**Middlesex University**


# e-Customer Relationship Management Readiness in the Banking Industry: The Case of Egypt


*Submitted in partial fulfillment of the requirements*

*of the degree of Doctor of Philosophy*


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# DEDICATION

*Dedicated to my **father** who had the dream of seeing my achievement but did not live to see the outcome of this research, and to my **mother** who was supportive all the way through this PhD lonely process without which I could never have gone through.*

# ACKNOWLEDGEMENT

# ABSTRACT

This study explores social and technical aspects of the electronic Customer Relationship Management (e-CRM) in Egypt. A pragmatic research approach using mixed methods with a range of stakeholders was employed.

A framework is drawn in order to identify the main factors affecting e-CRM readiness in the Egyptian banking industry. In order to better understand the problem at hand, three different structured questionnaires were devised to survey a large number of bank employees and users. Data collected was analysed statistically using SPSS. Semi-structured interviews were also conducted with a small number of decision makers at five different banks, which allowed a more penetrating study in Egyptian banking industry.

Quantitative method was used through distributing a questionnaire to employees in five banks. Data obtained from the questionnaire was triangulated with data gathered from other sources: interviews with branch managers and observations. Findings of the empirical research were evaluated against the framework suggested in the beginning leading to a final framework that assesses e-CRM readiness in banking industry. Findings revealed that the use of technology, organisational culture, corporate strategy and customer perceptions affect e-CRM readiness while the employees' perception does not affect e-CRM readiness. The interpretation of the results illustrated that organisational culture and corporate strategy have a strong effect one-CRM readiness, whereas use of technology has a modest effect on it.

The investigation was conducted mainly in Alexandria, as the second main city in Egypt. From the data analysis, supported by a review of literature, a revised framework was generated. When results were brought together, similarities and differences between employees, customers and bank managers helped the researcher better understand the problem at hand, derive conclusions and make recommendations to the main stakeholders, which would help promote and enhance the e-CRM in Egypt.

# DECLARATION

This is to certify that:

(i) The thesis comprises only my original work towards the PhD except where indicated,

(ii) Due acknowledgement has been made in the text to all other material used,

(iii) The thesis is less than 100,000 words in length, exclusive of table, maps, bibliographies, appendices and footnotes.


**Nermine El Essawi**


# PUBLICATIONS ASSOCIATED WITH THIS THESIS

1. Dafoulas, G, and Essawi, N., (2006) 'Measuring Customer Relationship Management Readiness in Developing Countries', 16th International conference on computer theory and applications (ICCTA).

2. Dafoulas, G, and Essawi, N., (2007) 'The difference between private and public banks in e-CRM implementation: A case study in Egypt', International Business Information Management Association, IBIMA Proceedings, Dublin, Ireland, ISBN: 0-9753393-7-0.

# Contents

# List of Tables

# List of Figures

# Introduction

**Objectives of chapter 1**

- Introduce and provide a context for the thesis.
- Describe the foundation of and the motivation for the research.
- Discuss the problem being addressed by the thesis.
- Outline the aims and objectives of the thesis.
- Present the methodology used for the research.
- To provide the rationale for the organisation of the thesis chapters.

Computers, information technology and internet have been replacing the labor-intensive business activities across the different industries. In the current market, companies are shifting their business strategies from being product-oriented to being customer-oriented. This allows organisations like banks to achieve higher returns on invested capital, gain more customers, and allow for large investment opportunities by understanding their customer needs. Electronic business in general is about using web technology to support business processes. According to (Sanayei, 2004), E-business success depends on a set of main aspects, on top of which is Customer relationship management.

Customer Relationship Management (CRM) is a strategy mainly used to optimize customer loyalty and their lifetime experience. CRM can help companies succeed, where not only large multinational companies, but also many small companies are increasingly seeking to implement CRM in order to find a competitive advantage on which to base their business strategy.

CRM has been defined and its aim has been stated and discussed extensively in literature (Bose, 2002) (Arndt and Gersten, 2001) (Schellong, 2003) (Levine, 2000) (Swift, 2000) (Rigby, et al., 2002) (Ryals and Payne, 2001) (Starkey and Woodcock, 2002) (Xu, et al., 2002) (Frow and Payne, 2004) (Chou et al, 2002) (Kotorov, 2003). CRM could be considered as all processes that organisations employ to manage their contact with current and potential customers. The aim of CRM is to establish and maintain long term relationship between current and prospective customers with the organisation. Organisations collect, store, retrieve and analyse information about their

customers. For that purpose CRM software such as Oracle, Microsoft, Sage and Maximizer software should be implemented.

In addition, e-CRM makes use of Internet technology and automation, and integrates it with existing CRM process and software (Fjermestad et al, 2003). According to (Dyche, 2001), e-CRM is a combination of software, hardware, and management commitments. This leads to an improvement of customer service, a development in the relationship and retention of valuable customers. An e-CRM system aims to improve customer service, develop a relationship and retain valuable customers. E-CRM has been a major concern for many organisations especially the banking sector (Anumala, 2007); as it is thought to increase revenues and decrease costs while improving customer service. E-CRM can be operational, analytical, or collaborative. Operational e-CRM refers to customer touch points, such as telephones, fax, letters, e-mails etc. Analytical CRM refers to the continuous of collecting customers' data which requires technology. Collaborative CRM is a communication center that aims at building online communities, developing business-to-business customer exchanges, and personalizing services (Adebanjo, 2003) (Greenberg 2002).

e-CRM provides various benefits to both employees and customers, some of which are integrating customer data into a single database allowing departments within the organisation to share the information (Scullin et al., 2002), improving communications within the company either between the employees or between the customers and employees (Goldenberg, 2002), using e-mail across departments allows finishing work quickly, inexpensively and also helps in distributing information and order confirmations (Elias, 2000), e-CRM provides personalization and customization of products and services, service and web content to specific users preferences. And finally, Gupta et al., 2004 stated that a 1% improvement in customer retention will lead to a 5% increase in firm value.

Based on the illustrated perceived benefits, many management experts welcome CRM, and companies rush to implement the concept without fully understanding the organisational restructuring required for successful CRM implementation (Abbott, 2001). This is clear because according to AMR Research, less than 50% of CRM projects meet organisation needs (AMR Research, 2007). It was also found that 22% of

CRM initiatives were dissatisfied (Economist Intelligent Unit, 2007). This would normally lead to cases were the output delivered to the organisations turns out to be below expectations.

According to the literature, several reasons behind the e-CRM implementation failure have become clear. The main failure causes are mainly employee resistance to change (Xu et al., 2002) (Robertswitt, 2000), insufficient e-CRM training (Liu, 2007), lack of management support (Freeland, 2002), (Jones et al., Parthasarathy and Sohi, 1997), lack of integration with other systems (Ward, 2001), (Amstel et al., 2000), absence of well defined strategies and objectives (Truck, 2004) (Chen and Popovich, 2003) (CGI Group Inc., 2004) (Greenberg, 2002), lack of cost-benefit analysis for e-CRM implementation (Goodhue et al., 2002), lack of appropriate IT infrastructure (Chen and Chen, 2004), technology use (Stahl, 2003)(Simpson, 2002), and being department-centric rather than customer-centric (Truck, 2004).

Egypt is considered a good representative of developing countries (Magder, 2005) due to the heavy investment in technology and information infrastructure since 1985 which became the platform for the economy's development and growth (Kamel, 2009). Two Public and three private banks were selected as case studies to represent the Egyptian banking industry.

## 1.1 Problem Domain

The Banking industry in Egypt is one of the oldest and largest in the region. The banking sector plays a crucial role in the development process in Egypt. The banking sector consists of commercial, specialized, and financial institutions operating in the fields of investment and credit for industry, agriculture, housing and rural development. Improving this sector would lead to faster rates of economic growth.

This mechanism is achieved mainly through the role of the banking sector in mobilizing more savings and channelling them to better investment allocation. This would lead to higher productivity and more capital accumulation. To achieve these results, an efficient banking system is required. The goal of banking reform created an

efficient banking sector which offers better quality services. This can be achieved through implementing e-CRM in banks (American chamber, 2008). CRM applications are critical success factors for businesses and they increase the competition between organisations/ banks (Srivihok and Batanov, 2005).

Although literature is rich with CRM studies, it has been mostly conducted in the west, leaving developing countries with a clear gap in this context (Nejadirani et al., 2011). Banks should investigate e-CRM readiness before actually implementing it (Dyche, 2002). In order to avoid e-CRM failure, banks should not only focus on the technical aspects, but rather focus on the social factors that affect technology adoption in any environment

Despite the clear need for such an investigation, literature is mainly concerned with the micro level in an organisation, focusing only on technical aspects of corporate Web presence (e.g., design, usability, features, and the acceptance of Web pages) or on marketing issues (e.g., customer behaviour, satisfaction, and retention, as well as trust). However, there has been little work on assessing the organisations perception and readiness for e-CRM (Tan, Yen, & Fang, 2002).

The study focuses on the main factors that affect e-CRM readiness in banks within the Egyptian context, and how different e-CRM perceptions do affect it. Egyptian banks have been chosen as case studies, and have been surveyed.

## 1.2   Problem Definition

According to (Liu and Han, 2007), banks with good CRM retain their substantial competitiveness in the market place. Similarly, (Coltman, 2007) stated that the financial organisations can have a competitive advantage through deploying CRM and e-CRM. As e-CRM involves several interests, the problem could not be solved using technology alone. Technology always exists within a social context.

CRM is defined by (Zablah et.al, 2004) as a combination between Information technology (IT), strategy and process; where (Chan, 2005) considered CRM as a combination of IT and strategy. Frow and Payane, 2004 also considered it a

combination of IT and process. In this sense, in order to understand e-CRM from the technical perspective, it is necessary to understand the CRM main components, available technologies, technology perception, cultural context, corporate strategy, different e-CRM perceptions, and e-readiness.

Therefore, in this context the research defines e-CRM readiness as the degree or level of which organisation is able to implement e-CRM. The research aims to investigate e-CRM readiness in banks by combining social and technical aspects through surveying the different e-CRM perceptions of a variety of stakeholders.

## 1.3 Research Questions

The research question has changed during the investigation. The following was the original research question which focused on the internal factors inside the organisations only:

- What are the internal factors that affect e-CRM readiness in organization? A case study in Egypt.

Various research angles seemed worth studying, which lead to the research questions as shown below:

- What are the main factors that affect e-CRM readiness in Egyptian banking industry?
- Does e-CRM readiness affect the quality of service in the Egyptian context?

Answering the above questions should help the researcher understand and more effectively propose a revised e-CRM framework that can be adopted in the Egyptian banking industry. It may be possible to generalise some of the findings to non-Egyptian contexts.

The variety of perspectives and the shifting patterns of business and technology make this a subject suitable for an analysis grounded in social and technical approaches. The contribution to knowledge shown in this PhD work will come from the development of a stakeholder analysis of the e-CRM readiness problem and its adoption in Egyptian banks both public and private in one country in focus, while the analytical and methodological frameworks could be generalised.

## 1.4  Contribution to Knowledge

The research aims to contribute to knowledge by understanding and defining the main factors that affect e-CRM readiness in Egypt. How various e-CRM stakeholders' view and rank different e-readiness factors is another main contribution to the research, where decision makers in banks, bank employees, and bank customers' perceptions were surveyed. The research also investigates how different perceptions affect the e-CRM readiness.

A comparison between public and private banks perceptions and e-CRM readiness was also derived from the interview analysis; in order to check whether the different organisational cultures play an important role in the given context. The research at hand also aims to provide an insight on whether e-CRM readiness in Egypt affects the e-CRM quality of service.

Moreover, the research tries to apply a combination of interpretive and statistical analysis. Interview data was interpretively analysed; as it provides more in depth and probably hidden data such as the case where some employees revealed that adopting e-CRM is a complex process only in the interview, while his was not possible using the structured questionnaires. On the other hand, questionnaires were analysed using a statistical package, namely, SPSS. This gave a more objective view as a quantitative method of analyses.  The mixture of methods used both in the data collection and data analysis is believed to give more strength to the research results. Investigation results are then used to review and revise the initial framework. The revised model will act as a basis for recommendations.

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## 1.5 Research Design

In order to explore the problem area in depth, with a range of stakeholders, a pragmatic research approach which views that problems occur in social contexts, will be used in the current study.

Since all methods have limitations, mixing data sources may help understand the problem and decrease bias in the research conducted. In order to answer the research question, an appropriate strategy of the inquiry for this subject area will be strategies associated with the mixed methods approach. As a theoretical framework to better understand e-CRM readiness in Egypt, customers, employees, and decision makers were identified as the key players. Accordingly, their perception and readiness to adopt e-CRM was emphasized in the framework.

### 1.5.1 Research Methodology

In order to extend the understanding of the problem, a mixture of methods can be used to collect and analyse both quantitative and qualitative data. Suitable methods for addressing the research questions include: structured questionnaires and semi-structured interviews, and interpretive analysis.

Structured questionnaires are appropriate for surveying a relatively large number of Egyptian bank users, and to produce data which can be statistically analysed (Creswell, 2003) using a statistical package such as statistical Package for Social Sciences (SPSS). On the other hand, semi-structured interviews will allow a deeper knowledge about a small number of decision makers in the Egyptian banks and would best be analysed interpretively (Sekaran, 2003). Semi-structured interviews are appropriate for the research; as they allow the researcher to clarify the doubts and answer any inquires the interviewees may have, thus ensure that the responses are properly understood and answered. Not to mention that many ideas can be brought to the surface during the interviews (Sekaran, 2003).

The investigation is conducted in the second main city in Egypt namely Alexandria. The banks sampled will include both public and private sectors. Case studies and interpretive analysis will be also used to analyse qualitative data. The intention is to find similarities and differences between the different stakeholders' perspectives. Finally, based on the statistical and interpretive analysis together with the literature reviewed, conclusion derived and recommendations made regarding e-CRM.

## 1.6   Research Process

The research study was designed and planned to be conducted over four years. Intended stages in the research process include: studying and reviewing e-CRM literature, surveying the banking sector in Egypt using secondary data, making contact with possible case study organisations, designing questionnaires for bank employees and users, distributing, collecting and analyzing questionnaire data, designing interview schedules for use with decision makers in banks, conducting interviews, transcribing and analysing data, integrating findings, writing up case studies, formulating conclusions and making recommendations to support decision making on e-CRM in Egypt, and writing the final version of the thesis.
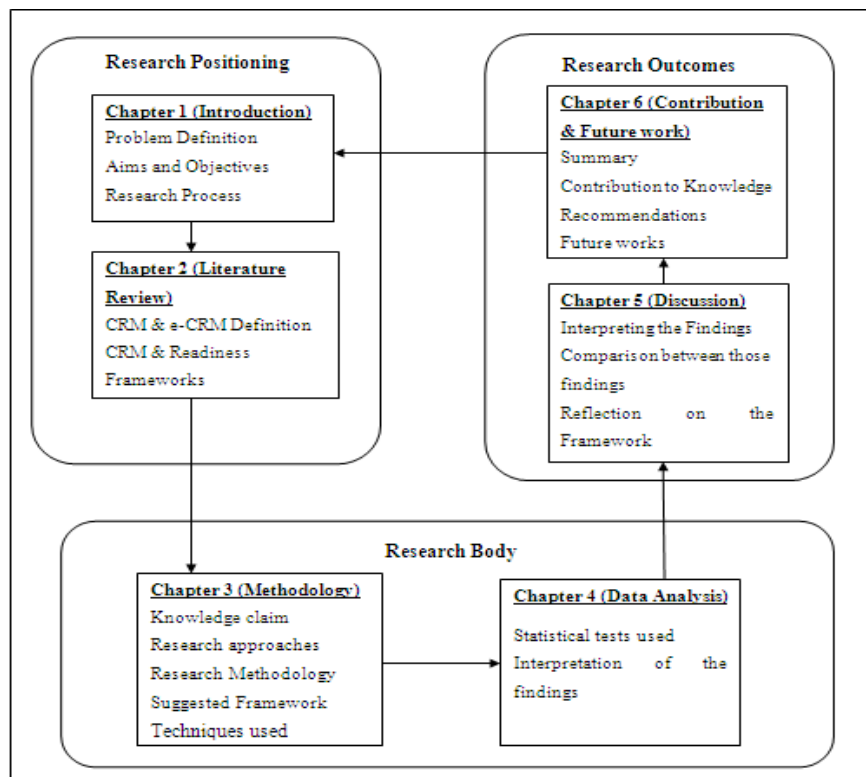


**Figure 1-1:Overall Research Process**

Based on the research question, the thesis objective is to identify the internal factors that affect e-CRM Readiness in banks. This is achieved through the following:

1. Identifying the concept of CRM and e-CRM, CRM technologies, CRM components, assessing e-readiness, CRM and e-CRM readiness models, assessing banks in Egypt, socio-technical perspective, technology adoption, technology adoption in the Egyptian banking, and cultural dimensions in Egypt).

2. Illustrating the external and internal factors that affect e-CRM from literature.

3. Identifying the internal factors that affect e-CRM in Egyptian banks.

4. Developing a preliminary theoretical framework of e-CRM readiness with internal factors illustrated from literature.

5. Conducting an empirical research on five case studies. The empirical part was carried out in five banks, three private banks and two public banks. These banks were selected from the public and private sector to represent the Egyptian banking industry in Egypt, where banks are either public or private sector banks. The selected banks are the largest banks in terms of transactions, number of employees, assets, deposits and loans (Directory of Egypt's Banks, 2006). Also because of their ranking; as they are among the top banks in Egypt. Data were collected from employees in the form of questionnaires and from managers in the form of interviews.

6. Statistically analysing questionnaire data using SPSS.

7. Transcribe interview data and document it using exact quotes from interviewees.

8. Interpretive analysis was done, reviewing interview notes in order to find similarities, differences, and main points emerging from the discussion.

9. Compare the questionnaire and interviews finding by using statistical and interpretive analysis. Public and private perceptions analysis were also derived and compared to answer the research questions.

10. Re-visit the framework on e-CRM readiness in organisations (banks) based on the results of the data analysis.

11. Make recommendations for banking organisations on the e-CRM readiness, and use in the Egyptian context.

## 1.7   Research Aim and Objectives

In the light of the above stated research questions, and what was previously explained the research aims to contribute to knowledge by understanding how various stakeholders' view and rank different readiness factors, what are the main the main factors affecting e-CRM readiness in Egyptian banks, and whether e-CRM readiness affects the quality of service in the Egyptian context.

The research also investigates how different perceptions affect the e-CRM readiness. and aims to provide an insight on whether e-CRM readiness in Egypt affects the e-CRM quality of service.

Moreover, the research seeks to apply a combination of interpretive and statistical analysis, where the mixture of methods used both in the data collection and data analysis is believed to give more strength to the research results, which are then used to review and revise the initial framework in order to act as a basis for recommendations.

