1.37816	1.17466	-.00013	.52992	381
Stud. Deleted Residual	-2.625	2.230	.000	1.003	381
Mahal. Distance	.051	4.098	.997	1.171	381
Cook's Distance	.000	.017	.003	.003	381
Centered Leverage Value	.000	.011	.003	.003	381

a. Dependent Variable: loyalty

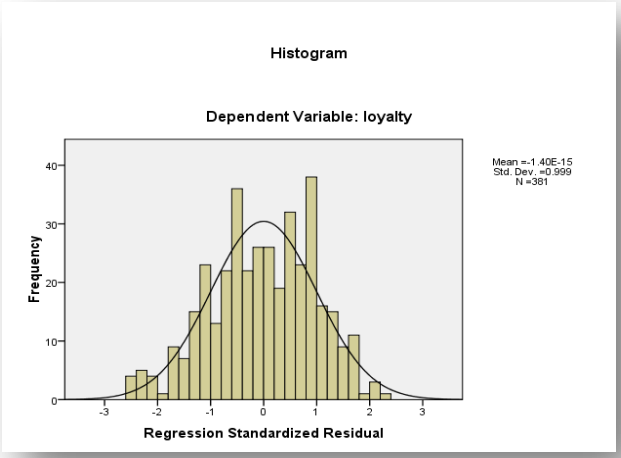

Figure 18: Histogram showing normality of residuals between Perceived value and loyalty

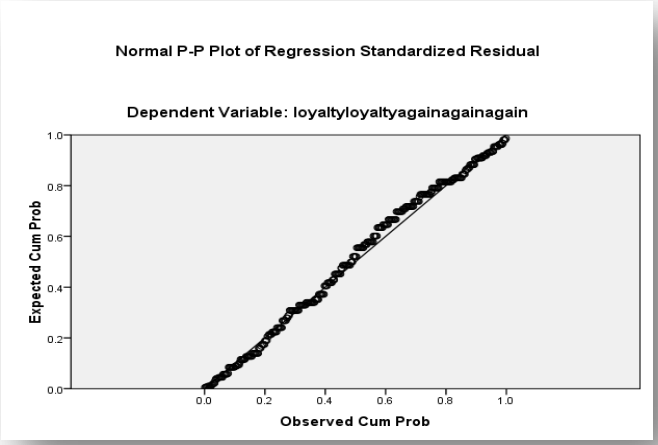

Figure 19: Linearity of residuals between PV of e-banking services and loyalty

Results of Kruskall-Wallis test and Jonckheere-Terpstra Test

Table 18: Perceived value/income levels

	INCOME	N	Mean Rank
Perceived value	From 1000-less than 3000 L.E.	176	182.63
	From 3000-less 7000 L.E.	150	182.03
	7000 L.E. and above	55	242.24
	Total	381	

Table 19: Test Statistics[b,c]

			value
Chi-Square			14.166
df			2
Asymp. Sig.			.001
Monte Carlo Sig.	Sig.		.000[a]
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.001

a. Based on 10000 sampled tables with starting seed 299883525.

b. Kruskal Wallis Test

b. Grouping Variable: INCOME

Table 20: Jonckheere-Terpstra Test[b]

			Perceived value
Number of Levels in INCOME			3
N			381
Observed J-T Statistic			25013.500
Mean J-T Statistic			22165.000
Std. Deviation of J-T Statistic			1125.701
Std. J-T Statistic			2.530
Asymp. Sig. (2-tailed)			.011
Monte Carlo Sig. (2-tailed)	Sig.		.011[a]
	99% Confidence Interval	Lower Bound	.009
		Upper Bound	.014
Monte Carlo Sig. (1-tailed)	Sig.		.006[a]
	99% Confidence Interval	Lower Bound	.004
		Upper Bound	.008

a. Based on 10000 sampled tables with starting seed 299883525.