The thesis aim is reached through attaining the following distinct but closely related objectives:

1. Investigate the concept of e-CRM and it is perception by different researchers.
2. Derive from the literature the critical success factors for e-CRM.
3. Identify the internal factors that affect e-CRM readiness.
4. Build a preliminary e-CRM readiness framework for banking industry.
5. Identify the organisations that can be used as case studies for the empirical research
6. Compare the empirical research findings with the different components of the primary framework that was developed earlier (step number 4).
7. Refine the preliminary framework based on the results obtained from the empirical research.

## 1.8  Thesis Structure

This thesis consists of six chapters that are organised under three categories of research positioning, research body and research outcomes. Figure 1.2 shows the overall organisation of the thesis. The first chapter provides the context for the thesis and highlights the problem to be addressed. It illustrates the nature of the problem and the background to it. It generally describes e-CRM. It also demonstrates the problem domain, problem definition, research questions, research methodology, research process, research aim, suggested framework for assessing e-CRM readiness, and finally shows the structure of thesis. Chapter 2, Literature Review, discusses the meaning of CRM and e-CRM begins with a general view about the development of e-CRM and illustrates the different readiness and e-CRM Readiness models, assessing banks in Egypt as well as Technology adoption models (TAM), Technology Adoption in the Egyptian Banking Industry and cultural dimensions in Egypt.
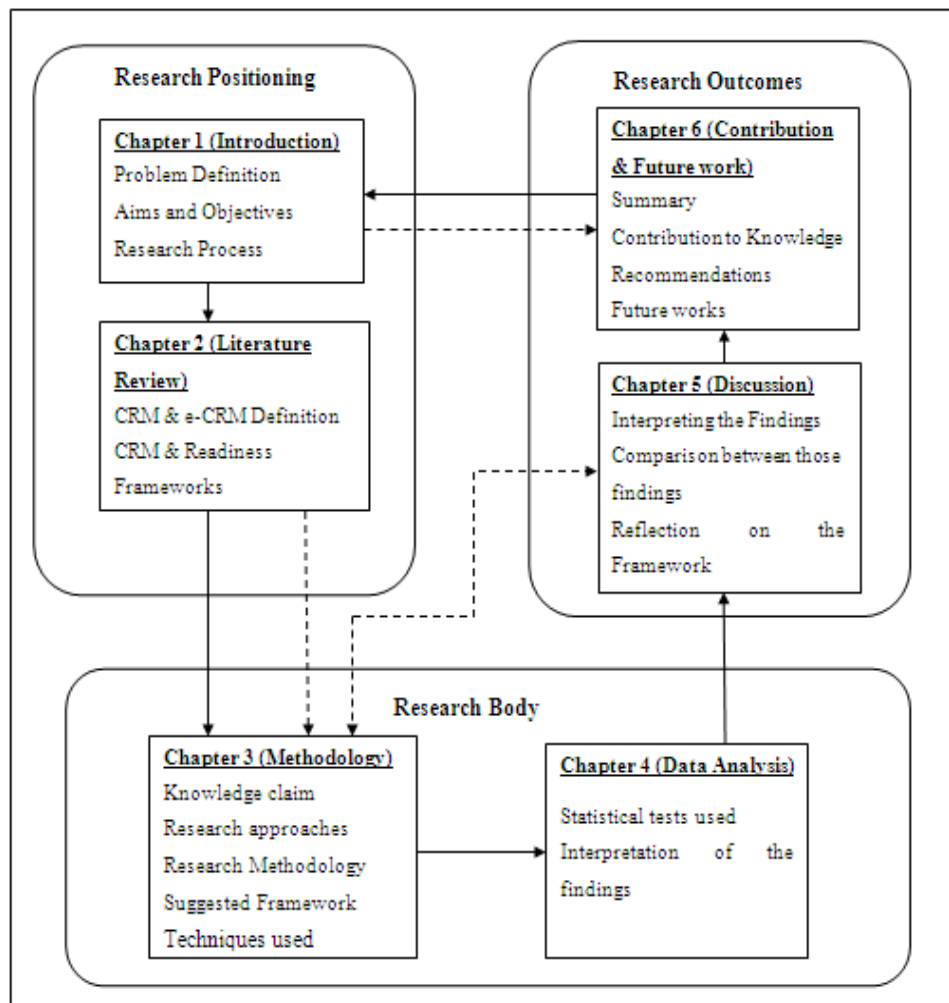


**Figure 1-2 Organisation of the Thesis**

Chapter 3, Research Design, explains the research approaches in general including the research methodology and research process. The current study will be clearly described, by exploring the research methodology and research process used in the study. Then the research methods designed for the research is introduced, with separate sections for both questionnaires and interviews. Chapter 4, Data Analysis and Results, introduces the data analysis process, analyses the data gathered from the five case studies interviews with managers, and reports the main findings of the research.

Chapter 5, Discussion, discusses the findings from the data analysis chapter; it starts with the employees' perceptions, followed by a section on customer perceptions. After that, findings are interpreted, followed by a reflection on the final framework for e-CRM readiness.

Finally, Chapter 6, Conclusions and Future Work, presents the findings of the thesis, answers research questions illustrated in chapter one, proposes recommendations for the banks according to the results, reflects on the research process and finally suggests future work that could be done.

## 1.9   Summary

This chapter highlights the main points of the problem being addressed which leads to the research questions. Also a brief introduction of the research methodology used in this research study is presented. The chapter identifies the aims and objectives of the research and illustrate the thesis structure. In the next chapter, a more-in-depth review of CRM and e-CRM from different perspectives and the barriers of CRM implementation are explored together with the various CRM, e-CRM models, e-readiness assessment models, CRM service quality and the challenges facing service quality. The chapter also explains the technology adoption in developing countries and the cultural dimensions in Egypt.

# 2. Literature Review

**Objectives of chapter 2**

- Introduce CRM and e-CRM from different perspectives.
- Describe the difference between CRM and e-CRM.
- Illustrate the main components of CRM
- Discuss the CRM technologies.
- Discuss the e-readiness assessment.
- Discuss the CRM and e-CRM readiness models.
- Present the CRM service quality and their obstacles.
- Introduce the technology adoption in Egyptian banking industry.
- Present the factors for assessing e-CRM readiness in Egyptian banks
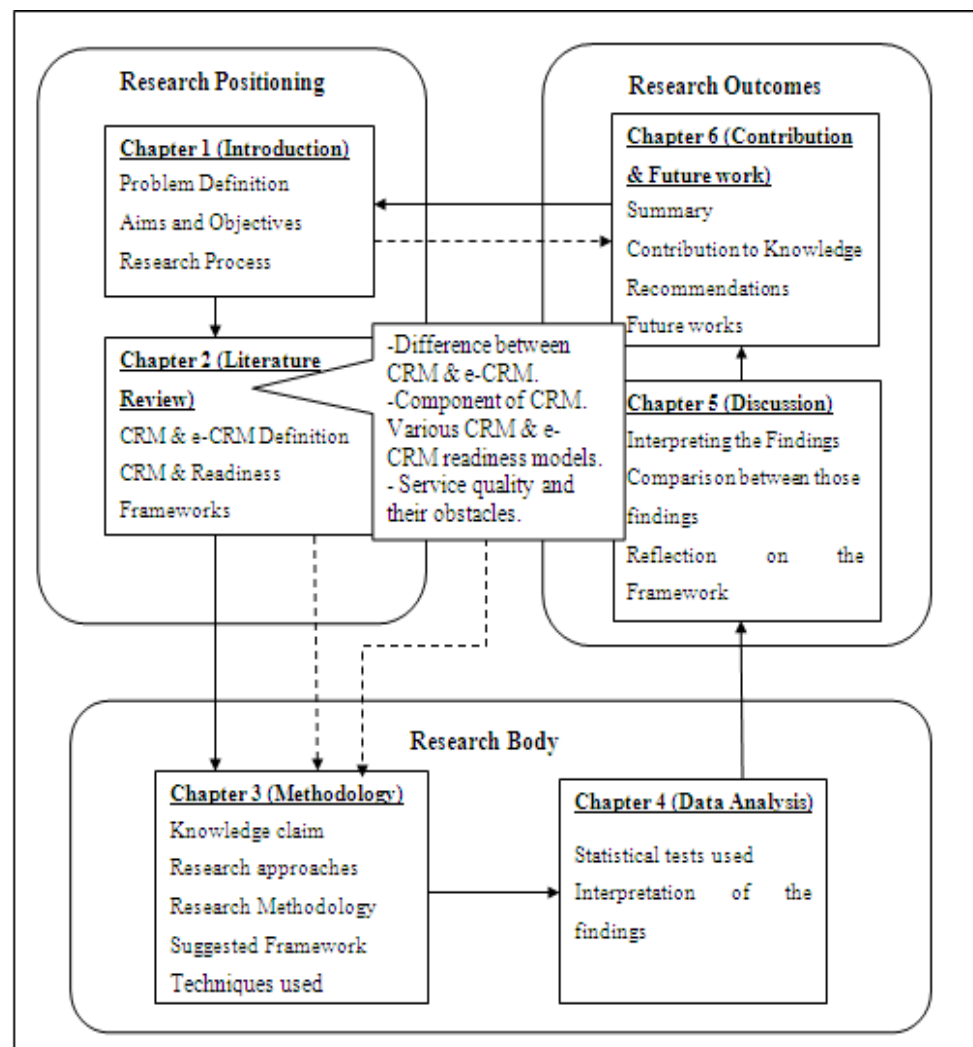


**Figure 2-01**

The chapter identifies the definition of CRM and e-CRM from different perspectives, types of CRM technologies, obstacles facing CRM and e-CRM implementation. E-readiness assessment models are also investigated. After which, the various e-CRM models introduced by other researchers are explored. Technology adoption, Customer satisfaction, cultural context, e-CRM appropriate criteria based on the cultural context in developing countries in general, and Egypt in particular.

## 2.1 CRM and e-CRM

This section identifies the difference between CRM and e-CRM, as well as the development of both

### 2.1.1 Defining CRM and e-CRM

Many researchers have conceptualised CRM in different ways, some of whom define processes that organisations employ to manage its contacts with current and prospective customers. In this case the aim of CRM is to establish and maintain long term relationship with current and prospective customers with organisation, where organisations collect, store, retrieve and analyse information about their customers (Bose, 2002) (Chou et al, 2002) (Kotorov, 2003) (Arndt and Gersten, 2001) (Schellong, 2003) (Levine, 2000) (Swift, 2000) (Rigby et al., 2002) (Ryals and Payne, 2001) (Greenberg, 2002).

Other researchers stress the fact that CRM is an IT enhanced value process, where they identify, develop, integrate and focus on the various competencies of the firm, based on what customers actually want (Dafoulas and Essawi, 2006). They also believe in delivering long-term customer value, at a profit, to well-identified existing and potential customer segments through the use of software, and usually internet capabilities (Starkey and Woodcock, 2002) (Xu, et al., 2002) (Frow and Payne, 2004).

The latter type seems to be better; because it conceptualises CRM as a combination between IT and marketing, and thus explains the importance of CRM in maintaining long-term win-win relationships with customers. CRM is a customer-centric business philosophy that allows the treatment of customers differently by customizing the offers according to their needs.

Accordingly, profitability would be expected to increase through the use of advanced technology.

The Electronic Customer Relationship Management (e-CRM) has been evolving and it seems to be the upcoming trend. It is a collection of techniques used automatically to capture, retain, analyze, and effectively utilize information about customers (Steinmueller, 2002) (Turban, 2006). In other words, e-CRM is a way of building successful relationships with customers, vendors, employees, investors and any other stakeholder via Internet usage (e-CRM Group, 2003:2).

Electronic CRM has also been defined by Forrester Research, 2007 as a web-centric approach that converts CRM transactions into the Internet in order to synchronise customer relationships across communication channels, business functions and customers. Another study at e-World Research defines e-CRM as a business process integrated through the Internet, which involves a series of activities for developing and retaining customers through increased satisfaction and loyalty, which in turn increases a company's sales revenue (eWorld Research, 2003). Moreover, in 2003 the e-CRM Group defines e-CRM as a way to manage relevant interactions across communication channels inside the organisation. This leads to good relationship with customers and employees.

After exploring the various definitions of e-CRM, it seems that CRM and e-CRM increasingly link different parts of customer information, and thereby make it easy and reliable to carry out the daily business operations. E-CRM provides more services to customers over the web, like providing customers with web-based internet browser page to place orders, supplies or complaints. E-CRM provides customers with a reliable anytime anyplace access in order to get control over their accounts. That is why CRM is mainly considered a value added process.

## 2.1.2  The Development of CRM and e-CRM

After explaining the meaning of CRM and e-CRM by various researchers, it is necessary to explore the stages of improvement where organisations become customer centric rather than product centric and the evolution of the organisations main focus

over several years, as shown in table 2.1     At the beginning of the 1900s, the organisations focus was on customer marketing, where organisations have the ability to adapt their offerings to treat each customer as an individual (Dafoulas and Essawi, 2006). After the two World Wars the organisations' focus shifted to manufacturing and industrial development. By 1950, the organisations' focus shifted again to enhance their production processes and marketing efforts. In the 1980s, direct marketing helped to differentiate products from the mass market, service quality and satisfaction which made marketing more focused.

The following decade brought on the information era and the ability to deliver a customized offering to individual customers, where retention of the most profitable customers, became the focus. By the year 2000, communication mediums had changed, which allowed companies to obtain greater knowledge about the customer, thus allowing businesses to target and customise their offerings (Eeden, 2000). The introduction of the Internet allowed CRM to morph into e-CRM, or Web-based CRM (Norton, 2001). E-CRM evolved out of CRM, which was seen as being more call-centre-centric and sales force- automation centric (Goldshlager, 2001). This illustrates that CRM and e-CRM add value to organisations.

**Table 2-01: The evolution of organizations' main focus**

| Year | Focus |
| --- | --- |
| 1900 | Organisations can adapt their products to treat each customer individually |
| After World Wars | Organisations focus on improvement of their products |
| 1950 | Organisations focus on acquisition strategies with new communication media |
| 1980 | Organisations focus more on service quality, and customer satisfaction |
| Mid 1990 | By the advent of the Internet e-CRM evolved out of CRM |
| 2000 | Organisation focus on customizing their offers and customer retention |

## 2.1.3 The Difference between CRM and e-CRM

CRM and e-CRM have been used interchangeably in literature, however they do not mean the same. CRM provides an integration of people, processes, and technologies in every area of business that touches or affects customers. According to (Turban, 2008), CRM is an approach for building and maintaining long term relationship with customers and its organisation. It conveys a tiny proportion of functionality that e-CRM provides.

E-CRM expands the CRM technique by integrating technologies of new electronic channels such as the Web, wireless technology and voice technologies, and combines them with e-business applications into the enterprise's overall CRM strategy, where in CRM customer contact is mainly done through traditional ways such as: stores, retail, telephones and faxes (Dafoulas and Essawi, 2006). Thus, e-CRM can be considered much wider in scope and more comprehensive than traditional CRM.

It can be said that e-CRM emerges from the technologies of the Internet and the Web in order to facilitate the implementation of CRM. The integration of various communication channels such as the Internet, email, telephone, call centre, and fax is essential across all departments in the organisation (Pan and Lee,2003), and this exactly is what e-CRM promises to deliver.

CRM system focuses on products and job functions and the web-enabled applications are designed around one department or business unit in other words it can be used for internal use. On the other hand, e-CRM mainly focuses on customer's needs, in other words it can be used for external use. It also allows for individualized and personalized views based on purchases and preferences, where it allows clients to customize their views unlike CRM, where personalization is not possible since the individual customization requires programming changes (Satish and Strickland, 2004).

## 2.2 CRM technologies

It is important to have solid understanding of how CRM technologies assist the banking sector. Accordingly, it is necessary to provide the relevant background to the CRM technology types. There are three main types of CRM technologies that banks adopt. These types are Operational, Analytical, and Collaborative.

### 2.2.1 Operational CRM

Operational CRM allows the organisation to perform its work in an effective and efficient way through the integration among various communication channels. It aims to support front-office processes (Vervest and Dunn, 2000) (Myers, 1998) (Greenberg, 2001). It focuses on automating business processes, including channels and front-back office integration (Berson, et al 2000). It is a tool for improving customer service and facilitating communication between the client and the customer service officer which should increase the customer loyalty and lead to a better service (Adebanjo, 2003). This allows the organisation to interact effectively with its customers through a variety of channels, some of which are: phone, fax, e-mail, chatting, and mobile devices. It also matches customer interactions consistently across all channels and enhances the organisational performance.

### 2.2.2 Analytical CRM

Analytical CRM builds on the operational CRM and aims at building data warehouses, improving relationships, and analyzing data by managing information concerning customer segments and behaviour using statistical methods (Nykamp, 2001) (Peppers and Rogers, 2001) (Adebanjo, 2003). Analytical CRM is important as it provides products based on the customers' preferences. This is mainly done by classifying customers into different categories or groups according to their profession, social traits and transaction records, which allows the bank to cross, sell the products in a better and effective way.

Data is often stored in a data warehouses, which is best described as a large repository of corporate data (Dyche, 2002). Analytical CRM deals with the strategic, efficient, and effective use of data in order to provide an added value to the customer, and

provide management with decision-making possibilities (Dafoulas and Essawi, 2006). Dividing customers into different categories will allow the bank to cross sell the products in an effective way, and to tailor the offering according to the needs and preferences of each and every customer.

### 2.2.3 Collaborative CRM

Collaborative CRM is a communication center or a coordination network that aims at building online communities, developing business-to-business customer exchanges, and personalizing services (Adebanjo, 2003) (Greenberg 2000). These include communications channels such as the World Wide Web, email, and voice applications. It also includes any function that provides a point of interaction between the customer and the channel (Shahnam, 2000:3).

Collaborative CRM provides the integration between remote banking and phone banking and private banking (i.e. opening an account outside the country, purchasing and selling stocks of foreign entity through the bank), which will give the client a full connection with the banking services all the time. Keen et al. (2000) stated that collaborative CRM focuses on customer integration using a coordinated mix of interaction channels. The integration between traditional banking, phone banking, and Internet banking will give the client a reliable connection with the banking services all the time.

E-CRM expands the CRM technique by integrating technologies of new electronic channels, and combines them with e-business applications into the enterprise's overall CRM strategy (Pan and Lee, 2003). Therefore, after determining the readiness of organisations to implement e-CRM, an organisation should determine the level of readiness, in order to be able to implement CRM either at the operational level, analytical level, collaborative level or an e-CRM.

## 2.3   Assessing E- Readiness

E-readiness could be defined as a sum of conditions met within the market, environment and organisations. The level to which these conditions are met within the market, environment, and organisation indicates the e-readiness of subsystems. E-readiness could also be considered as an organisation's assessment of the ecommerce, managerial, organisational, and external situations in making decisions about adopting e-commerce applications (Molla and Licker, 2005). Choucri et al. (2003) have also defined e-readiness as "the ability to pursue value created opportunities facilitated by the use of the Internet".

Accordingly, we can define e-readiness as the assessing whether organisations are ready to adopt e-commerce through the use of technology. Several large institutions have e-readiness assessment tools that can be used to measure the overall e-readiness of a country. E-readiness assessments differ in their goals; as the choice of the appropriate tool depends mainly on the user's goal and preferences.

An e-readiness model developed by (Molla and Licker 2005) identifies relevant managerial, organisational and contextual factors that affect e-commerce adoption. Their model concluded that in developing countries organisational factors especially the human, business and technological resources and awareness are more influential than environmental factors in the initial adoption of e-applications. Also organisational factors mainly governance, commitment and resources influence the success of e-commerce development (Dafoulas and Essawi, 2006).   In 2006, Rizk has assessed the e-readiness of small organisations in Egypt in the textile field. The study concluded that lack of connectivity, lack of awareness and human capital reduce e-readiness (Rizk, 2006).

Karanasios and Burgess, 2005 identified a framework discussing factors that must be considered in three contextual areas, namely: the enabling environment, market readiness, and the organisation readiness. First, the enabling environment refers to an e-readiness assessment of e-commerce enablers such as supporting industries and the government, in other words the macro environment. The second area, market readiness refers to an assessment of the market environment, for example the competitors,

vendors. Finally the third area is organisational readiness, which refers to an assessment of the organisational readiness to adopt ecommerce for example management's attitude, knowledge, and commitment. The third area shows that organisational readiness can be adapted to organisation readiness for e-CRM implementation with the addition of other factors that affect e-CRM deployment.

Several factors influence the organisation's evaluation of the returns from the adoption and use of technology (Dafoulas and Essawi, 2006). The characteristics of the organisation, its internal factors to effectively adopt the technology and its position in the market are crucial factors. Similarly, an organisation's links with external factors greatly enhances its knowledge pool as well as its ability to manipulate and handle these external factors by learning from others' experiences (Bronwyn and Beethika, 2003).

Many studies in the field indicate that management and organisational factors have a strong influence on successful IT implementations (Mensah and Przasnyski, 1991) (Jarvenpaa and Leidner, 1998). Although it is important to stress the senior management commitment, it might not necessarily produce the best result unless supported by the readiness of the users and the entire organisation. Sustaining initial commitment is a crucial issue because initial commitment would be of limited value if managers withdraw their support at a later stage, as most managers in developing countries do (Galleries et al, 1998) (Munene, 1995) (Vreede et al, 1999). In 1998, Heeks stated that managers in developing countries need to shift from the isolate approach (Heeks, 1998) that they commonly maintain towards IT projects. Instead, they need to get involved actively.

Organisational e-readiness consists of a number of variables, some of which are awareness, managerial commitment, experienced employees, business resources, technological resources, and governance (Molla, 2004) (Karanasios and Burgess, 2005).

External e-readiness variables include market forces e-readiness, supporting industries e-readiness, and government's e-readiness. Market forces e-readiness refers to the assessment of an organisation's business partners such as customers and suppliers. Supporting industries e-readiness refers to the assessment of the presence, development, service level and cost structure of support-giving institutions such as telecommunications, financial, trust enablers, and the IT industry. Finally, government's e-readiness refers to the organisation's assessment of the preparation of the nation state in terms of government commitment and the legal infrastructure to promote, support, facilitate and regulate e-commerce and its various requirements

After investigating the main areas that assess organisational e-readiness, it becomes worthwhile to discuss assessing e-readiness which deals with organisational areas, taking into consideration the previously identified factors. These factors are taken into consideration in the research to assess organisation readiness toward deployment of CRM and are listed below:

- Managerial characteristics include commitment, governance, awareness, perceived value, overall strategy, types of products to be sold through the internet.

- Capital is used to assess resources available to invest in. IT infrastructure defines the ability of organisation to adopt new technology.

- Employees are the organisational staff members.

- Socio cultural factors include customer service, culture and attitudes.

Alter (2004), stated that 63% of organisations that have deployed or are currently deploying some form of CRM systems has failed. This is because the organisations that implemented CRM lack thorough understanding of what customer relationship management initiatives involve (Chen and Popovich, 2003). Another research states that more than 55% of customer service employees believe that CRM failure is due to the lack of any managerial support (Freeland, 2002). This supports the organisational factors in e-readiness model.

It has been found that 70% of CRM solutions that have been implemented by businesses ultimately failed (Feinberg et al., 2002) (Amerongen, 2003, Frook, 2000; Rigby, et al., 2002). Moreover, Gartner claims that 60% of customer relationship management implementations do not achieve the expected return on investment (ROI) and, not surprisingly, Forrester, AMR Research and the Yankee Group all draw similar conclusions (Foley, 2002).

In 2007, a survey reported that 22% of CRM initiatives were not satisfactory (Economist Intelligent Unit, 2007). Another research (AMR Research, 2007) have also reported that in every three organisations that implement CRM at least one fails and that less than 50% of CRM projects meet the organisation's needs. Thus, a comprehensive action plan should be set for aims to increase ROI on current and previous CRM investments, as well as on future ones. This also emphasizes another e-readiness factor, and hereby, stresses the importance of the research at hand.

Employee resistance to change is one of the major risks associated with CRM implementation. In most companies, CRM face stiff resistance from users (Xu et al., 2002), the reason of this could be low perceived value, lack of support from the organisation's top management, personal and demographic factors, and lack of motives to change (Jones et al., Parthasarathy and Sohi, 1997). Although advanced technology had helped them strengthen their relationships with customers, the lack of integration with other organisational systems is one of the most widely cited reasons for CRM failure (Ward, 2001). CRM applications require integrating existing systems for managing content, inventory, marketing and customer data  in order to build a true one-to-one experience with the customer (Amstel et al, 2000) (Turban, 2008).

According to (Chen and Popovich, 2003), CRM implementation depends on the integration of three main dimensions: people, process, and technology, within the framework of an enterprise-wide customer-driven, technology-integrated, cross-functional organisation. Successful implementation is not clear to many organisations, because they do not understand that CRM and e-CRM requires a company-wide, cross-functional, customer-focused business process. Many companies are unable to meet their business goals because they fail to adequately understand their customers and

define how CRM should meet their customers' unique requirements. This is because most managers tend to be too internally focused and department-centric, rather than customer-centric (Truck, 2004).

Additionally, the lack of alignment between the expected outcomes of CRM implementation with strategic objectives, the lack of a formal project evaluation methodology and the lack of benefits of realization processes are among the major failure reasons for CRM programs. A survey by Accenture, Inc., found that 74% of executives believe that CRM fails due to the inconsistent plans execution (Freeland, 2002).

As Dyche (2002) pointed out, many CRM projects failed simply because companies are anxious to implement CRM with currently advanced CRM technologies although they – the companies – do not undertake a thorough assessment to determine whether the company is ready for CRM adoption or not. To avoid this mistake, Dyche, 2002, recommends that CRM-pursuing organisations should thoroughly evaluate their extent of CRM readiness before development. Hence, this research concludes the necessity for research and its concept relates to organisational e-readiness which focuses on organisational factors.

## 2.4   CRM and e-CRM Readiness Frameworks

Ocker and Mudambi (2002) proposed a Framework to assess organisational readiness to deploy CRM software. This Framework answers the questions: What is a firm's current CRM capability, and what changes must be in place before initiating a CRM project.

The Framework has three dimensions: intellectual, social, and technological. Each dimension is comprised of three complementary categories. The intellectual dimension includes the categories of strategy, structure, and planning. Similarly, the social dimension includes the categories of culture, stakeholder interactions, and domain knowledge. Finally, the technological dimension consists of the CRM application, IT capability, and knowledge management categories (Ocker and Mudambi, 2002).

31

In 2005, Leo et al. defined a measuring scale for CRM, which consists of four areas: the first area is key customer focus which refers to customer-centric focus rather than product centric, it includes Key customer lifetime value identification, personalization through use of mass customization (Dyche, 2002)( Hart, 1995). The second area is CRM organisation, which refers to changes in the way that firms are organized; it includes Organisational structure, Organisation, commitment of resources. The third area is knowledge management refers to what has been learned from experience, it include knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness (Dafoulas and Essawi, 2007). Finally technology-based CRM refers to organisation capability to collect, store, analyze, and share customer information in order to meet customer needs, this will leads to retain customers.

In 2005, (Karimi and Sarkhosh, 2005) and (Payane and Frow, 2005) have identified a strategic framework for e-CRM, which includes an adaptation of the framework for different firms, which in turn helps the use of e-CRM. This provides a base line where some important factors may be taken into consideration and relevant factors may be re-considered, modified, or extended before deployment of CRM. Their framework consists of five cross-functional and interrelated processes:

- Strategy development which refers to those managers should consider CRM in the context of their overall business strategies (Gartner Group, 2001) (Kale, 2004).

- Value creation which includes Customer value is the sum of benefits that customers gain from a relationship.

- Firms' value is the current value of benefits that customers create during their lifetime interaction with firms (Park and Kim, 2003).

- Multiple channel integration, refers to develop a relationship-based strategy for existing channels and web-based technologies, which designed to enhance the relationships with customers not only reducing costs.

- Information management process which includes customer data collection from all contact points.

Another conceptual framework suggested by (Tesar, 2006) identified a number of factors which helps to differentiate between e-CRM adopters and non-adopters in manufacturing SMEs. This framework examines the discriminating factors of the e-CRM adoption decision and identifies the essential characteristics of management and the firm in relation to the tendency to adopt e-CRM. It also identifies the level of e-CRM adoption in manufacturing SMEs based on the amount of e-CRM application being used.

All of the above CRM and e-CRM frameworks agree upon the importance of strategy (Kale, 2004) (Gartner Group, 2001). Any organisation should have a business strategy that identify how does business operate. Greenberg's stated that CRM and e-CRM must start with a business strategy, which drives change in the business, and influences work processes. They imply that management support is essential, because it is the managerial role to keep the employees aware and motivated to start the implementing phase.

These frameworks identify the technology as the usage of internet to facilitate contact between customer and organisation. Previous frameworks emphasise the importance of integration between multiple channels, in order to prevent data redundancy. The infrastructure that supports CRM applications plays an important role in the successful implementation of CRM. Infrastructure has two components: (1) a technical IT infrastructure, which is a set of tangible, shared, and physical IT resources and capabilities; and (2) a human IT infrastructure, which includes the necessary individual skills and knowledge required to develop, maintain, and support organisations to leverage the technical infrastructure (Chen and Chen, 2004).

However, the upfront costs for the e-CRM infrastructure can be higher than the individual e-CRM applications (Goodhue et al., 2002). So an organisation's e-CRM strategy will only be successful if its infrastructure supports it (Kumar, 2004).

Although literature has been very rich with available technological systems, technical problems, technology adoption, and e-readiness in general, studies concerned about the e-CRM perception and readiness in developing countries are very few and

superficial. Few of which identify the importance of organisational culture, and none of them actually considered the Egyptian cultural context in particular.

(Ocker and Mudambi, (2002) has revealed the importance of culture in his alignment framework for CRM. Research suggests that between 30 to 75 % of CRM initiatives fail because organisations deploy it out without assessing their cultural readiness and consider CRM applications to be the end of all customer-centric approach (Simpson, 2002). To build a relationship with a customer is not just a technical issue but is rather mainly a social aspect where the most important factor in that objective seems to understand what are the customer values, thoughts, and perceptions and behaviour patterns. Multinational organisations deal with customers with different cultures. E-CRM systems in multinational organisations are built to attract new customers, increase customer value and retain customers.

Stahl (2003) defined corporate culture as the set of shared values and employee actions directed to a specific purpose in the enterprise. In other words, it explains what is important and what is real, and thus one should act in terms of business ethics. Culture determines the perception and use of IT. Culture can influence whether employees are able and willing to use certain technologies and what bearing on the use of IT this is on the organisational and social level.

CRM faces stiff resistance from the IT staff; this leads to organisation failure because CRM was a new cultural initiative. A well-planned training program is one of the solutions to this problem, in order to eliminate or minimize resistance (Witt, 2000). There is a need for top management commitment and organisational support of e-commerce projects, a clear vision and a justified strategy.

According to CGI Group Inc. (2004) (Rigby, 2002) if CRM is implemented with a poor strategy will result in a failure; as strategy is considered the overall plan for deploying resources in order to establish a favourable position (Grant, 1998). According to (Ocker, 2002), a CRM initiative should be considered as a corporate strategy. Greenberg (2002) has also showed that a CRM should start with a business strategy, which requires business changes, and thus influences work processes. These processes

are enabled by information technology (IT) shown in the CRM Pyramid in Figure below 2.2. Since a business strategy is a plan that indicates how a business should operate.
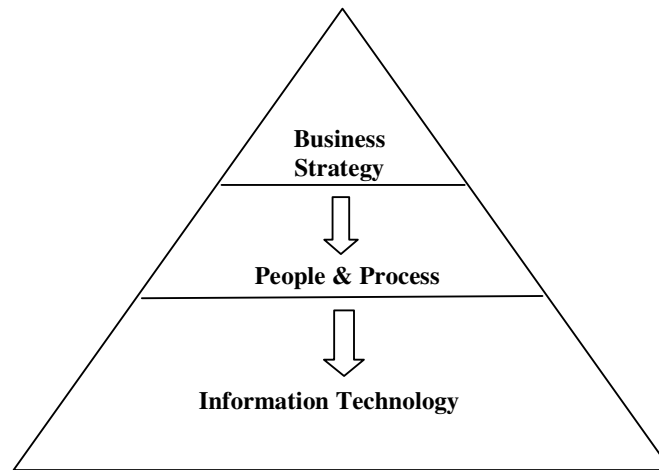


**Figure 0-2: CRM Pyramid (Greenberg, 2002)**

The figure illustrates that any organisation should have a strategy for adopting any new technology, whether hardware or software. This requires restructuring the organisations processes and developing employees' skills. This could be achieved through managing the information technology.

## 2.5 CRM main components

According to (Donaldson and O'Toole, 2002), the content of a CRM strategy consists of six mutually dependent criteria, which are important for the success of CRM adoption. These main criteria that organizations should focus on are listed below:

1. Emphasis on quality. Poor service is the dominant reason for losing business. The core product alone is no longer enough, and service quality is stressed as the key to successful business.

2. Measure customer satisfaction but manage customer service. This implies understanding and defining the various benefits that a prospect expects prior to purchase and the management of the gap between expectations and performance after the purchase process.

3. Invest in people. Internal relationships are as important as external relationships. Implementation of a relationship orientation can only come from the people in the organisation understanding the objectives set and meeting the required standards.

4. Maintaining dialogue with customers. Building long-term relationships is the key

issue in CRM. Companies that listen and adapt to preferences of individual customers have a higher propensity to retain them and make them loyal.

5. Setting realistic targets and assessing performance. Organisations must have an understanding of customer perceptions of the various elements in the offering and the elements important to each individual customer.

6. Relationship-based interfaces. This means being in touch with both internal and external customers in a responsive and flexible manner. In practice, there is a gap between what firms do, what they should do, and what is most desirable to do. The means of communication should be adapted to the needs of the individual customer.

Cox and Dale (2001) believe that physical service environment and e-commerce environment are different. In the physical environment, there is human interaction between service providers and customers, where in e-commerce environment there is no human interaction. In other words cleanliness, comfort, friendliness, care commitment and flexibility are not relevant in e-commerce, except for contacting customers by emails or telephone.

Another difference is that organisations are capable of customizing their products and services according to their customers' preferences. On the other hand in the e-commerce environment, the opportunity to customize is not automatic because the website must collect customer information then processes this information to provide customization.

The Internet changed the way that banks conduct business with their customers. So many banks have used the Internet as a new channel to provide their customers 24 hours services a day. Customers can access more financial information and wider range of services. The competitive advantage of the banks through Internet resides on the services provided to customers but not the attraction of Internet (Furst et al., 2002).

Internet banking is described as the use of the Internet as a delivery channel to offer their customers a variety of services 24 hours a day which include traditional ones, such as opening a deposit account or transferring funds among different account, and new banking services, such as electronic bill presentment and payment (Jun and Cai, 2001) (Furst et al., 2002).

Stevens (1995) stated that the lower the expectations the customers have, the better their perceptions of the actual service would be. On the contrary, the higher their expectations about what will happen, the better their perceptions of the actual service. This calls for the need of measuring the quality of service provided to customer; especially as it is the major success of CRM ad e-CRM.

## 2.6   CRM Service Quality

The service quality is the result of the comparison that the customers make between their waiting and their perceptions of the service carried out (Lehtinen and Lehtinen, 1982; Gronroos, 1984; Parasuraman and al.. 1985, 1988, 1994). Accordingly, the customers' perceived quality is the result of the evaluation between expected and of what was carried out by taking account of organisation image influences.

According to the CRM definition quality of service is a main concern for the success of the CRM. Service quality has become an important factor that affects the customers' decision to select the bank. This has led a number of authors to investigate the main factors that affect the quality of service. These factors are further discussed in chapter3, table 3-2.

As a pioneer in the service quality studies, Parasuraman (1985) has identified ten variables that he believed to affect the quality of service: tangibility, competence, reliability, responsiveness, courtesy, credibility, accessibility, communication, understanding customer, collaboration, and continuous improvement. Zeithaml, Parasuraman and Berry developed SERVQUAL framework in 1985. It decomposed the quality into five main dimensions that would affect any service provided to users, and thus CRM and e-CRM in particular. These dimensions are listed below:

- Tangibles refer to the appearance of physical facilities, equipment, personnel, and communication materials

- Responsiveness refers to the willingness to help customers and provide prompt service

- Reliability is the ability to perform the promised service dependably and accurately

- Assurance refers to the knowledge and courtesy of employees and their ability to inspire trust and confidence

- Empathy refers to the caring, individualized attention the firm provides its customers. This dimension interacts in the minds of customers with other factors, such as: word of mouth, personal needs past experience and external communications to create a view of what service is expected.

SERVQUAL is a potentially useful approach to consider as a complement to current approaches for assessing quality for organisations in general and banks in particular (Cowing and Newman, 1995). In 1995, Mosad has identified a number of dimensions as the key factors that customers use to evaluate the banks' quality of service and accordingly, their bank choice. These dimensions are accounts, transactions accuracy, availability of the information technology, and effectiveness in correcting mistakes (Mosad, 1995).