b. Grouping Variable: INCOME

Table 21: Ranks Perceived value/Age levels

AGE		N	Mean Rank
Perceived value	From21-less than 40	50	229.53
	From 40-less than60	247	196.98
	60 years and over	84	150.48
	Total	381	

Table 22: Test Statistics[b,c]

			Perceived value
Chi-Square			18.547
df			2
Asymp. Sig.			.000
Monte Carlo Sig.	Sig.		.000[a]
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.000

a. Based on 10000 sampled tables with starting seed 1314643744.

b. Kruskal Wallis Test

c. Grouping Variable: AGE

Table 23: Jonckheere-Terpstra Test[b]

			Perceived value
Number of Levels in AGE			3
N			381
Observed J-T Statistic			14208.500
Mean J-T Statistic			18649.000
Std. Deviation of J-T Statistic			1039.849
Std. J-T Statistic			-4.270
Asymp. Sig. (2-tailed)			.000
Monte Carlo Sig. (2-tailed)	Sig.		.000[a]
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.000
Monte Carlo Sig. (1-tailed)	Sig.		.000[a]
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.000

a. Based on 10000 sampled tables with starting seed 1314643744.

c. Grouping Variable: AGE

Table 24: Mean rank of e-banking services perceived value /education levels

	Education Levels	N	Mean Rank
Perceived value	Bachelor degree or equivalent degree	158	196.56
	Post graduate Diploma	131	164.53
	Master or PhD graduate or equivalent degree	92	219.14
	Total	381	

Table 25: Test Statistics b,c

			Perceived value
Chi-Square			14.232
df			2
Asymp. Sig.			.001
Monte Carlo Sig.	Sig.		.001[a]
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.001

a. Based on 10000 sampled tables with starting seed 334431365.
b. Kruskall Wallis test
c. Grouping variable education

Table 26: Result of Jonckheere test value/education

Jonckheere-Terpstra Test[b]

			value
Number of Levels in Education			3
N			381
Observed J-T Statistic			24487.000
Mean J-T Statistic			23643.000
Std. Deviation of J-T Statistic			1150.037
Std. J-T Statistic			.734
Asymp. Sig. (2-tailed)			.463
Monte Carlo Sig. (2-tailed)	Sig.		.462[a]
	99% Confidence Interval	Lower Bound	.449
		Upper Bound	.474
Monte Carlo Sig. (1-tailed)	Sig.		.232[a]
	99% Confidence Interval	Lower Bound	.222
		Upper Bound	.243

a. Based on 10000 sampled tables with starting seed 2000000.

b. Grouping Variable: Education

Appendix 3: The English version questionnaire

The perceived value of E-banking services in the Egyptian environment

The purpose of this questionnaire is to find out your opinions about e-banking services, in order to improve the role of such services in satisfying your financial services requirements the Egyptian environment.

In this research**, E-Banking services are defined as; *'Accessing the financial service through all types of Visa or MasterCard, ATM cards, phone banking and internet banking'.***

Your cooperation will contribute greatly to the success of this research. The questionnaire should take only few minutes to complete. Please note that your name or the name of your bank is not required. Any personal data provided will be used only for statistical analysis.

If you have any questions or concerns regarding this questionnaire, you can contact the researcher at the following e-mail: rashanaggar@yahoo.com

Thank you for your cooperation,

The researcher: *Rasha El Naggar*

The University of Hull
Business School
Marketing Department

Section 1

1. **What type is your bank? (Please tick the relevant box)**
   1. Public ☐
   2. Non-Public sector bank ☐

2. **How long have you been with this bank?**

Less than one year	
From 1-2 years	
From 3-4years	
From 5- 6 years	
7years and above	

3. **To what extent do you use each of the following e-banking services? (Please tick one box for each item).**

*__Moderately__ refers to the use of e-banking services in very basic financial transactions such as accessing money, viewing the recent transactions, knowing the balance.

*__Heavily__ refers to the use of e-banking services in payment for a third person. For example, using some forms of e-banking services in payment for purchases or transferring money to another person's account.