In 1998 Doll and Torkzadeh have studied service quality and have identified five dimensions that affect the quality of service, namely content, accuracy, format, ease of use and timeliness, which they believed were important factors for on line system quality. In 2000, Laser et al. have also used the SERVQUAL to measure the effect of service quality in private banks on customer satisfaction.

(Bahia and Nantel, 2000) has also measured perceived service quality in banks using six dimensions. These dimensions are access, tangibility, reliability, assurance, price and service portfolio. Moreover (Oppewal and Vriens, 2000) have suggested four dimensions to measure the service quality, namely the accuracy, competence, tangibility and access.

Finally, in 2001, Jun and Cai have proposed six dimensions that they identified as the key factors for the quality of service. Content and ease of use were used to determine the use for system quality, while content, ease of use, access, courtesy, responsiveness and reliability were used for customer service quality. These dimensions (Jun and Cai, 2001) were proposed to evaluate the service quality for online banks and to compare quality of service provided by public and private banks. They are also used to investigate how do employees and bank customers perceive the quality of service offered.

## 2.7   Challenges of Service quality

Though service quality has a high potential, it still faces a number of obstacles (Ghobadian, Speller and Jones, 1994). Lack of visibility is considered one of the major challenges, where service quality problems are not always visible to the service provider. Difficulties in assigning specific accountability are another obstacle, where customers overall perception of service quality is influenced by experience at different stages of service delivery. However, it is hard to attribute quality problems to a particular stage of service delivery.

The effort required for improving quality of service is normally a tedious process and often consumes a lot of time to get resolved. This is because service quality is more dependent on people than on systems and procedures. Attitudes and beliefs take longer time to change than procedures. Finally, control of service delivery and quality is complicated by the individual and unpredictable nature of people. The people element encompasses both customers and front-line staff of the service organisation (Ghobadian, Speller and Jones, 1994). Accordingly, the success of electronic service quality requires a set of considerations, some of which are listed below.

First, service quality problems normally arise in organisations that do not focus on determining customer's needs and preferences. Second, employees dealing with customers should be well trained because those who are not well trained are more likely to face difficulties when dealing with customers. Top management should also motivate and empower customer service employees by delegating decision-making authority to them.

A clear service quality vision would also help organisations enhance and improve the quality of service. This is particularly important because the absence of a clear vision and definition of service quality leaves room for employees to have their own interpretations of service quality.

This simply means that service quality is considered a main component of CRM which leads to the success of its adoption. Accordingly, by illustrating the obstacles of achieving high level of service quality, CRM adoption and its core components seem to provide potential solutions to these obstacles and should receive more attention.

## 2.8 Socio-technical Perspective

Banking systems can be considered as socio-technical systems in which people interact with technology in a framework of financial services. In 1964, Leavitt suggested that there should be a balance between social and technical perspectives in order to understand any organisational problem. Leavitt's framework has five interrelated components: task, technology, structure, people, and organisational culture (Leavitt, 1964).

The cultural component is a socio-technical system component that shows that systems will differ based on their cultural context. This stresses that fact that systems developed and applied in a cultural context cannot be easily adopted in another, without considering the cultural aspects (Geoffrey et al., 1997).

In the 1960s, Trist has also emphasised that socio-cultural, organisational, and technological factors are all interrelated and are affected by the environment in which it operates (Okunoye, 2001).

Decision making process in general is often treated technically. Decision makers tend to favour investing in assets that can be easily measured and have the potential to create short term profits, and good returns. Decision makers sometimes treat organisational problems as if they could be solved by technical solutions alone. But, organisations are complex systems with different sets of variables that are social as well as technical and interact in ways which often produce significant changes in process or structure.

## 2.9 Technology Adoption

Research on technology adoption processes is relatively rare (Woiceshyn, 2000). Earlier studies have mostly explained the process as one of political influence (cf. Dean, 1987). Several studies have focused on the role of technology supporters (Burgelman 1983; Howell and Higgins, 1990; Kanter, 1983). Technology adoption in any industry has to be understood and planned in relation to organisations' broader objectives. Information Technology provision, should be linked to overall business strategy in a coherent manner (Beeson et al., 2002).

Adoption of a new technology is often expensive (Hall and Khan, 2003). The observable determinants of new technology adoption are the benefits gained by the user and the costs of adoption. These benefits are simply the difference in profits when an organisation migrates from an older technology to a new one. In the case of customers, the benefits vary from decreased costs and increased productivity to better processes. However, these benefits may also include such "non-economic" factors as the satisfaction of being the first on the block to be converted from the older technology to the new one (Hall and Khan, 2003).

Although technology acceptance and cultural aspects have been key components of information technology research, and have been extensively studied by different researchers, little has been done to integrate these two areas. There have been a number of different behavioural frameworks that have been utilized to study the acceptance of technology. Some of these frameworks are: the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Technology Adoption Framework (TAM) (Abd El Aziz, 2009).

The key application of the theory of TRA is the prediction of behavioural intention, spanning predictions of attitude and predictions of behaviour. The separation of behavioural intention from behaviour allows for explanation of limiting factors on attitudinal influence if people evaluated the suggested behaviour as positive, and if they think their significant others wanted them to perform the behaviour, this results in a higher intention and they are more likely to do so (Azjen, 1980).

Theory of Planned Behaviour (TPB) is an extension of the TRA introduced by Ajzen; since behavioural intention cannot be the only determinant of behaviour. He added a new component which is, perceived behavioural control, to cover wishful behaviours for predicting behavioural intention and actual behaviour.

UTAUT aims to explain user intentions to use an information system and subsequent usage behaviour. The theory holds that four key constructs (performance expectancy, effort expectancy, social influence, and facilitating conditions) are direct determinants of usage intention and behaviour. Gender, age, experience, and voluntariness of use are

posited to mediate the impact of the four key constructs on usage intention and behaviour.

The Technology Acceptance Framework (TAM) is an information systems theory that frameworks how users come to accept and use a technology. In 1989, Davis suggested that successful adoption of an application depends primarily on the functions it performs, and secondarily on how easy it is to perform these functions. Davis believed that users' acceptance is the biggest barrier to the success of new information technology (Davis et al., 1989)

Of these frameworks, Davis's Technology Adoption Framework (TAM) is considered the most widely accepted framework; because although it has equal predictive power to TRA and TPB, yet it is more economical (Taylor and Todd, 1995, Mathieson, 1991). It is a widely accepted framework because although it has a predictive power, yet it is more economical (Taylor and Todd, 1995, Mathieson, 1991).

This framework in particular highlights the importance of understanding and investigating users' perception; as it is a key factor to the attitude towards the adoption of new technology. This in turn helps to understand why employees, customers and decision makers resist using the E-CRM, and how they respond to the E-CRM (Crosby and Johnson, 2000) and emphasizes the importance of measuring the different stakeholder perceptions.

## 2.10 Technology Adoption in Developing Countries

The general understanding of TAM is based on the belief that the high costs of the technology adoption like CRM are justified by an increase in customer satisfaction which leads to higher customer loyalty and possibly new customers (Seung-jun Yeon, 2007). A new technology helps organisations to increase customer satisfaction, which affects customer behavioral intent such as customer loyalty and retention (Heskett et al., 1994) (Hallowell, 1996) (Hennig-Thurau et al., 2002) (Ranawera and Prabhu, 2003).

Customer satisfaction normally motivates organisations to take the advantage of adopting a new technology (Kamakura, Mittal, and Mazzon, 2002). Since customers in

the banking sector are capable enough and would easily switch to competitors, it is crucial for banks to adopt new technologies in order to strengthen relationships between the business and its customers.

## 2.11 Technology Adoption in the Egyptian Banking Industry

Most organisations in developing countries, especially in Egypt, had either decided not to integrate their e-CRM system with other functions or had difficulties in doing so (Goodhue et al., 2002). They implement e-CRM simply to be eligible for benefiting from the vendors' promises. This causes lack of integration and interaction between the company and its partners and customers. Customer data can be redundant as these data can be stored in various systems that are not linked with each other in different departments of the same organisation. Channels are the capability of a CRM tool to support cross-channel communication which requires extensive data integration from all interaction points through all phases of a customer lifecycle; especially in developing countries since they have different technological, cultural and political variables that affect the implementation of CRM. In general, developing countries face different obstacles when implementing western technologies and information systems that have been created in developed countries (El Sawah et al, 2008)

## 2.12 Assessing banks in Egypt

The Egyptian banking sector is considered one of the largest in the region. In the last decade Egypt's economy has been moving towards decentralizing, deregulating and liberalizing (El Nawawi and Ismail, 1999). In 2003, Egypt was ranked number four with the value e-commerce less than one hundred million dollars. Emirates, took the first place, followed by Kuwait and Saudi Arabia (El Shenawi and Rwegasira, 2005).

During the first half of the $20^{th}$ century, the banking sector has grown quickly (Dafoulas and Essawi, 2007). In 1956, there were a total of 32 banks operating in Egypt; they were all foreign except for the National Bank of Egypt and Bank Misr. In 1961, the Central Bank of Egypt was established to act as the only responsible entity for setting banking system regulations (Kamel and Hassan, 2003). Egyptian banking sector has further expanded in the mid 1970s, and it divided banks into three categories; Commercial banks, Business and investment banks, and Specialized banks

(Dafoulas and Essawi, 2007). Banks in Egypt can also be classified as public sector, private and joint venture. The degree of customer satisfaction and customer loyalty to a specific bank has been a major concern for many Egyptian banks.

The banking sector is strongly affected by political, economic, social and technological factors (Khosrowpour, 2006). The current environment includes both opportunities and challenges. So banks realised that in order to be competitive, they have to build long term relationship with their customers and make them loyal .

First, political factors play a significant role on the development and growth of the banks. Since in 1950 the Egyptian banks were public banks, where private banks have been established in mid of 1970 and by 2002 a number of international banks entered the market (Business today, 2001). Then, Egypt has been following economic reform programs to establish a stable and credible economy since the mid 1980. Egypt success on macroeconomic indicators are positive, where the growth rate is 6.5%, inflation rate is 2.8% (BSAC, 2001). The growth rates of bank's assets, deposits, and loans are direct reflections of economic growth of the banking sector.

Social factors are also a major, where the Egyptian population of more than 68 million represents many attractions for local and foreign banks to expand their business. Egyptian people are reluctant in using technology in banks they prefer to deal cash. This is due to culture, level of awareness (Business today, 2001).

Finally, Technological factors also affect Egypt as a developing country. Egypt has invested on technology and information infrastructure since 1985. During the period 1985-1995 many projects were established in government, public and private sector organisations seeking for development. These projects included human, technology and financial infrastructure development (Kamel, 2009).

Banking industry has been affected by the technology evolution that transformed the way banks deliver their services. The rate of information and communication technology adoption in the banks increased (Dafoulas and Essawi, 2007) due to the governmental support in improving the infrastructure (MCIT, 1999). Despite these improvements, banks are still in the early stages in terms of banking technology

infrastructure necessary for large scale efficient call centres and e-banking operations (Magued, 2001) (business today, 2001). Call centres were introduced in 1999, when many banks started installing interactive voice response (IVR) systems. Internet access found its way to Egypt in 1993 through the governmental and educational organisations, where in 1996 the government authorized the private provision of internet service.

According to (Kamel, 2003) Egypt realized the need for improving its infrastructure. Bank changes should also take human resources development need into consideration. Reviewing studies e-CRM readiness, explains the existence of a research gap if one's aim is to assess internal factors affecting e-CRM readiness. As discussed earlier, literature has been very limited with stakeholder analysis regarding the e-CRM readiness in the cultural context. Previous studies focused on technical aspects of corporate Web presences (e.g. design, usability, features, and the acceptance of Web pages) on marketing issues (e.g., customer behaviour, satisfaction, and retention, as well as trust). However, there has been little work assuming both social and technical perspectives (Tan, et al., 2002).

There are many internal factors for assessing e-CRM readiness, some of which are listed below:

▪ Technology and infrastructure, which refer to the existing systems in organisations and the integration between these systems in different departments inside the same organisations (Kumar, 2004) (Chen and Chen, 2004).

▪ Scalability refers to collection of information about customers and classifying them into groups according to their preferences, permissions and information that may be useful to them. This requires integration between back office and front office. This facilitates changes in information from multiple databases (Micro strategy, 2000).

▪ Number of channels through which the organisation reaches their customers such as branches, call centres, internet banking should be integrated in order to provide the customer with a comprehensive view of the bank without any confusion. This integration also prevents data redundancy.

- Technology Perception refers to how employees perceive the technology (Renner, 2001) (Drucker, 2000).

- Organisational culture refers to well-trained, skilled employees with professional expertise. A successful CRM strategy relies on highly motivated and competent staff to maximize the potential that the technology brings to the business. CRM initiatives require that each and every employee would understand the purpose and changes that CRM will bring. Since culture has a great influence on employees, and whether they accept technology or not, culture can be considered a critical success factor of e-CRM (Ali and Altai, 2005) (Simpson, 2002) (Coltman, 2006).

- Awareness reflects the degree of employee understanding of technology and realizing the benefits of their organisation in implementing a specific technology. On the contrary, some organisations rush to adopt CRM regardless of whether it suits the products before studying it suits them or not (Renner, 2001).

- Corporate Strategy refers to the identification of the organisation's strategy, which explains how they do their business according to both the employees' and the customers' perspectives (Chen and Popovich, 2003).

- Commitment refers to the clarification of the organisation vision, mission and strategy that supports e-commerce and project evaluation (Gartner, 2003).

- Cost concerning CRM implementation can be summarized in terms of cost reduction, profitability, customer satisfaction, and loyalty (Timm and Jones, 2005) (Goodhue et al., 2002) (Forrester Research, 2003) (Swift, 2001) (Curry and Kkolou, 2004).

Accordingly, in order to adopt CRM, decision makers should take the previous factors into consideration.


## 2.13 Cultural Dimensions in Egypt

The huge amount of information about customers makes it difficult for organisations to extract valuable information. To remedy this problem, many organisations use e-CRM. However, the rate of failure is high (Gartner Group, 2002). Companies, who buy such packages, fail to receive the full benefits of using them and many companies do not

even purchase e-CRM. The organisations must define and develop a business strategy as well as a supporting infrastructure for that strategy in order to be successful with CRM (Chaudhry, 2009). Therefore, this research investigates the reasons for such failure by examining the degree of organisational readiness to deploy e-CRM. This investigation will identify a framework for assessing e-CRM readiness in organisations and the effect of e-CRM implementation on service quality

To sum up, Egypt is one of the major countries in the Middle East and has a great potential to expand in retail banking activities because, it has the highest population among the Arab countries. Moreover, the rapid development of IT networks and telecommunications in the last 10 years is a key to develop electronic payment systems (Tooma and Grosser, 2005). However, although some banks in Egypt have recently recognized the importance of CRM, some of these CRM systems are not necessarily as effective as they could be. Most banks prefer CRM to be offline for security reasons. But customers prefer CRM systems to be electronic, so that banks can better serve their customers at any time and in any place, as the customers need them.

The Greet Hofstede analysis for Egypt shows that large power distance (PDI) (80) and uncertainty avoidance (UAI) (68) are the predominant characteristics for this region. This indicates that it is expected and accepted that leaders separate themselves from the group and issue complete and specific directives.

The high Power Distance (PDI) ranking indicates a high level of inequality of power and wealth within the society, where Egyptians seem to expect and accept that leaders will separate themselves from the group, as part of their cultural heritage.

The Egyptian high uncertainty avoidance index, lead to the society being highly rule-oriented with laws, rules, regulations, and controls in order to reduce the amount of uncertainty, while inequalities of power and wealth have been allowed to grow within the society. Egyptians tend to control everything in an attempt to avoid uncertainty. As a result of this high Uncertainty Avoidance characteristic, the society does not readily accept change and is very risk adverse.

The Masculinity index (MAS), the third highest Hofstede Dimension is (52), only slightly higher than the 50.2 average for all the countries included in the Hofstede MAS Dimension.

The lowest Hofstede Dimension for Egypt is the Individualism (IDV) ranking at (38), compared to a world average ranking of (64). This translates into a Collectivist society as compared to Individualist culture and is clear in a close long-term commitment to the group, which could be one's family, extended family, or extended relationships. Loyalty in a collectivist culture is obvious, and over-rides most other societal rules.

This simply highlights the necessity to understand the Egyptian culture before making an attempt to adopt a new technology. Banks should first consider the high avoidance to the uncertainty and resistance to change. Technology providers should create awareness, promote the new technology, and highlight perceived gains. They should also make it clear that the logic behind adopting a new technology is to make it work for people and not the other way round. Decision makers must ease the minds of employees, customers, and other business partners regarding implementing e-CRM. Decision makers should also consider their customers as part of a well tied family rather than just an individual. They should provide collective benefits.

## 2.14 Summary

This chapter introduces the definition of CRM and e-CRM defined by other researchers, the main components of CRM and CRM technologies. It also discusses the CRM and e-CRM readiness frameworks as shown in table 2.2 which identifies various frameworks and presents the factors for assessing e-CRM readiness in Egypt as shown in table 2.3. Also CRM service quality and challenges are introduced together with the technology adoption in Egyptian banking industry. The next chapter will explain the methodology that was followed in order to attain the research objective.

**0-3 Summary of various frameworks**

| Framework | Author | Focus |
|---|---|---|
| CRM Readiness Factors | Ocker and Mudambi (2002) | Alignment framework for CRM |
| Measuring Scale for CRM | Leo et al (2005) | Focus on four areas: key customer focus, CRM organisation, knowledge management and technology based CRM |
| Strategic framework for e-CRM | Kaimi and Sarkhosh (2005) | Strategic CRM |
| CRM strategy and implementation | Payne and Frow (2005) | key cross-functional CRM processes |
| Conceptual Framework | Tesar (2006) | Distinguish between SMEs that adaptes CRM from those that don't adapt |
| A framework of dynamic customer relationship management | Park and Kim (2003) | Customer information Management |
| A Framework for CRM Success | Almotairi (2009) | The CRM implementation phases The CRM success factors |
| A framework for assessing eCommerce adoption in developing countries | Molla and Licker (2005) | Identifies relevant managerial, organisational and contextual factors that affect e-commerce adoption |
| Conceptual e-readiness framework | Karanasios and Burgess (2005) | Framework consists of three contextual areas (enabling environment, market readiness and organizational readiness) |
| SERVQUAL framework | Zeithaml et al (1985) | Factors that affect quality of service |

**Table 2-4summary of previous studies on CRM and e-CRM success/failure factors**

| Factor | Source |
|---|---|
| Technology perception and Infrastructure | (Kumar, 2004) (Chen and Chen, 2004) (Renner, 2001) (Drucker, 2000) (Greenberg, 2002) |
| Scalability | (Micro strategy, 2000) |
| Organisational culture | (Ali and Altai, 2005) (Simpson, 2002) (Coltman, 2006) (Chaudhry, 2009) |
| Commitment | (Gartner, 2003) (Saloman et al, 2005) |
| Awareness | (Renner, 2001) (Drucker, 2000) |
| Employees resistance to change | (Witt, 2000) |
| Cost | (Timm and Jones, 2005) (Goodhue et al., 2002) (Forrester Research, 2003) (Swift, 2001) (Curry and Kkolou, 2004) |
| Corporate Strategy | (Chen and Popovich, 2003) (Kumar,2004) (Greenberg, 2002) CGI Group Inc. (2004) (Rigby, 2002) |
| Tangibility, competence, reliability, responsiveness, courtesy, credibility, accessibility, communication, understanding customer, collaboration, and continuous improvement | (Parasuraman, 1985)( Zeithaml et al, 1985)(Doll and Torkzadeh, 1998)(Laser et al, 2000) (Bahia and Nantel, 2000)(Oppewal and Vriens, 2000) (Jun and Cai, 2001) |
| Timelines | (Doll and Torkzadeh, 1998) |
| Price and service Portofolia | (Bahia and Nantel, 2000) |
| Accuracy | (Oppewal and Vriens, 2000) |
| Content, ease of use | (Jun and Cai, 2001) |

In conclusion, CRM and e-CRM are important issues that have been studied extensively in literature, which lead to CRM readiness and service quality being among the main points of concern. However, a clear gap remains unresolved; especially in developing countries.

# 3. Methodology

**Objectives of chapter 3**

- Illustrate the types of Epistemology and Knowledge claims.

- Discuss the research approaches.

- Presents the research process

- Illustrates the initial research focus

- Discuss the research methodology in the current study

- Describe the conceptual framework

- Illustrate the research process in the current study

- Describe the data collection methods and techniques used in the current research.
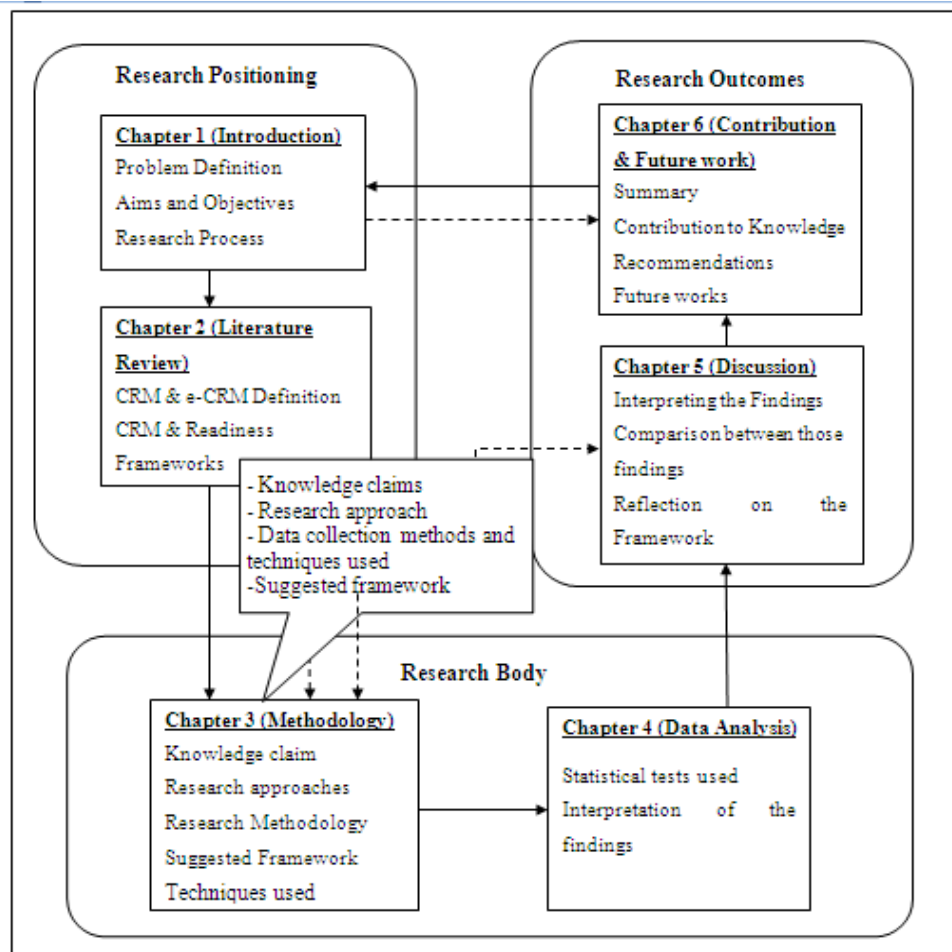


**Figure 3-1**

Methodology refers to the methods and steps used to conduct a research. It is the research design that selects specific methods and links them to the desired outcomes (Burrell and Morgan, 1979) (Sekaran, 2003). The purpose of this definition is to clarify the aim of this research and the methodology undertaken in order to achieve the

51

research results. It describes how well the research design fits within the theoretical frame reviewed in the previous chapter, answers the research questions, and recommends solutions to the problem at hand.

This Chapter will begin with a review of the different research approaches including the main research methodology and research process in general. Section 3.2 will elaborate on the current study by discussing the research methodology and research process used in the study. Then, the design of the framework, questionnaire, and interview will be briefly explained in order to give solid basis for the following chapters.

## 3.1 Epistemology

Goles and Hirschheim (2000) define research ontology as the part of the reality which researchers choose to address. According to their study, there are two extreme positions:

- Realism, which assumes that the universe consists of objectively given unchangeable objects and structures that exist independent of the observer's opinion.

- Relativism (instrumentalism), which holds the reality, and is mainly subjective. That is, it expresses how concepts are perceived in reality.

Assumption about knowledge has been referred to as research epistemology. That is, the nature of knowledge, and how it can be obtained (Hirschheim, 2000). Creswell has defined four different schools of thought about knowledge claims:

- Postpostivism refers to thinking after positivism; as researchers cannot be positive about their claims of knowledge. In this assumption, causes that affect outcomes are examined, variables are quantified out of the ideas, and objective reality is examined. Therefore, it is connected to quantitative research.
- Constructivism refers to studies where researchers try to understand the world in which they live. In this sense it is connected to qualitative research but they are not the same.

- Advocacy/Participatory is a research that involves changing the lives of participants, organisations, and the researchers themselves. Accordingly, it goes beyond qualitative and quantitative approaches.

- Pragmatism gives special attention to the research problem. It applies mixed methods, where the researcher can move freely between quantitative and qualitative assumptions, different methods, techniques, and procedures that best suit the research needs.

In 1979, Burrell and Morgan defined epistemology through two streams of knowledge:

- The Positivistic approach identifies what occurs in the social world by seeking regularities and casual relationships between the elements that represent the social world. It is more inclined towards quantitative research and is based on the significance of observations of the external reality. Hussey and Hussey (1997) refer to the positivist approach as a way of investigating human and social behavior. It focuses on what is general and representative in order to make it possible to generalise and predict.

- Interpretivism approach explains that social world is mainly relative and can be only understood from the point of view of individuals who are directly involved in the activities studied. This approach mainly deals with qualitative methods, where it reveals multiple and socially constructed realities; such as language, consciousness and shared meanings, where it can be determined through interactions, and the meanings that people assign to them. The main focus is on what is specific in order to understand and generate interpreted meanings. It does not predefine dependent and independent variables, but focuses on the full complexity of human sense-making as the situation emerges (Kaplan and Maxwell, 1994**).**

Having identified the different research approaches, the potential of adopting pragmatism approach have been selected, which allows the use of structured questionnaires, semi-structured interviews, and direct observation as the main source of data collection. There are three main types of research, quantitative research, which has been available to researchers for years, qualitative research, which emerged thirty or forty years ago (Becker et al. 1961), and mixed methods, which is still new and

developing. Accordingly, the research approach is selected based on the relevance and appropriateness to the research topic, objectives and questions.

## 3.2 Research Approach

There are three main types of research approaches, quantitative, qualitative and mixed method. Quantitative research normally deals with objective data and explicit knowledge. Qualitative research involves dealing with subjective data and implicit knowledge. Finally, the mixed methods, which is still relatively new allows the researcher to use different methods and assumptions. There are different ways data collection, some of which are questionnaires, interviews, focus groups, documentations, observation and field notes (participant and non participant observation). The study uses three different research methods; questionnaires, interviews, and observations (Stewart, 2000) in an attempt to validate the data obtained.

### 3.2.1 Quantitative Approach

The quantitative research methods are more suitable if there was evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from the sample to a stated population (generalization). Since positivism provides an independent objective view of what is being studied, it helps to enable quantitative measurement and identify casual relationships. Moreover it makes it more possible to reach a sufficient large sample size, to make generalizations in human and social behaviours (Hussey and Hussey, 1997) (Hyde, 2000). Finally, the main advantage of quantitative method is the possibility to measure the reactions of many people to a limited set of questions thus facilitating comparison and statistical aggregation of data to get a broad, generalsable set of findings (Sekaran, 2003).

Based on the different argument mentioned above, this research used a questionnaire in order to guarantee the researcher's unbiased administration, the ability to test the relationship between variables and ability to generalize the finding to different financial banks in Egypt. Strategies associated with the quantitative approach include statistical analysis, experiments, surveys, and frameworks, and accordingly, may include:

▪ **Questionnaires:**

Questionnaires are considered as a list of questions sent to specific individuals. The questionnaire is pre-designed written set of questions to which respondents record their answers (Sekaran, 2003). The questions follow each other in a logical order. Questionnaires are considered as an efficient data collection mechanism when researcher knows exactly what is required and how to measure the variables of interest. In the current study, questionnaires were distributed and collected in person in order to increase chance of a high response rate.

The research uses three different questionnaires discussed below in section 3.9. The results of those questionnaires represent evidence in confirming the research hypotheses and illustrating the factors that affect e-CRM assessment in organisations. The main reasons of using the questionnaires include the following:

- Are ways of bringing out the feelings, thinking, knowledge, perceptions, or behaviours of a sample of individuals (Key, 1997).

- Are written forms used to gather information on a specific subject.

- Are useful to reach large numbers of participants and to get quick information from them in an easy and a non threatening way (McNamara, 2006).

- They could be structured, unstructured, or semi-structured.

▪ **Document analysis**

Is useful in knowing how a program operates without disturbing it (McNamara, 2006).

▪ **Decision models**

Normally useful to answer "What if?" questions. That is, they are used to simulate decision making processes and their impacts under uncertainty. Modeling can be used to estimate the cost-effectiveness of different technologies for a problem (U.S. National Library of Medicine, 2004).

## 3.2.2 Qualitative Approach

Qualitative research methods on the other hand, are more suitable to understand people's mind sets (Hussey and Hussey, 1997). When the research topic is more concerned with interaction or process, or is complex, hard to quantify, or sensitive, qualitative methods may be indicated.  It enables a deeper understanding of organisational issues (Yin, 1994).

When the research objective is to interpret, illuminate, illustrate, or understand, to describe previously unstudied processes or situations, to learn about subjects who are few or hard to reach, or to brainstorm ideas, it may be better to use qualitative methods. A qualitative approach can provide deep and detailed explanations, openness and flexibility; it can allow different perspectives and insights, and take into account unusual or extreme cases, and a range of experiences.

Strategies associated with qualitative approach include ethnographies, grounded theory, and case studies. Some of the qualitative practices are listed below:

▪ **Interviews**

Interviews are direct face-to-face methods in order to get verbal responses to act as measures (Key, 1997).  They are most useful to fully understand people's impressions or experiences (McNamara, 2006). Interviews could be standardized and formal, flexible, or a mixture of standardized and flexible questions (Key, 1997). There are three main types of interview techniques: structured, unstructured, or semi-structured (Grix, 2004).

— Structured interviews

It is the most precise and least flexible in the way it is set up. Interviewees are asked predetermined questions in a specific order and the responses are logged (Sekaran, 2003). The main advantage of structured interviews is to achieve a high degree of standardisation and ease of comparability. The major limitation of this type is missing the opportunity of discovering important information due to the inflexible nature of interviews.

— Unstructured interviews

The main purpose of the unstructured interviews is to explore and find out the several factors in the situation that might be central to the broad problem. This type of interview allows a certain degree of flexibility and allows for the pursuit of unexpected lines of enquiry. This technique would be very difficult to analyse because the data gathered are not comparable, because the content of interviews are likely to differ from one interview to another (Grix, 2004).

— Semi-structured interviews

Semi-structured interviews provide a clear line for the interview with a list of topics to be explored; however it gives a certain level of flexibility allowing new questions to be brought up during the interview as a result of what the interviewee says. Accordingly, to be in a better position during the interview to clarify the doubts and answer any inquiries the interviewees may have, thus ensuring that his responses are properly understood and answered. Also many ideas can be brought to the surface during the interviews (Sekaran, 2003).

This type of interview enables a fixed set of questions to be asked and also allow additional questions as relevant, which gives some flexibility. The interviews seek to investigate the IT capabilities, number of channels and the integration between them, the scalability, the awareness of employees with the benefits of system they used, clarification in bank vision, and the employee resistance to change, which are all dimensions that affect success of e-CRM adoption.

**Observations**

Observations are mainly used to gather accurate information about how a program actually operates or to understand a phenomenon in depth (McNamara, 2006) (Sekaran, 2003).

The research has also used observations, as a method beside interviews and questionnaires. Observations gave the researcher a chance to watch employees work naturally inside the five case study banks and observe the way they deal with customers and whether customers are actually satisfied with the quality of service provided by bank employees.

There are two techniques for observations (Sekaran, 2003), participant and non-participant observations. Participant observations allow the researcher to enter the organisation and be part of the work team, which is difficult in a country like Egypt. On the other hand, using non participant observations, which is the method used for the research at hand, does not require that the researcher have direct influence on work, but rather only observes the interaction, which is the method used for the research at hand.

▪ **Case studies**

It can be exploratory as well as confirmatory. They are used to fully illustrate client's experiences in a program, and carry out comprehensive examination of cases.

▪ **Conceptual models**

It refers to defining how the system functions and how it achieves its objectives. It shows the activities which logically should be included in any system designed to carry out the root definition. It involves thinking about the real world and is useful with complex situations.

### 3.2.3 Mixed Methods Approach

Strategies associated with the mixed methods approach emerged from the concept of triangulation, where quantitative and qualitative methods are united to avoid the biasness of methods. This strategy is useful because results of one method may develop the other method, methods could be nested to strengthen the understanding and deepen the analysis, or methods can serve a larger goal to better change minorities.

Mixed methods, though still new, allows the researcher to use different methods and assumptions. They also allow for different data collection and analysis methods. Different research questions require different approaches and methodologies. Accordingly, the researcher must choose the methods that are appropriate to the research topic, objectives and questions. According to (Tantawi, 2008) using more than one method research allows:

- Triangulation: using quantitative research in order to support the qualitative research results and vice versa.

- Facilitation: when one research strategy is used to assist other research using the other research strategy.

- Complementarily: this is applied when two research strategies are employed with the goal to fit together different aspects of an enquiry.

The mixture of different type of measures can strengthen a study and produce better value. The qualitative research explains complex social phenomena, and assists researchers develop themes or using participant's point of view, where the quantitative, researchers will have better capabilities in dealing with larger quantities of data and in reaching generalization of the results (Abd El Aziz, 2009).

To determine the factors that affect e-CRM readiness structured questionnaires were distributed over both bank employees and decision makers, which give room for asking many questions that can be easily coded, analysed and compared. In order to complement the finding of the questionnaires and to add more depth to the research it was considered crucial to use semi structured interviews as a qualitative method. Non participant observation was also used in the current study to observe interactions occur

between bank customers and employees. This gave the researcher a chance to watch customers closely and record whether they are actually satisfied with the quality of service provided or not. This way the researcher can ensure that answers, feelings, opinions were captured and that uncertainty regarding e-CRM readiness and adoption was clarified.

## 3.3 Research process

Stages in the research process normally include: selecting the problem area, deriving hypotheses or research questions, reviewing literature, developing methodology, data collection, statistical analysis, and result interpretation. Although the research process of the current study was rather iterative, it is most likely that the process would normally be conducted in the following sequence:

1. Review literature,

2. Select problem and derive hypothesis or research questions,

3. Develop methods,

4. Collect data,

5. Analyse statistics,

6. Interpret results and conclusions.

In 2002, Dan Meir had a slightly different listing of the research process' stages, shown as follows: planning and survey design, data collection, data access, data penetration and management, data analysis, reporting, and deployment consecutively (Meir, 2002).

## 3.4 The Initial Study Focus

The initial focus in this study was on e-CRM readiness and service quality. The research was classified into four dimensions: Use of technology, corporate strategy, organisational cultural and perceived service quality. Each dimension was investigated in terms of the main factors affecting it. The suggested framework for e-CRM readiness included measures of the internal factors only affecting e-CRM. Service quality and its perception were thought to be a major pillar in the research.

The research is trying to answer the following question:

- 'What are the internal factors that determine e-CRM readiness in organisations?

It also had another research question as a supporting one which was:

- 'Will service quality be affected by e-CRM implementation?'

In order to solve these questions, five hypotheses were devised and are listed below:

H1: Use of technology in the organisation affects e-CRM readiness.

H2: Corporate Strategy affects e-CRM readiness.

H3: Organisational cultural affects e-CRM readiness.

H4: Perceived service quality affects e-CRM readiness.

H5: e-CRM affects quality of service.

The model referred to an assessment of the organisational readiness to adopt e-CRM.
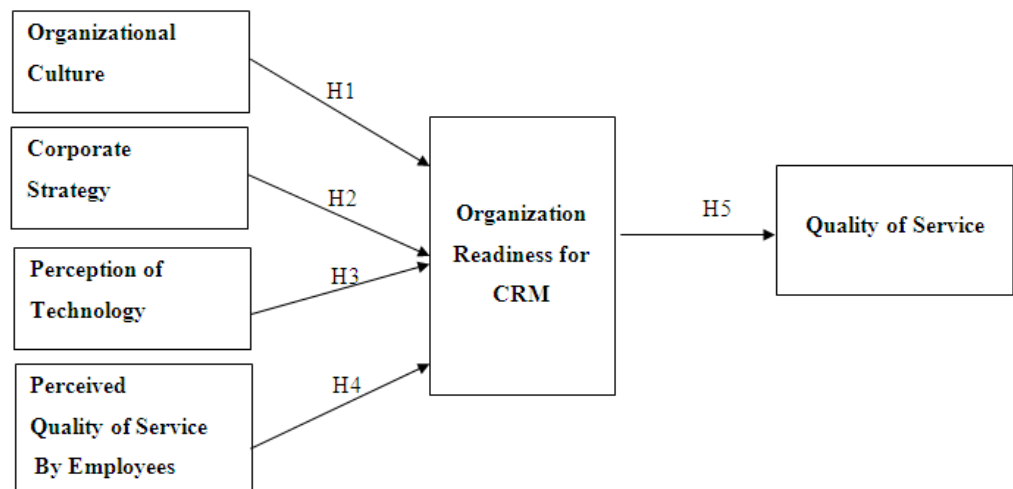


**Figure 3-2: Initial e-CRM Readiness Model**

However, it emerged during the course of study that technology adoption and adaptation is unpredictable; it depends on people's opinion and attitude toward technology, and these will differ according to their skills, interest, and knowledge. A good e-CRM would be viewed differently by different stakeholders. Accordingly, a

61

main e-CRM stakeholder was introduced to the study, namely the e-CRM user, who seems to play a major role and is the real customer for whom the technology was adopted in the first place. As a result the research focus was modified to include not only bank employees and decision makers, but to survey e-CRM users and bank clients too.