Type of service	**Heavily***	***Moderately**	**Don't use**
	3	2	1
1. **Visa/Master card**			
2. **ATM card**			
3. **Internet banking**			
4. **Call centres (telephone banking)**			

Section 2

Statement	Strongly disagree	Disagree	Neither agree Nor Disagree	agree	Strongly agree
	1	2	3	4	5
To what extent do you agree on the availability of information about e-banking services:					
1. **My bank keeps me up-to-date with information about its products and services.**					
2. **My bank advertises on its e-banking services in media.**					
3. **My bank keeps me up-to-date with its new e-banking services through the mail.**					
4. **I would go to my bank branch to get information about the e-banking services offered.**					
5. **Leaflets (or brochures) at the bank branch provides enough information about e-banking services and their uses.**					
6. **The information written in leaflets or brochures is easy to understand.**					
7. **The information provided in leaflets or brochures helps in selecting the visa/master card that fits my needs.**					
8. **Information provided by my bank is helpful to guide my selection decision for the financial product.**					
9. **Information provided by customer service is not enough to select the visa/master card that best fits my needs.**					
10. **I would access my bank website to get information about banking products.**					
11. **The bank website provides helpful information on all banking products.**					
12. **I would access call banking to get information about banking products.**					
13. **Call banking provides enough information about banking products.**					
To what extent do you agree on the ability of your bank to manage complaints:					
14. **Usually, I would complain if I face any problem with my bank.**					
15. **There is a box for receiving complains in my bank branch.**					
16. **Procedures of raising a complaint, are announced clearly in the bank branch.**					

	Strongly disagree	Disagree	Neither agree Nor Disagree	agree	Strongly agree
17. **The stages of raising a complaint are easy to follow.**					
18. **I would raise a complaint in my bank branch, if I face any problem while using e-banking services.**					
19. **It is difficult to resolve any complain through other branches of my bank.**					
20. **In the branch, customer service employees have the knowledge to answer my questions.**					
21. **In the bank branch, customer service employees show immediate help in solving my problems.**					
22. **It is difficult to solve complaints by telephone.**					
23. **It is difficult to access customer service by telephone**					
24. **Usually, on the telephone, I do not wait too long to get my problem solved.**					
25. **Solving complaints by telephone saves time**					
26. **I would call the visa/master card helpline in case of any problem in using them.**					
27. **The helpline number of visa/master cards is accessible from any mobile.**					
28. **When I have a problem, my bank shows sincere interest in solving it.**					
29. **My bank responds to complaints by developing new financial products.**					
To what extent do you agree on the role of your bank branch location and operating hours in supporting e-banking services:					
30. **It is easy to reach my bank branch to report on a complaint about e-banking services.**					
31. **My bank operating hours are convenient to resolve e-banking problems.**					
32. **Waiting time in the bank branch to get a problem solved is acceptable.**					
33. **Whenever I go to the bank branch to access the financial service, I have to wait too long to be served.**					
34. **Usually, visiting the bank branch to resolve a complaint requires me to take a day off from my work.**					
35. **Going to the bank branch to renew visa/credit card is time consuming.**					

	Strongly Disagree	Disagree	Nor Disagree	Neither agree	agree	Strongly agree
To what extent do you agree on the ability of e-banking services to meet your financial requirements:						
36. **It is better to access financial services through the bank branch.**						
37. **I cannot rely on my card to withdraw money when needed.**						
38. **The locations of my bank's ATM machines are inaccessible.**						
39. **Usually, ATM machines are out of service.**						
40. **Withdrawing money from ATM machines not belonging to my bank is costly.**						
41. **Relying only on one visa/master card from one bank cannot secure my financial needs.**						
42. **The current system of visa/master pin number does not provide maximum security for cardholders.**						
43. **It is easy to access the phone banking from my mobile.**						
44. **It is not possible to perform some financial transactions via call banking.**						
45. **Some financial transactions cannot be performed by internet banking.**						
46. **Using prepaid internet visa card secures the payment transaction on the internet.**						
47. **Using visa/credit card provides more flexibility in spending, when I run out of cash.**						
48. **It is easy to use internet banking website to access information on financial services.**						
49. **It is easy to use phone banking to access the information or financial services.**						
50. **It is safe to use internet banking to transfer money between my accounts.**						
To what extent do you involve your friends when using e-banking services:						
51. **Usually, I consult my friends when I intend to use technology related products.**						
52. **I would use internet banking if my close friends use them.**						
53. **I would consult trusted friends in selecting the visa/master card that best fits my needs.**						
54. **Consulting friends while using e-banking services helps overcome the expected problems.**						