Moreover, after the preliminary interview analysis with bank mangers, service quality was found to be secondary to the e-CRM implementation and adoption in Egyptian banks. It was clear that it is there is a lack of awareness, readiness, and sometimes negative perception towards adopting new technologies. As a result, the cultural aspects in the Egyptian context had to be emphasized while service quality was believed to come on the second place after understanding the main problem. Especially because implementing and using e-CRM in the Egyptian banking industry seems to be in its early phases which makes it more difficult and less important to survey its service quality.

## 3.5 Pilot Study

A pilot study was conducted before administering the main questionnaires (Breaugh, 1988) in order to identify and hence avoid misunderstanding or ambiguities in the questionnaire statements (El-Kot, 2002). It also helps to validate the whole scale used in the study. Changes in the questionnaire wording or its administration were suggested to guarantee clear understanding from the respondents. The questionnaire was translated to the Arabic language; as it is the employees' mother tongue.

The pilot study was undertaken for assessing the factors that affect e-CRM readiness in Egyptian banks and targeted five Egyptian banks in Alexandria, Egypt, namely CIB, Piraeus bank, BNP, Industrial Development bank and finally Banque du Caire. These banks were specifically chosen due to their large share of the total number of employees, the large contribution of deposits compared to the total deposits, the large share of the total loans volume and the large share of the total assets among all banks in the Egyptian banking sector (Central bank of Egypt, 2005) as shown in Appendix 1.

The questionnaires were distributed during the personal interviews with the branch manager or head of the department, who managed to distribute the questionnaire to the employees working within the branch. This phase helped improve the questionnaire by establishing simple and straight phrases, evaluating how employees understand the questions, and checking whether the range of response alternatives is sufficient or not. The pilot process has not been recorded or documented based on the respondents' preferences, where they stated that they would feel more comfortable to comment on the questionnaire if their comments were kept anonymous and unrecorded.

Based on the feedback, the questionnaire was revised and some modifications were made; some questions were deleted while other questions were added. The most common comment on the questionnaire as a whole was that it is long and that some questions were redundant. Accordingly, the number of questions were reduced from 84 to77 questions (appendix A contains the last version of the questionnaire). Moreover, some employees faced difficulty in understanding and answering some questions. As a result, some questions were rephrased and simplified, reviewed by language experts, and the researcher was available during answering the questionnaire in order to explain unclear questions.

Other e-CRM stakeholders such as the government, suppliers, and the supporting industries such as telecommunications, infrastructure, and IT industry were thought to be not the main e-CRM players in the Egyptian banking industry. Many studies have discussed the ICT progress in Egypt, and proved that the telecommunications and infrastructure are ready and mature, and seems not to be the real problem (El Gamal and Abd El Aziz, 2011). Interviews with bank employees and decision makers also show that government does not play an important role in supporting or hindering the e-CRM adoption.

Finally e-CRM suppliers have been competing for quite a while to produce the most comprehensive and powerful systems, which has made a wide variety of products available to decision makers at banks to select from, and still seems not to be the main issue in the Egyptian context. On the contrary and due to the Egyptian nature and culture, and because e-CRM adoption and use is still in its early phases, it was

worthwhile investigating the awareness, readiness, and perception of the main players, that is the e-CRM providers and users.

## 3.6   Research methodology in the current study

The primary interest in this study is in the development of specific new technology, namely e-CRM, in particular organisations, and human contexts, namely the banking sector in Egypt. While the customer service exists in all types of business, the need for strong customer service prevails in service sector. The banking sector in Egypt has seen great improvement in the last few years. Many international banks entered the banking sectors in Egypt. In addition, a lot of mergers occur among national banks. This in turn has created greater need for better / improved customer service in these organisations.

As mixed methods approach combines both qualitative and quantitative methods, and is used to better understand research problems (Creswell, 2003), it was considered appropriate for the research problem, and was accordingly used to answer the research questions.

Combining both the quantitative and qualitative methods is considered the base where the research was built to identify the factors that affect e-CRM readiness in Egyptian banks. This is clear where a quantitative method is used by distributing questionnaires over bank employees and customers (Coombes, 2001) this helps to understand phenomena at a large scale; especially that managers are usually too busy to fill in questionnaires. As a result, interviews were conducted with decision makers to gather qualitative data (Sekaran, 2003).

Accordingly, the researcher answers the research questions by using quantitative method to formulate hypotheses, together with the qualitative method in order to get deeper understanding of organizational issues (Yin, 1994). Observations were also used as another qualitative method to record how employees working in the organizations deal with the bank customers.

## 3.7   The Current Conceptual Framework

The research will start with an initial framework that derives its dimensions from the previous research on e-CRM readiness, perception. The suggested framework for e-CRM readiness includes the main factors affecting e-CRM readiness, since CRM is a combination of technical, human and business capabilities (Coltman, 2007). A stakeholder analysis concerning the main e-CRM players would help the researcher understand the problem from a variety of perspectives, find similarities, and discover differences. The research questions have been changed from those in section 1.3 due to the addition of customer stakeholders to the current framework as follows:

- '*What are the main factors that affect e-CRM readiness in Egyptian banking industry?*

- '*Does e-CRM readiness affect the quality of service in the Egyptian context?*

In order to understand the problem at hand, a number of hypotheses were devised and tested as shown below:

**H1: Employees' Technology perception affects e-CRM readiness.**

Use of technology has been proved to affect technology readiness in a number of studies such as (Ward, 2001) (Amsteletal, 2000) (Stahl 2003) (Simpson, 2002) (Chen and Chen, 2004), however, none of them have been conducted in the Egyptian context. Accordingly, it was worth testing the hypothesis to check whether this is actually true in the case of Egypt.

**H2: Organisational culture affects e-CRM readiness.**

Organisational culture is regarded as a key factor in adopting any new technology (Xu et al., 2002) (Junior& Regno, 2003). Simpson, (2002) has stated that in order to assess e-CRM readiness in any organisation, decision makers should carefully take the organisational factor into consideration (Ocker and Mudambi, 2002). This highlights the importance of testing whether the organisational culture actually affect e-CRM readiness in Egypt.

**H3: Corporate Strategy affects e-CRM readiness.**

In order to establish and maintain good position and be competitive, a corporate strategy should be clarified. According to Freeland, 2002 and CGI Group Inc. 2004, if CRM is implemented without a clear strategy, this will result in a failure (Kale, 2004). Therefore CRM must start with a business strategy (Greenberg, 2002), which requires a change in the business, and influences work processes. Since e-CRM has been evolving and adopted all over the world, it was tempting to test whether e-CRM readiness is affected by the corporate strategy to affect the e-CRM readiness.

**H4: Different e-CRM perceptions affect e-CRM readiness.**

Decision makers, bank employees, and bank customers are all considered key players in the e-CRM problem, and thus their perceptions would be considered of high importance before making decisions, taking actions, or in this case adopting e-CRM. This justifies the thorough investigation into how these three main parties perceive e-CRM and whether the different perceptions have significant differences with regards to the e-CRM readiness in the Egyptian context.

**H5: e-CRM readiness affects e-CRM quality of service.**

Service quality is considered as the key to successful business. Poor service is a major reason for business losses (Donaldson and O'Toole, 2002). This calls for the need to test whether e-CRM readiness in Egypt have an impact or is significantly related with the quality of service provided by banks in Egypt.

**H6: Different e-CRM perceptions affect quality of service.**

Perception in particular has been proven to affect the intention, attitude, behaviour and use to adopt technology (Davis, 1989; Roger, 1995; Venkatesh et al., 2003). Accordingly it was worth to assess both customers and employees perceptions towards the quality of service.

**H7: There is a significant difference between private and public banks in customers' perception of e-CRM service quality.**

A number of studies have stated that there is a significant difference between private and public banks; especially in Egypt (Abd EL Aziz, 2009). This makes it interesting to test whether this significant difference is also relevant with regards to customers' perception of e-CRM service quality.

Answering the above questions should help the researcher understand and more effectively help promote e-CRM systems that were found to be available only implicitly but not in the form of a technical systems, and to some extent of Egyptian banking industry in general. It may be possible to generalize some of the findings to non-Egyptian contexts.

## 3.8  Research design in the current study

The research study was envisaged to be conducted over four years. The steps of the research process in the current study could be stated as follows:

1. Study Literature to Review CRM and e-CRM technologies, e-CRM readiness models, assessing banks in Egypt, CRM components, socio-technical perspective, Also CRM service quality and challenges are introduced together with the technology adoption in Egyptian banking industry and cultural dimensions in Egypt. This review helps identify the main factors that affects CRM readiness in developing countries

2. Survey the banking sector in Egypt using secondary data gathered from sources such as government publications, previous research studies and library records (Sekaran, 2003). Secondary data collected include the following:

- Data concerning number of employees in Egyptian banking sector, size, deposits, loans, types and names of Egypt's commercial banks in-order to justify the reason of choosing the commercial banks rather the other types. Data has been extracted from the periodic bulletins published by the Egyptian central bank, the central authority for general consensus and statistics, and the annual guide of Egyptian banks.

67

- Data concerning the factors that affect organization readiness (internal, external, and others factors) are obtained from books and articles available in the library of Alexandria university, the Arab Academy for Science and Technology and Maritime Transport's library, the library of the Middlesex university and search engines on the Internet.

3. Define the theoretical propositions, research questions and relevant data to the focus of the study.

4. Develop a preliminary theoretical model of e-CRM readiness.

5. Design and assemble questions for questionnaires targeting bank employees.

6. Design and assemble questions for questionnaires targeting Egyptian users.

7. Design interview schedules for use with decision makers in banks.

8. Distribute questionnaires and collect data.

9. Carry out interviews with decision makers and transcribe data.

10. Statistical analysis: including SPSS and some mathematical formulas for questionnaire and possibly interview data. Analysis will be used to answer the research questions.

11. Interpretive analysis: reviewing interview notes in order to find similarities, differences, and main points emerging from the discussion

12. Integrate findings and write up case studies.

13. Define the e-CRM adoption deficiencies, challenges and their leading factors in the Egyptian context.

14. Revisit e-CRM model on the basis of technology adoption and the cultural context.

15. Formulate conclusions and write up the final version of the thesis.

## 3.9 Research methods in the current study

As discussed earlier, in the previous chapter, literature has been very generous with technical e-CRM studies in the field, but was rather rare regarding the e-CRM awareness, perception, readiness, and technology adoption. Methods for addressing the research questions include the following:

- The model as suggested by the researcher refers to an assessment of the organisational readiness to adopt e-CRM. By identifying e-CRM readiness factors, organisations in general and banks in particular can help improve e-CRM adoption.
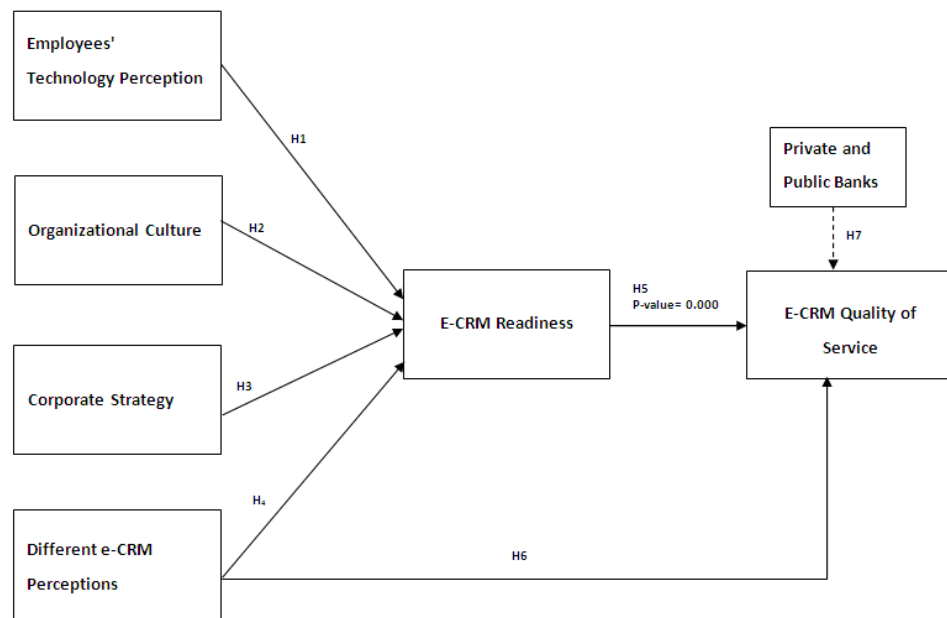


**Figure 3-3: Suggested e-CRM Readiness Model**

- Case study: a number of Egyptian public and private banks were surveyed to assess current methods and decision making practices relating to e-CRM adoption. The empirical part was carried out in five banks, three private banks and two public banks. These banks were selected, because they are the largest banks in terms of transactions, number of employees, assets, deposits and loans (Directory of Egypt's Banks, 2006). Also because their ranking is among the five top banks in Egypt. Data were collected from employees in the form of questionnaires and from managers in the form of interviews.

69

Semi-structured interviews: The interviews are conducted with decision makers in the selected banks, where each manager of the selected fives cases was given an information letter that includes the purpose of the research and a consent form that states that participating in this study is voluntary, and that they could withdraw at any time. Interviewees were required to sign the form after reviewing it. An appointment was taken by phone before going to the manager to ensure the availability of the manager to conduct the interviews. The interviews results determine the main factors that affect e-CRM readiness in the Egyptian context.

- Three structured questionnaires were distributed over a sufficient number of respondents both bank customers and employees:

o    Questionnaire One: distributed over a sufficient number of bank employees to assess their perception and readiness towards e-CRM adoption. Questionnaires are considered an efficient data collection tool; especially where a large number of respondents were targeted and asked to voluntarily participate. Respondents were explicitly informed that their participation is voluntary, and that they are free to ask questions and even withdraw from the questionnaire at anytime. The questionnaire includes several questions related to the factors that affect e-CRM implementation. The Results of this questionnaire represent evidence in testing the research hypotheses and in illustrating the factors that affect e-CRM readiness, perception.

This questionnaire includes seventy eight statements, used to measure the factors that affect organisation when implementing e-CRM. Five point likert scales was used on some of the statements. With 1 as strongly disagree, and 5 as strongly agree. The questionnaire must be translated to Arabic because the majority of the employees do not know English well. The questionnaire included two parts as follows:

— The first part includes questions related to demographic characteristics. |The aim of this part is to construct a profile for the respondents.

— The second includes sixty eight statements to measure the four factors that affect e-CRM implementation in banks. There was an additional question to measure overall CRM readiness.

o   Questionnaire Two: distributed over a sufficient number of bank users to assess their usage and opinion of e-CRM services.

This questionnaire includes forty three questions, used to measure employees' awareness, and perception regarding e-CRM implementation in the Egyptian banking industry.

— The first part includes questions related to demographic characteristics. |The aim of this part is to construct a profile for the respondents.

— The second part includes thirty statements to measure the user perception that affect e-CRM implementation in banks. There was an additional question to measure overall CRM readiness.

▪   Statistical analysis involved using a statistical package namely SPSS, which was used to analyse the questionnaires' data. Analysis is used to answer the research questions and most likely will include chi square test, Mann-Whitney, and Linear regression analysis, to check all factors that affect e-CRM readiness in the banking industry. Chi-squared is used to test whether the number of individuals in different categories fit a hypothesis. A Mann-Whitney test is used to compare service quality perceived by customers in banks both public and private. Linear regression test is also used to assess the impact of Employees' Use of technology, Organisational Culture, Corporate Strategy and different e-CRM perceptions on e-CRM readiness.

▪   Descriptive statistics may also be used to describe the characteristics of the bank users, and show how frequently they use them, their preferences regarding the services offered in general, and the e-readiness in particular. Interpretive analysis: reviewing interview notes in order to find similarities, differences, and main points emerging from the discussion.

- From statistical and interpretive analysis and with support of relevant literature, it is hoped to derivate key parameters in framing a proposed model to represent and possibly support decision making on e-CRM adoption.

This research seeks to investigate the main criteria that affect e-CRM readiness of the Egyptian Banks. This means identifying the internal factors in banks that affect e-CRM implementation including employees' technology perception, organisational culture, corporate strategy and employees and decision maker e-CRM perceptions. Case study public and private banks are selected to study these aspects by interviewing decision makers inside banks, together with surveying the bank employees' perception and culture using a structured questionnaire.

Egyptian bank users would be surveyed as well using structured questionnaire which would enable gathering sufficient data; different e-CRM stakeholders' perceptions are surveyed to affect e-CRM readiness.

- The Use of technology (IT capabilities, Integration and number of channels, Scalability) dimension was measured using only twenty three statements. These questions are used to identify the technology used which allowed banks a variety of channels to contact their customers such as bank branches, call centers, internet, direct mail, allied stores, and whether these channels are integrated or not in order prevent data redundancy. Whether there are databases used to store customer data according to their preferences, permissions and information that may be useful to them, which requires integration and flexible communication between back office and front office; which enables editing information from multiple databases will be done easily (Micro strategy, incorporated, 2000).

- The Corporate Strategy dimension was measured using twenty three statements. These questions seek to identify the Strategy defined as an overall plan for deploying resources to establish a favorable position (Grant, 1998). The availability of business strategy for the organisations that includes updating the organisation system. These questions try to understand whether there is a well defined vision, plan, and objective for their organisation. This would lead to understanding how a business should operate.

72

- The Culture dimension was measured using fourteen different statements that explain whether the employees are committed to their organisation, are aware of the e-CRM usage benefits, and whether they can accept training courses. It also asks whether every employee understands the purpose and changes that CRM yields.

- The Different e-CRM dimensions were measured using five different statements that explain the employees' perceptions which affect e-CRM adoption, and thirty statements in a separate questionnaire to measure the user perception that affect e-CRM implementation in banks.

A summary of the questionnaire and the possible answers for personal data part 1is shown below (Table: 3.1a).

**Table 3-1a: e-CRM Readiness Questionnaire Summary personal data**

| No. | Question | Possible Answers |
|-----|----------|------------------|
| 1. | Gender | Male/ Female |
| 2. | Age | 20-30 / 31-40 / 41-50/More than 50 |
| 3. | Which department do you work in | Customer Service dept/Operations dept/Cash dept. |
| 4. | Period of employment with the organisation | Less than 2 years / 2 to 5 years / 5 to 8 years / over 8 years |
| 5. | Educational level | Less than or equal to secondary education/ University degree/Diploma/ Master's degree/ PHD degree |

The questions of the questionnaire were designed to collect data about the dimensions derived from literature about CRM, e-CRM, and readiness shown below in Table 3-1b,c,d) part 2 .Table 3-1b presents the dimension of the Use of technology toward e-CRM adoption. It includes 22 questions that measure the scalability of the system used in the banks, the number of communication channels that exist, the integration among those channels, the effect of the size of organization, the ease of accessibility to system easily, gaining control of the work, easily segment bank clients, create awareness about IT and IT capability. These 22 statements have been adapted from Sin, et al., 2004, and Ocker, 2002 to measure readiness of technology. Research items measuring employees' perceptions are measured in a 5-point Likert scale, with 1 as strongly disagree, and 5 as strongly agree.

**Table 3-1b: e-CRM Readiness Questionnaire Summary for Use of Technology**

| Variable | Definition | Statements used to assess the variable |
|---|---|---|
| Use of technology | IT capability | 1. Everyone in your bank has access to the same customer information<br>2. The bank has a method to segment its clients<br>3. The bank administers a customer loyalty program<br>4. Our employee training programs are designed to develop the skills required for acquiring and deepening customer relationships and the use of IT<br>5. Our organisational structure is designed around our customers<br>6. IT enables customers to expect prompt services from employees<br>7. IT enables employees to work with individual key customers to customize offerings.<br>8. The bank customizes customer interactions using IT to optimize value and loyalty.<br>9. The transactions performed through website is safety |
| | Infrastructure | 1. The bank has the capable technical personnel to provide technical support for the utilization of computer technology in building customer relations<br>2. The bank has the required sales and marketing expertise and resources to succeed in CRM |
| | Number of channels | 1. Customers can access their account, order and service information via e-mail requests<br>2. Customers can access their account, order and service information via fax requests<br>3. The customers can access their account and order service information via Internet/ wireless devices<br>4. When the bank finds that customers would like to modify a product/ service, the departments involved makes a coordinated efforts to do so<br>5. The bank uses the Internet in its daily transactions |
| | Integration between communication channels | 1. Using e-CRM gives me greater control over my work<br>2. The bank maintains an outside sales force<br>3. Technology is used to integrate various customer delivery channels |
| | Scalability | 1. The size of organisation affects electronic customer relationship management adoption<br>2. The bank maintains a comprehensive database for customers' data.<br>3. When a problem occurs the technical staff solve it in a timely manner |

Table 3-1c, presents the dimension of organizational culture toward e-CRM adoption. It includes 17 questions regarding the employees' commitment, management support, awareness of benefits and usage of e-CRM, employees' resistance to change and improving employees' skills. These 17 statements have been adapted from (Sin, et al., 2004) and (Ocker, 2002) to measure the organizational culture dimension using a 5-point Likert scale, with 1 as strongly disagree, and 5 as strongly agree.

**Table 3 1c: e-CRM Readiness Questionnaire Summary for Organizational Culture**

| Variables | Definition | Statements used to assess the variable |
|---|---|---|
| Organisational culture | Employee resistance to change | 1.I am flexible with using new IT technology in my work<br>2. I am willing to take extra courses to learn new technology |
| | Employees skills | 1. It is easy for me to communicate with other departments in the organisation |
| | Human resource training | 1.I was involved in the evaluation of training courses that I had<br>2. I always trained on how to deal with changes due to the implementation of new technology.<br>3. The training courses I had, always had a positive impact on accomplishing my work |
| | Awareness | 1.Our management understands the importance of IT in serving customers<br>2. I am fully aware of the benefits added to my work because of the new technology.<br>3. Using e-CRM system helps me to do my work quickly. |
| | Commitment | 1. The bank commits time and resources to managing customer relationships<br>2. Our computer technology can help create customized offerings to our customers<br>3.The bank manages all customer communications so that they are consistently superior and relevant to the customer<br>4.Policies and procedures critical to managing customer relationships are well documented and consistent across all customer touch points. |
| | Management support | 1.Employee performance is measured and rewarded based on meeting customer needs and successfully serving the customer<br>2. Our top management team provides leadership for the building and maintenance of customer relationships as a major goal of my organisation.<br>3. The bank CEO specifies a budget for updating the system used.<br>4. The manager specifies a certain time for updating the system used |

Table 3-1d, presents the dimension of Organizational Strategy toward e-CRM adoption. It includes 22 questions, adapted from (Sin, et al., 2004) and (Ocker, 2002) to measure the organisational strategy by measuring the existence of organisation vision and mission of updating system, clarification of organisation goals, organisation plan, IT policies and managers goals. Items related to the organisational Strategy dimension are measured in a 5-point Likerts scale, with 1 as strongly disagree, and 5 as strongly agree.

**Table 3-1d: e-CRM Readiness Questionnaire Summary for Corporate Strategy**

| Variables | Definition | Statements used to assess the variable |
|---|---|---|
| Corporate Strategy | Strategy | 1.The bank has clear objectives and strategies for updating the system used<br><br>2. The bank treats each key customer differently<br><br>3.Our top management supports the use of customer relationship management<br><br>4. Our top management team spends much time with their employees to discuss offering new products to satisfy customers.<br><br>5. The organisation uses IT to support employees and organisational learning.<br><br>6. The bank has an IT strategy.<br><br>7. The employees are aware about the bank IT strategy.<br><br>8. All employees implement the IT strategy of the bank |
| | Overall plan | 1.The organisation IT action plan takes into consideration the assessment of the current organisation system in terms of IT resources (people, technology, applications)<br>2.The bank uses web site to market products<br>3. The policy of the bank has the required software to serve our clients<br>4. The policy of the bank has the required hardware to serve our clients<br><br>5. The bank information systems are designed to give comprehensive data about all aspects of our customers, so that we can be responsive to them.<br><br>6. Our Organisations IT strategy includes action plan. |
| | Goals | 1.Using electronic customer relationship management affects the quality of banking operation<br>2. The bank shares customer information across all points of contact.<br>3. All employees in my bank understand and share the common goal of building and maintaining customer relationships All employees in my bank understand and share the common goal of building and maintaining customer relationships<br><br>4. The bank has established clear business goals related to customer acquisition, development, retention, and reactivation.<br><br>5. The bank fully comprehends the needs of our key customers via knowledge learning.<br><br>6. Organisations placed set of goals in its IT strategy |
| | IT Policy | 1. Individual customer information is available at every point of contact<br>2. The bank provides channels to enable ongoing, two-way communication between its key customers and its employees. |

Table 3-1e, presents the dimension of different perceptions toward e-CRM adoption. It includes 22 questions measuring reliability, accuracy, responsiveness, awareness, courtesy, communication, continues improvement, and competence. Items related to the different perceptions dimension are measured in a 5-point Likerts scale, with 1 as strongly disagree, and 5 as strongly agree

**Table 3- 1e: e-CRM Readiness Questionnaire Summary for Different Perceptions**

| Variables | Definition | Statements used to assess the variable |
|---|---|---|
| **Different e-CRM perceptions (employees and customers)** | Refers to employee reliability, accuracy, responsiveness, awareness, Courtesy, communication, continuous improvement, competence. | Adapting 5 statements to measure how the employees' perceive the provision of service offered to customers. As we as how customers perceive the quality of service perceived from employees. Using 5 point scale.

Adapting 30 statements to measure how the employees' perceive the provision of service offered to customers. Using 5 point scale. Shown below in Table: 3.2

Adapting 14 statements to measure how the customers perceive the provision of service offered to customers. Using 5 point scale. Shown below in Table: 3.3. |

**Table 3-2: Employees Questionnaire Summary**

| No. | Question | Possible Answers |
|---|---|---|
| 1 | Do you have a bank account? (If you answer is no, please go to question #9) | Yes / No |
| 2 | How long have you been dealing with your bank? | Yes/No |
| 3 | What is your bank's type? | Public/Private |
| 4 | How frequently do you use a banking service? | Every day/ A few times a week/ A few times a month/ A few times a year |
| 5 | When do you most frequently use banking services? | During bank working hours/ After bank working hours but not at weekends/ After bank working hours and at weekends/ Anytime |
| 6 | Where is the bank you most frequently visit? | Near Home/ At or near my workplace/ At or near a shopping mall or a restaurant/ Somewhere else. |
| 7 | Where would you prefer to use your banking services? | At the bank/ Via ATMs / Over the Internet/ Others |
| 8 | Rank:<br><br>- When bank employees promise to do something, they do so.<br>- When customers have a problem, bank employees show a sincere interest in solving it.<br>- Bank employees provide prompt services with no delay<br>- Bank employees insist on error free and confidential information | 1: Strongly agree<br>2: Agree<br>3: Don't know<br>4: Disagree<br>5: Strongly disagree |

|   |   |   |
|---|---|---|
| | - Bank employees always have the will to help customers<br>- Bank employees are never too busy to respond to customers<br>- Bank employees are knowledgeable<br>- Bank employees can solve customers' problems<br>- Bank employees are always considerate of customers<br>- Bank employees address customer complaints in a friendly way<br>- Bank employees give a clear answer to customer inquiries<br>- Bank employees keep customers aware of new products/service<br>- Bank employees give each customer an individual attention<br>- Bank employees work as a team to help customers quickly<br>- My bank has a good reputation<br>- I feel confident when making transactions with my bank<br>- I can easily access my bank account when I am abroad<br>- My bank branches are conveniently located<br>- My bank introduces a variety of channels (ATM, phone, e-mail, e-banking) to deal with customers<br>- My bank provides a good range of service<br>- My bank continuously improves its offerings<br>- My bank continuously improves its customer service<br>- Information is always available online for customers<br>- Online transactions with my bank are accurate<br>- Online information is always up-to date<br>- My bank's website is attractive<br>- Accessing my bank's website is easy<br>- Logging in to my bank's website is easy<br>- My bank's website is easy to navigate<br>- I am satisfied with my bank's overall customer service | |
| 9 | Gender | Male/ Female |
| 10 | Marital status | Single/<br>Married<br>Divorced/Widow<br>Other |
| 11 | Age | 16 – < 25/<br>25 – < 40/<br>40 – < 60/<br>>=60 |
| 12 | Monthly income | < 1000 / 1000–<3000/ 3000-<5000/>=5000. |
| 13 | Level of education | No education/<br>Prim-Prep-high school/<br>University graduate/<br>University postgraduate |
| 14 | Occupation | Employed/<br>Unemployed/ Student |

o Questionnaire three: was used for measuring users' perception regarding e-CRM adoption in banks includes several questions. The original questionnaire is shown in the appendix, while a summary of the questionnaire and the possible answers is shown below in Table: 3.3.

The third questionnaire was designed with seventeen variables, which were drawn from the five different SERVQUAL dimensions (Parasuraman, et al, 1991). These dimensions were used to measure e-CRM quality of service. This questionnaire seeks to understand how customers perceive the quality of service delivered to them in terms of employees ability to address complaints from customers, inform customers about important information, continuous improvement for online system, customer service and banking products, ability to solve problems and whether they have the required the knowledge to answer any customers questions.

Five point likert scales was used on some of the statements. The questionnaire included two main questions:

▪ The first section included demographic characteristics.

▪ The second section included thirty two statements to measure the fifteen factors that affect perception of e-CRM service quality in commercial banks. There was additional question to measure overall CRM readiness as follows:

a. The Reliability dimension was measured using four statements
b. The Responsiveness dimension was measured using six statements
c. The Competence dimension was measured using two statements
d. The Courtesy dimension was measured using two statements
e. The Credibility dimension was measured using two statements
f. The Access dimension was measured using two statements
g. The Communication dimension was measured using two statements
h. The Understanding customer dimension was measured using only one statements
i. The Collaboration dimension was measured using only one statements
j. The Continuous improvement dimension was measured using three statements
k. The Accuracy dimension was measured using two statements
l. The Content dimension was measured using only one statements

m. The Ease of use dimension was measured using four statements

n.  The Timeliness dimension was measured using one statements

o. The Aesthetics dimension was measured using one statements

p. The Security dimension was measured using one statements

**Table 3-3: Customers Questions Regarding Quality of Service**

| Variables | Conceptual Definition | Statements used to assess the variables |
|---|---|---|
| **Reliability** | Ability to perform the promised services dependably and accurately. As well as the accuracy of information that is captured. | Adapting 4 statements by Jun and Cai, 2001, to measure the reliability. Using 5 point scale.<br>- Employees stick to their promises regarding the service provided<br>- Employee are committed to solve customer problems<br>- The bank employees performed their service right the first time<br>- The bank employees provided the services at the time they promised the customer to do so |
| **Responsiveness** | The possibility to get a quick response using automated and human factors | Adapting 6 statements by Jun and Cai, 2001, to measure the responsiveness of employees. Using 5 point scale.<br>- The bank employees told the customers exactly when service will be performed<br>- Employees usually provide the service in the expected time<br>- Employees are highly responsive and willing to provide customers support<br>- The bank employees were never too busy to respond to requests of customers<br>- The bank employees are quickly solves customers problems<br>- The bank employees offer convenient service for customers |
| **Competence** | The ability to solve problems and the knowledge to answer any question by customers | Adapting 2 statements by Jun and Cai, 2001, to measure the ability of employees in handling problems that customers face. Using 5 point scale.<br>- The bank employees had the knowledge to answer a questions of customers<br>- Employees have the ability to solve customer problems |
| **Courtesy** | The ability to address complaints from customers | Adapting 2 statements by Jun and Cai, 2001, to measure the extent of dealing with complaints by customers. Using 5 point scale.<br>- The bank employees were consistently courteous to customers<br>- Employees are usually friendly when dealing with customer complaints |

| Credibility | Refers to the reputation of bank. | Adapting 2 statements by Jun and Cai, 2001, to measure the credibility. Using 5 point scale.<br>- My banks reputation is good<br>- Customer trust bank employees and are confident when making transactions |
|---|---|---|
| Access | The availability of ATM, Phone, e-mail and access account when customer abroad | Adapting 2 statements by Jun and Cai, 2001, to measure the accessibility. Using 5 point scale.<br>- The bank employees helps their customers to access their accounts when they are abroad<br>- There is a Varity of channels (ATM, phone, e-mail)available for customers to deal with bank |
| Communication | The ability to inform customers about important information | Adapting 2 statements by Jun and Cai, 2001, to measure the way of communications between bank and customers. Using 5 point scale.<br>- The bank employees gives a clear answer to any question asked by employees<br>- The bank employees usually informs me for new products they offer |
| Understanding customer | The extent of personnel attention | Adapting 1 statement by Jun and Cai, 2001, to measure the extent of paying attention to customers. Using 5 point scale.<br>- Customers are usually given individualises attention by employees |
| Collaboration | The extent of external and internal collaboration | Adapting 1 statement by Jun and Cai, 2001, to measure degree of collaboration. Using 5 point scale.<br>- Employees work collaboratively to be be able to help customers quickly |
| Continuous improvement | Refers to Continuous improvement for online system, customer service and banking products | Adapting 3 statements by Jun and Cai, 2001, to measure the degree of improvement of updating system online. Using 5 point scale.<br>- The banks products are continuously improved<br>- customer service is continuously being improved |
| Contents | Availability of information that required by customers and information about banking products | Adapting 1 statement by Jun and Cai, 2001, to measure the availability of Varity information online. Using 5 point scale.<br>- Availability of information on products and service online and other information that customer needs Content online |
| Accuracy | The extent of errors in content online | Adapting 2 statements by Jun and Cai, 2001, to measure the extent of accuracy of content on line. Using 5 point scale.<br>- Online banking transactions provide accurate information<br>- Availability of errors in the content online |

| Ease of use | Refers to the online banking is easy to login, easy to navigate, the speed of response | Adapting 3 statements by Jun and Cai, 2001, to measure the extent of ease of use to web. Using 5 point scale.<br>- The bank web site is easy to use<br>- Easy to login to web site<br>- The bank web site navigation is easy and simple<br>- The web site's response to customers requests is fast |
|---|---|---|
| Timelines | The ability to update information on time | Adapting 1statement by Jun and Cai, 2001, to measure the timeliness of updating information. Using 5 point scale.<br>- The banks web site provides up-to date information |
| Aesthetics | Refers to what extent the web site is attractive | Adapting 1 statement by Jun and Cai, 2001, to measure the attractiveness of site. Using 5 point scale.<br>- The banks web site is appealing |
| Security | Refers to what extent the safety of information transaction | Adapting 1 statement by Jun and Cai, 2001, to measure the attractiveness of site. Using 5 point scale.<br>-The employees insisted on error free and confidential documents |

o Semi-structured interviews were designed and conducted with decision makers in banks. The selected banks include five banks with 10 different branches, in both the public and private sectors. A summary of the interview questions conducted with the managers 1isted below shown below (Table 4).

**Table 3-4 Interview questions for managers**

| | Semi-structured Interview Questions |
|---|---|
| 1. | Have you ever heard about customer relationship management (CRM)? |
| 2. | Do you take the legal issues into considerations when implementing CRM? |
| 3. | Does your bank has a strategy concerning updating the Software? |
| 4. | Do you think choosing adequate CRM-software is a very complex issue? |
| 5. | Are you aware bout the benefits that your bank will gain from e-CRM adoption? |
| 6. | Customer data is usually distributed across several systems and does not provide a consolidated view? |
| 7. | Do you think that IT-Integration requires additional reorganisation? |
| 8. | Integration of CRM with existing IT infrastructure is extremely costly? |
| 9. | CRM implementation requires high expenses for training? |
| 10. | Do you think an intensive communication is needed to overcome internal resistance to CRM implementation? |
| 11. | Do you categorize important customers with the data obtained? |

| | |
|---|---|
| 12. | Can you provide efficient individual service with the data obtained? |
| 13. | Do you have the service where customers can provide feedback and complains online? |
| 14. | What is the main reason that prevents customers' form not achieving tasks through internet?<br>    a) Complexity<br>    b) No time<br>    c) Costly |
| 15. | What are the main weaknesses in providing high level of customer service?<br>    a) Absence of Customer Service Culture<br>    b) Inadequate Technological Support<br>    c) Lack of Information on Customer |
| 16. | Can you rank the most important factor for assessing e-CRM in your bank:<br>    a) Use of technology<br>    b) Corporate Strategy<br>    c) Organisational culture<br>    d) perception of readiness |
| 17. | How often do you measure customer satisfaction<br>    a) Monthly<br>    b) Quarterly<br>    c) Every six months<br>    d) Don't know |
| 18. | How do you currently track and review all the communication you have with your clients<br>    a) Contact Management software<br>    b) Create notes in back-office solution<br>    c) Track e-mail messages only<br>    d) Keep a separate database<br>    e) Call centre |
| 19. | Do you store your customer information in an integrated database?<br>    a) One main data warehouse<br>    b) Separate databases<br>    c) Don't know |
| 20. | Approximately how many employees are in contact with customers on a daily basis within your organisation<br>    a) 5-10<br>    b) 11-25<br>    c) 26-50<br>    d) 51-100 |

## 3.10 Population and Sampling

The population refers to the entire group of people, events or things of interest that the researcher wishes to investigate (Sekaran, 2003). The population in this study is the bank employees and bank customers in Egypt.