	Strongly Disagree	Disagree	Neither agree Nor Disagree	agree	Strongly agree
55. **Having at least one visa/master card is prestigious among my friends.**					
To what extent do you agree on the effect of other factors existing in the Egyptian environment in supporting the use e-banking services:					
56. **It is unsafe to carry visa/credit card in Egypt.**					
57. **It is not possible to use visa/master cards in most governmental agencies.**					
58. **Usually, shops accepting payment by visa/credit are relatively more expensive.**					
59. **Paying for very small transactions (maximum 20 L.E.) by visa/master card is costly.**					
60. **It is not applicable to pay utility bills (e.g. water, electricity or gas) online.**					

1. **How do you perceive e-banking services offered? (One tick per statement).** ***For each statement, please tick the response that reflects your degree of agreement.***

Statement	Strongly disagree	Disagree	Neither agree Nor Disagree	Agree	Strongly agree
	1	2	3	4	5
1. **In general, e-banking services are of limited benefits in Egypt.**					
2. **The expected benefits provided by the e-banking services are less than those provided by the bank branch.**					
3. **Costs of visa/master cards are relatively low, compared to their benefits.**					
4. **Problems of e-banking services are more difficult to solve than those occur in the bank branch.**					
5. **Comparing the problems of using e-banking services with their expected benefits, I think those services are highly beneficial in the Egyptian environment.**					
6. **Overall, in my opinion, e-banking services are highly beneficial in Egypt.**					

2. **To what extent do you think you are loyal to your bank? (Please tick one box in front of each statement).**

Statement	Strongly Disagree	Disagree	Neither agree Nor Disagree	agree	Strongly agree
	1	2	3	4	5
1. My bank offers other valuable services to consider, apart from e-banking services.					
2. I will invest with my bank, in the future.					
3. I might switch to another bank offering a wide range of e-banking services, even if this means scarifying higher interest rate on deposits.					
4. I will continue dealing with my bank, in the near future.					
5. I would encourage my friends to join my bank, for the range of e-banking services it offers.					
6. I would recommend my bank to my friends.					
7. I will continue dealing with my bank, because of its e-banking services.					

Section 3

In the next set of questions, please tick the box that corresponds to the most appropriate answer.

1. Please select your age from the available categories.	
21 to less than 40.	
40 years to less than 60.	
60 years and above.	
2. Please select your approximate <u>monthly</u> income range.	
less than 1000 L.E.	
1000 to less than 3000 L.E.	
3000 to less than 7000 L.E.	
7000 L.E. and above.	
3. What is your educational level? (Please select the appropriate box)	
University graduate or equivalent degree.	
Diploma	
Master or PhD graduate.	

Thank you for your cooperation

Appendix 4: The Arabic version questionnaire

تقييم خدمات البنوك الالكترونية في البيئة المصرية

يهدف هذا الاستقصاء إلى تقييم أرائكم بشأن خدمات البنك الالكترونية بغرض تحسين أداء و جودة هذه الخدمات في البيئة المصرية. **تعرف خدمات البنك الالكترونية** في هذه الدراسة على أنها: **الحصول على الخدمة المالية عن طريق كروت الفيزا visa card بجميع أنواعها، كروت الماستر Mastercard، كروت خدمة الصراف الآلي ATM card ، الخدمة الصوتية للبنك phone banking و خدمة البنك عن طريق الانترنت Internet banking**

لذلك يعد تعاونكم أساسيا لنجاح أهداف هذا البحث. يستغرق البحث من 15 إلى 17 دقيقة تقريبا .

ليس هناك داعي للإدلاء باسمك ولا اسم البنك الذي تتعامل معه. إذا كان لديكم أية استفسارات بشأن الاستقصاء يمكنكم مراسلة الباحثة على البريد الالكتروني : rashanaggar@yahoo.com

الباحثة : رشا عبد العزيز اسماعيل النجار

قسم التسويق وإستراتيجية الأعمال

جامعة هال بانجلترا

القســـم الأول

ما هو نوع البنك الذي تتعامل معه؟ الرجاء الإجابة بوضع دائرة حول الرقم الذي يعكس اختياركم.

بنك قطاع عام (بنك حكومي) 1

بنك غير حكومي 2

منذ متى وأنت تتعامل مع هذا البنك ؟ الرجاء الإجابة بوضع دائرة حول الرقم الذي يعكس اختياركم.

أقل من سنة	1
من سنة إلى سنتين	2
من ثلاثة سنوات إلى أربعة سنوات	3
من خمسة سنوات إلى ستة سنوات	4
سبعة سنوات وأكثر	5

إلى أي مدى تستخدم كلا من هذه الخدمة البنكية؟ الرجاء الإجابة *بوضع دائرة حول الرقم* الذي يعكس معدل استخدامكم لكل خدمة.

معدل الاستخدام متوسط: استخدام خدمات البنوك الالكترونية في الحصول على العمليات الاحتياجات المالية الأساسية مثل التعرف على الصيد و الحصول على الأموال النقدية

الاستخدام بكثافة: يعنى استخدام خدمات البنوك الالكترونية في التعامل المالي مع طرف ثالث مثل استخدامها في التعاملات المالية

نوع الخدمة	معدل الاستخدام		
	لا استخدمها	بمعدل متوسط	أستخدمها بكثافة
كروت الفيزا Visa/master card	1	2	3
الكروت الخاصة بماكينة الصراف الآلي التابعة للبنك ATM cards	1	2	3
خدمة البنك عن طريق الانترنت Internet banking	1	2	3
الخدمة الصوتية للبنك phone banking	1	2	3

القســـم الثانـي

لكل جملة من الجمل التالية، الرجاء الإجابة بوضع دائرة حول الرقم الذي يعكس درجة موافقتك عليها.

الجملـــة	لا أوافق على الإطلاق	غير موافق	محايد	أوافق	أوافق تماما
إلى أي درجة توافق(ى) على ممارسات البنك فيما يتعلق بإتاحة المعلومات الخاصة بخدمات البنوك الالكترونية؟					
1. يجعلني البنك على علم مستمر بكل خدماته الالكترونية بوسائل مختلفة.	1	2	3	4	5
2. يقوم البنك بالإعلان عن خدماته الالكترونية في وسائل الإعلام المختلفة.	1	2	3	4	5
3. يرسل البنك للعملاء بخطابات تحتوى على معلومات عن خدماته الالكترونية المتاحة.	1	2	3	4	5
4. عادة، أذهب إلى فرع البنك للحصول على معلومات عن خدماته الالكترونية .	1	2	3	4	5
5. فيوجد في الفرع مطبوعات بها كل المعلومات الخاصة عن خدماته الالكترونية المتاحة و كيفية استخدامها.	1	2	3	4	5
6. المعلومات عن تلك الخدمات الالكترونية مكتوبة بأسلوب يسهل فهمه.	1	2	3	4	5
7. المعلومات المتاحة في المطبوعات تفيد في اختيار نوع كارت الفيزا /الماستر الذي يناسب احتياجاتي المالية.	1	2	3	4	5
8. لا المعلومات المتاحة تفيد فى اختياري للمنتج المالي الأكثر ملائمة لظروفي	1	2	3	4	5
9. المعلومات المتاحة من موظفي خدمة العملاء غير كافية لاختيار نوع كارت الفيزا /الماستر الذي يلائم متطلباتي المالية.	1	2	3	4	5
10. عادة، ألجأ إلى خدمة البنك عن طريق الانترنت للحصول على معلومات عن المنتجات البنكية.	1	2	3	4	5
11. خدمة البنك عن طريق الانترنت تمكني من الحصول على معلومات عن المنتجات البنكية.	1	2	3	4	5
12. عادة، ألجأ إلى الخدمة الصوتية للبنك للحصول على معلومات عن المنتجات البنكية.	1	2	3	4	5
13. الخدمة الصوتية تتيح لي الحصول على كل المعلومات عن المنتجات البنكية.	1	2	3	4	5
إلى أي درجة توافق(ى) على قدرة البنك الذي تتعامل معه في حل المشكلات و إدارة الشكاوى؟					
14. عادة، أتقدم بشكوى حينما أواجه مشكلة في البنك الذي أتعامل معه.	1	2	3	4	5
15. يوجد صندوق لتلقى الشكاوى داخل فرع البنك.	1	2	3	4	5
16. الخطوات اللازمة للتقدم بشكوى معلنة بوضوح في الفرع التابع للبنك الذي أتعامل معه.	1	2	3	4	5
17. تتعد خطوات التقدم بشكوى سهلة الإتباع.	1	2	3	4	5
18. ففي حال حدوث أية مشكلة تتعلق بخدمات البنك الالكترونية، أتوجه بشكوى في الفرع الذي أتعامل معه.	1	2	3	4	5
19. يصعب إزالة أسباب الشكوى عن طريق أي فرع آخر للبنك.	1	2	3	4	5
20. موظفي خدمة العملاء داخل البنك على دراية كافية للإجابة على اسئلتى	1	2	3	4	5
21. يبدى موظفو خدمة العملاء بفرع البنك استعدادا لإزالة أسباب الشكوى.	1	2	3	4	5
22. ي يصعب إزالة أسباب الشكوى عن طريق التليفون	1	2	3	4	5
23. يصعب الوصول إلى موظفي خدمة العملاء عن طريق التليفون	1	2	3	4	5
24. . غالبا لا انتظر وقت طويل على التليفون لحل مشكلتي	1	2	3	4	5
25. إزالة أسباب الشكوى عن طريق التليفون يوفر الوقت	1	2	3	4	5

الجملـــة	لا أوافق على الإطلاق	غير موافق	محايد	أوافق	أوافق تماما
26. الجأ إلى الخط الساخن لكروت الفيزا/ الماستر حين أتعرض إلى أي مشكلة خاصة باستخدامها.	1	2	3	4	5
27. خدمة الخط الساخن لكروت الفيزا/الماستر متاحة من التليفون المحمول.	1	2	3	4	5
28. يبدى البنك اهتماما لإزالة أسباب المشكلات	1	2	3	4	5
29. يستجيب البنك للشكاوى بتطوير منتجاته المالية.	1	2	3	4	5
إلى أي درجة توافق(ى) على دور كلا من مكان الفرع وساعات العمل في دعم خدمات البنوك الالكترونية؟					
30. يسهل الوصول إلى فرع البنك لتقديم شكوى من خدمات البنك الالكترونية.	1	2	3	4	5
31. ساعات العمل للبنك ملائمة لحل المشكلات المتعلقة بخدمات البنك الالكترونية.	1	2	3	4	5
32. عادة، يعتبر الوقت الذي أمضيه داخل البنك لحل المشكلات مقبولا.	1	2	3	4	5
33. في الغالب انتظر طويلا داخل البنك حتى تتم ازالة اسباب الشكوى	1	2	3	4	5
34. الذهاب إلى فرع البنك هو الطريقة الوحيدة المتاحة للحصول على كروت الفيزا/الماستر أو تجديدها .	1	2	3	4	5
35. يستغرق الذهاب إلى فرع البنك لتجديد كارت الفيزا/الماستر وقتا طويلا.	1	2	3	4	5
إلى أي درجة توافق(ى)على قدرة خدمات البنك الالكترونية في الوفاء باحتياجاتك المالية؟					
36. أأفضل الذهاب إلى البنك للحصول على الخدمة البنكية.	1	2	3	4	5
37. لا يمكن الاعتماد على الكارت لسحب الأموال حينما أريد.	1	2	3	4	5
38. يصعب الوصول إلى ماكينات الصراف الآلي التابعة للبنك الذي أتعامل معه.	1	2	3	4	5
39. عادة، تكون ماكينات الصراف الآلي خارج الخدمة.	1	2	3	4	5
40. سحب الأموال عن طريق ماكينات الصراف الآلي ATM machines غير التابعة للبنك مكلفا.	1	2	3	4	5
41. الاعتماد على كارت فيزا/ماستر واحد فقط من بنك واحد لا يؤمن الحصول على احتياجاتي المالية وقتما أريد.	1	2	3	4	5
42. النظام الحالي للرقم السري pin number الخاص بكارت الفيزا/الماستر لا يوفر درجة الأمان اللازمة لمستخدميه.	1	2	3	4	5
43. يسهل الاتصال بالخدمة الصوتية للبنك من التليفون المحمول.	1	2	3	4	5
44. لا يمكن إجراء بعض العمليات المالية عن طريق الخدمة المسموعة للبنك.	1	2	3	4	5
45. لا يمكن إجراء بعض العمليات المالية عن طريق خدمة البنك على الانترنت.	1	2	3	4	5
46. يعد استخدام خدمة البنك على الانترنت غير آمنة لتحويل الأموال بين الحسابات الخاصة بى.	1	2	3	4	5
47. يمنحني كارت الفيزا/الانتمان مرونة أكثر في الإنفاق عندما تنفذ نقودي السائلة المتاحة للإنفاق.	1	2	3	4	5
48. ي يسهل استخدام خدمة البنك المتاحة عن طريق الانترنت فى الحصول على معلومات عن الخدمات المالية المتاحة من البنك	1	2	3	4	5
49. يسهل استخدام الخدمة الصوتية للبنك للحصول على معلومات عن الخدمات و المنتجات البنكية	1	2	3	4	5
50. استخدام خدمة البنك عن طريق الانترنت آمنة لتحويل الأموال بين الحسابات الخاصة بى	1	2	3	4	5
إلى يتدخل أصدقاؤك المقربين في قرار اعتمادك على خدمات البنوك الالكترونية؟					
51. عادة، آخذ برأي أصدقائي المقربين فيما يختص باستخدام التكنولوجيا.	1	2	3	4	5
52. سأستخدم خدمة البنك عن طريق الانترنت لو علمت أن أصدقائي يستخدمونها.	1	2	3	4	5
53. سأستشير أصدقائي ذوى الثقة في اختيار نوع كارت الفيزا/الماستر الذي يناسب احتياجاتي.	1	2	3	4	5
54. استشارة الأصدقاء أثناء استخدام خدمات البنك الالكترونية يساعد في التغلب على مشكلاتها المتوقعة.	1	2	3	4	5
55. امتلاك كارت فيزا/ماستر واحد على الأقل يزيد من الوجاهة الاجتماعية بين الأصدقاء.	1	2	3	4	5
أي مدى توافق(ى) على تأثير عوامل خارجية في البيئة المصرية في دعم خدمات البنك الالكترونية؟					
56. يعد حمل كارت الفيز/الماستر غير آمنا في البيئة المصرية.	1	2	3	4	5
57. لا يمكن التعامل بكارت الفيزا/ الماستر في غالبية المصالح و الهيئات الحكومية.	1	2	3	4	5

58. تتعد المتاجر التي تقبل الدفع بكارت الفيزا/الماستر أكثر غلاء من مثيلتها التي لا تقبل هذه الكروت في الدفع.	1	2	3	4	5
59. يعد الدفع للعمليات المالية الصغيرة (التي تصل إلى 20 جنيها مصريا) بكارت الفيزا/الماستر مكلفا.	1	2	3	4	5
60. دفع فواتير الخدمات (مثل الغاز، الكهرباء، المحمول) على شبكة الانترنت ليس متاحا في الوقت الحالي.	1	2	3	4	5

كيف ترى قيمة الخدمات الالكترونية للبنك؟ الرجاء الإجابة بوضع *دائرة حول الرقم* الذي يعكس درجة موافقتك على كل جملة من الجمل التالية.

الجملة	لا أوافق على الإطلاق	غير موافق	محايد	أوافق	أوافق تماما
1. بشكل عام، تعد خدمات البنك الالكترونية ذو منفعة محدودة في البيئة المصرية.	1	2	3	4	5
2. الفوائد المتوقعة من خدمات البنك الالكترونية أقل من تلك التي تقدم وجها لوجه عن طريق فرع البنك.	1	2	3	4	5
3. تكلفة كروت الفيزا/الماستر لا تذكر مقارنة بالفائدة المتوقعة منهم.	1	2	3	4	5
4. إصلاح الأخطاء التي قد تنجم عن استخدام خدمات البنك الالكترونية أصعب من تلك التي قد تحدث في فرع البنك.	1	2	3	4	5
5. م بمقارنة مشكلات الخدمات الالكترونية للبنك بفوائدها المتوقعة، أعتقد أن تلك الخدمات ذو منفعة عالية فى البيئة المصرية.	1	2	3	4	5
6. بصفة عامة، تعتبر خدمات البنك الالكترونية ذو منفعة عالية في البيئة المصرية.	1	2	3	4	5

إلى أي مدى توافق على درجة إخلاصك للبنك الذي تتعامل معه، في المستقبل القريب؟

الرجاء وضع دائرة حول الرقم الذي يعكس درجة موافقتك على كل جملة من الجمل التالية

الجملة	لا أوافق على الإطلاق	غير موافق	محايد	أوافق	أوافق تماما
1. يقدم البنك خدمات آخري تستحق أن توضع في الاعتبار بعيدا عن التفكير فقط في خدماته الالكترونية.	1	2	3	4	5
2. سأستثمر في نفس البنك، في المستقبل	1	2	3	4	5
3. ممن المحتمل أن أنتقل إلى بنك آخر يقدم تشكيلة واسعة من الخدمات الالكترونية، حتى لو اضطرني ذلك الاستغناء عن معدل فائدة مرتفع على الودائع والتوفير.	1	2	3	4	5
4. سأستمر في التعامل مع البنك الحالي.	1	2	3	4	5
5. سأشجع أصدقائي على الالتحاق بالبنك الذي أتعامل معه لما يقدمه من تشكيلة خدمات البنوك الالكترونية	1	2	3	4	5
6. سأوصى أصدقائي بالبنك الذي أتعامل معه	1	2	3	4	5
7. سأستمر فى التعامل مع البنك الحالي لما يقدمه من خدمات البنوك الالكترونية	1	2	3	4	5

القسم الثالث

يرجى من سيادتكم الإجابة بوضع *دائرة حول الرقم* الذي يعكس اختياركم تحت كل سؤال.

ما هو سنك تقريبا؟	
من 21 سنة - أقل من 40 سنوات	**1**
من 40 سنة إلى أقل من 60 سنة	**2**
60 سنة وأكثر	**3**
ما هو دخلك الشهري بالتقريب؟	
أقل من ألف جنيها مصريا	**4**
من ألف إلى أقل من 3000 جنيها مصريا	**5**
من 3000 إلى أقل من 7000 جنيها مصريا	**6**
7000 جنيها مصريا وأكثر	**7**
ما هو مؤهلك التعليمي؟	
شهادة الليسانس أو البكالوريوس	**8**
دبلومه دراسات عليا	**9**
ماجستير أو دكتوراه	**10**

لكم جزيل الشكر لتعاونكم في مليء الاستمارة،