The banking sector in Egypt is composed of two sectors, namely the public and private sector banks (Dafoulas and Essawi, 2007), which play a crucial role in the development process. The study's population is the employees within the branches of the public and private banks in Alexandria. Table 3.4 shows the number of public and private banks in Egypt (Directory of Egypt's banks, 2006).

**Table 3-5: List of Public and Private Banks in Egypt**

| Name of Bank | | Establishing Date |
|---|---|---|
| **Public Sector Banks** (Fully state owned) | | |
| 1 | National Bank of Egypt (NBE) | June 25, 1898 |
| 2 | Banque Misr | May 7, 1920 |
| 3 | Banque du Caire | May 15, 1952 |
| 4 | Bank of Alexandria | April 17, 1957 |
| **Private Banks** | | |
| 1 | Commercial International Bank | (CIB) August 8, 1975 |
| 2 | Blom Bank - Egypt (MRB) | March 24, 1977 |
| 3 | BNP PARIBAS Le Caire | May 12, 1977 |
| 4 | Suez Canal Bank | March 4, 1978 |
| 5 | Piraeus Bank – Egypt | June 29, 1978 |
| 6 | Cairo Far-East Bank | August 19, 1978 |
| 7 | Delta International bank (DIB) | August 30, 1978 |
| 8 | Faisal Islamic Bank of Egypt | June 14, 1979 |
| 9 | Egyptian Saudi Finance Bank | May 8, 1980 |
| 10 | Al-Watany Bank of Egypt | May 26, 1980 |
| 11 | The United Bank | July 9, 1981 |
| 12 | Alexandria Commercial & Maritime Bank | August 20, 1981 |
| 13 | Egyptian Gulf Bank | January 28, 1982 |
| 14 | HSBC Bank Egypt | July 15, 1982 |
| 15 | Misr Iran Development Bank (MIDB) | May 27, 1975 |
| 16 | Barclays Bank - Egypt | August 13, 1975 |
| 17 | Societe Arabe Internationale De Banque (SAIB) | March 21, 1976 |
| 18 | Calyon Bank - Egypt | February 10, 1977 |
| 19 | Societe Generale Bank | April 13, 1978 |
| 20 | Federal Arab Bank for Development & Investment | July 6, 1978 |
| 21 | Housing & Development Bank | September 24, 1979 |
| 22 | Arab African International | Bank June 10, 1982 |
| 23 | Arab Banking Corporation Egypt (ABC Bank) | August 21, 1982 |
| 24 | Export Development Bank of Egypt | Egypt December 31, 1984 |
| 25 | Egyptian Arab Land Bank | February 5, 1880 |
| 26 | Industrial Development Bank of Egypt | May 27, 1976 |
| 27 | Principal Bank for Development & Agricultural Credit | August 11, 1977 |

**List of banks in Egypt, source directory of Egypt's banks, 2006**

A sample is a subset of the population (Sekaran, 2003). It consists of some members selected from it. But not all elements of the population will form the sample. By studying the sample the researcher should be able to draw conclusions that would be generalisable to the population of interest. The reasons for choosing a sample instead of collecting data from the whole population are self evident. In research investigations involves several elements, so it will be difficult and costly in terms of time and money. The study of a sample rather than the entire population is also sometimes likely to produce more reliable results (Sekaran, 2003).

The sample for this study is mainly based on random sampling, where decision makers and employees were selected using stratified random sampling, and bank customers were selected using simple random sampling techniques. The sample bank branches were randomly chosen from both the public and private banks in Alexandria, which is the second city in Egypt. Statistical tables were used to determine the sample size of employees in the case study banks (Sekaran, 2003). Therefore, the bank sample studied includes three private bank branches and two public bank branches. 400 e-CRM readiness questionnaires and 500 Quality questionnaires were distributed over bank employees working at the selected sample banks. 377 e-CRM readiness valid questionnaires were returned and 176 e-CRM qualities of service questionnaires were considered valid for the research.

The total number of employees working in the five case study banks is 16571 employees. The number of employees working in CIB is 4000 employees, in Banque du caire is 10777 employees', in BNP bank is 524 employees, in Piraeus bank is 900 employees and finally in Industrial Development bank is 370 employees. Therefore according to (Sekaran, 2003) an appropriate sample size for this population would be 376 questionnaires, which is almost the 377 valid questionnaires returned.

The sample selected from each bank was calculated by dividing the total number of employees in each bank by the total number of employees working in the five case study banks (16571). Then the result was multiplied with sample size 377. The result revealed the required sample size from each case study bank. The sample size was calculated as follows:

- For the CIB bank: 4000 employees in CIB bank / 16571 total sample from five case studies = 24.14%. Then

  377*0.2414= 91 employee

- For Banque du Caire the sample calculated as follows: 10777/16571 = 0.65%. Then 377*0.65= 245 employee

- For BNP bank the sample calculated as follows: 524/16571= 0.0316%. Then

  377* 0.0316= 12 employee

- For Piraeus bank the sample calculated as follows: 900/16571= 0.0543%. Then

  377*0.0543= 25 employees

- For the industrial development bank the sample calculated as follows 370/16571= 0.0223%. Then

  377*0.0223 = 9 employees

On the other hand, bank customers are chosen using simple random sampling technique; as each respondent has an equal opportunity to be picked for the survey. As the total banking customer population is around 1,000,000, using (Sekaran, 2003) sampling calculations, a convenient sample size would be 384 respondents. Accordingly, over 500 questionnaires were distributed over bank customers. A total number of 388 valid questionnaires were returned and were considered sufficient to represent the whole population.

## 3.11 Synthesising the research process

The banking sector is one of the main pillars in the development process of Egypt. The Egyptian Government has been undertaking a comprehensive reform strategy for the banking system. The state pays special attention to accelerate the banking restructuring program, expand processes of merging, and increase foreign contributions in the banking sector due to the expanded processes of merging during 2006. Accordingly, the value of liquidity rose in June 2006 to reach LE 560.4 billion at a growth rate of about 13.5 %.

The researcher conducted interviews with decision makers at the 5 study banks. The selected banks form a variety of public and private banks, Commercial and Foreign banks, which could act an appropriate sample of the Egyptian banking industry. These banks have a sufficient number of employees whose branch managers agreed to conduct the study at their bank branches (See Appendix 1). The sample for this study is mainly selected based on stratified random sampling, where 5 different banks are chosen for the study at hand. Stratified sampling is commonly used probability method, where a stratum is a subset of the population that share at least one common characteristic.

The researcher first identified the relevant stratums and their actual representation in the population. Random sampling is then used to select a sufficient number of subjects from each stratum. Stratified sampling is often used when one or more of the stratums in the population have a low incidence relative to the other.

The pragmatic knowledge claims were selected for our research; as knowledge claims come from situations instead of inputs as in the post-positivism. This helps to understand the problem apart from any differences between the reality and the mind. The pragmatic research indicates that problems usually take place in social contexts, which is the case in the current study.

As all methods have limitations, using a mixture of data sources helps to better understand the problem and to decrease bias in the research. In order to answer the research questions, an appropriate strategy of the inquiry will be strategies associated with the mixed methods approach; as it will be mainly interpretive, but there will be some objective analysis.

The research uses a survey strategy, which has been chosen because of the number of employees working in banks, which would help reduce bias, and reach an acceptable significant level. Survey is a feasible research method for the study at hand due to its importance in the banking sector which leads the researcher to investigate and identify number of factors for measuring the readiness of the banking industry to implementing e-CRM, and avoid the failure of deployment. The result from the questionnaire and interviews are a set of factors that affect the e-CRM readiness in the Egyptian context.

All respondent completed the questionnaire during the normal working hours in the commercial banks to ensure the confidentiality of the responses.

Secondary data was also used and analysed in order to save time and cost of acquiring information. Data was gathered through existing sources such as government publications, data available from previous researches and library records (Sekaran, 2003). In this research the main secondary data sources are:

- Data concerning number of employees in Egyptian banking sector, size, deposits, loans in-order to justify the reason of choosing the commercial banks rather the other types, all these data are extracted from the periodic bulletins published by the Egyptian central bank, the central authority for general consensus and statistics, and the annual guide of Egyptian banks, it supplies the types and names of Egypt's commercial banks.

- Data concerning the factors that affect organisation readiness (internal, external, others factors) are obtained from books and articles available in the library of Alexandria university, and search engine on the Internet.

## 3.12 Data Validation

The data analysis was followed by validation of data. In order to validate the data obtained and the research framework, based on the suggestions of (Creswell, 2003), literature is reviewed; where similar studies related to e-CRM dimensions and models that have already been adopted are compared to the current study's results. Then, a triangulation between quantitative and qualitative data is performed to investigate the extent to which they support each other. After that, the model is further validated through obtaining feedback from experts such as, IT consultants, decision makers in the banking industry and academics. The data validation will be provided in a form of comparison of the findings in chapter 5.

## 3.13 Summary

This chapter illustrates knowledge claims and the research approaches, and explains the research methodology used in this study. It presents the data collection methods and techniques used, describes the conceptual framework for assessing e-CRM readiness in developing countries; which has been developed based on the literature review. It also proposes a summary of the questions used to measure the dimensions of the framework as in questionnaire. The next chapter explains the analysis of the data obtained from the five case studies resulted from different approaches.

# 4. Data Collection, Validation and Analysis

**Objectives of chapter 4**

- Presents the data collection and analysis using quantitative.
- Illustrate the statistical tests used in data analysis.
- Discuss the findings of the quantitative approach (employees and customers) perspectives.
- Presents the interpretation of the findings for the quantitative data.
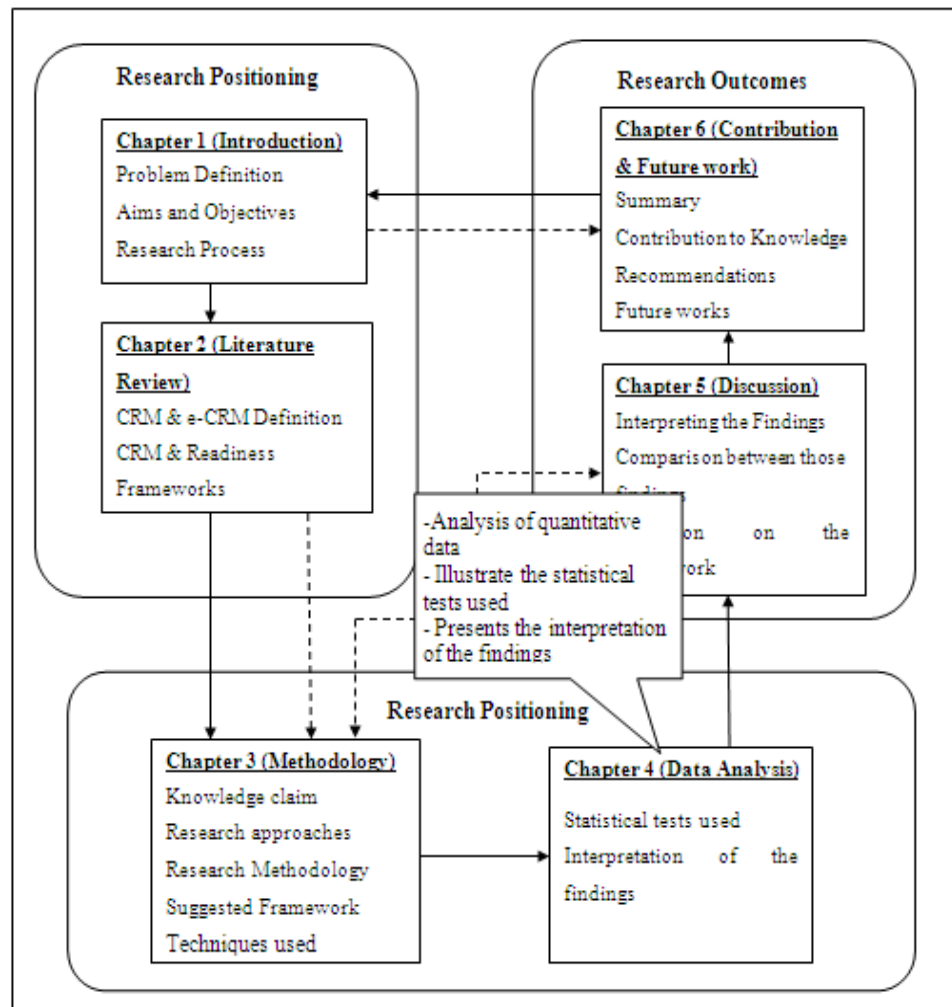


**Figure 4-1**

This chapter presents data collected using quantitative approach, and reports on the data analysis. For this research, two structured questionnaires were designed, distributed, and collected in order to assess the e-CRM readiness in five bank cases. The two questionnaires were administered inside the banks' premises, one of which was answered by employees and the other questionnaire was answered by the banks'

clients. In an attempt to deeply understand the e-CRM problem, the researcher has conducted semi-structured interviews with banks' mangers discussed in chapter 5.

Data collected and analysed using the two different questionnaires were used to be compared together with the interviews interpreted data in order find similarities and differences between the different results obtained from the three different e-CRM stakeholders, namely the banks' managers, employees, and customers. This in turn will help prove to which extent the data obtained for the two different methods (quantitative and qualitative) reveals the framework for assessing e-CRM readiness in Egyptian banks.

The statistical analysis for this study was done using the SPSS (Statistical Package for Social Science) software. Statistical tests used were as follows:

- Reliability Analysis (Cronbach alpha) was used to measure the reliability of e-CRM readiness and quality of service used in the study

- Descriptive analysis was used to provide insights on the sample structure, demographic characteristics, education level, duration employee's work in bank, length of transaction period with the bank and monthly income, bank name, and bank type

- Kolmogorov-Smirnov analysis was used to assess normality of distribution. Whether the data is normally distributed or not normal distributed. Since each distribution has different tests.

- Kruskal Wallis analysis H test was used to analyse whether the independent variables (Employees' Use of technology, Organisational Culture, Corporate Strategy and different e-CRM stakeholders' perceptions (employees and customers' perceptions) have a significant relations with the dependent variable (e-CRM readiness)

- Mann-Whitney U test was used to test the difference between two independent groups. In other word, used to measure the difference between private banks and public banks in customers' perception of e-CRM service quality

- Chi-Square was used to further test whether the independent the independent variables: Employees' Use of technology, Organisational Culture, Corporate Strategy and different e-CRM stakeholders' perceptions (employees and customers' perceptions) affect the dependent variable e-CRM readiness. As well as, test weather the e-CRM readiness affect the quality of service.

- Regression analysis was used to assess how much do Employees' Technology Perception, Organisational Culture, Corporate Strategy and different e-CRM Perceptions (employees and customer) (independent variables)  affect and explain e-CRM Readiness(dependent variable). It also gives an indication of the relative contribution of each independent variable.

## 4.1   Frequencies

There were 400 questionnaires distributed over employees working in the chosen private and public banks, of which 377 valid questionnaires were returned, with a response rate of 94.25%. The response rate differs from bank to another; the total returned questionnaires constituted more than 100% of the calculated planned sample size of the target sample size (375). Another questionnaire was distributed over 400 employees working in public and private banks, of which 176 valid questionnaires were returned, with response rate of 44%.Another questionnaire was distributed over 500 customers who deal with the previously named five banks. 388 questionnaires were returned and proved to be valid with a response rate of 78%. This again has exceeded the required sample of 384 questionnaires and is considered satisfactory in terms of numbers.

### 4.1.1  Employee respondents personal details

Analysis of the survey shows that 58.5% are males while 41.5% are females. 34% were between 41 to 50 years old, 31.8% were between 20 to 30, 29.7 were between 31 to 41, and 4.5% are over than 50. The majority of respondent 94.4% were university graduates due to the job requirements in the banks.  2.9% had only attended secondary schools, and 1.3% was diploma holder and 1.3% was Master holder.

71.1% is working in private banks and 28.9% are working in public banks. 36.6% works in customer service department, 35.3% works in operation department and 28.1% works in cash department. 28.6% spends more than 8 years woks within banks, 26.8% spends between 5 to 8 years, 24.4% less than 2 years works in the banks and 20.2% spends between 2 to 5 years within banks. As shown in figure 4.2; 28.1% works in Piraeus banks, 23.3% works in CIB and 19.6% works in BNP banks, 3.7% works in Industrial Development, and 25.2% works in Banque du Caire.
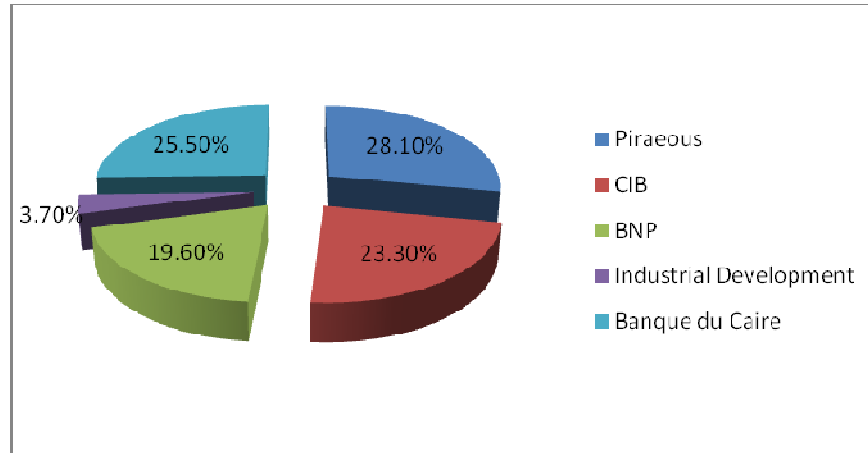


**Figure 4-2: employees' percentage in banks**

## 4.1.2 Customer respondents personal details

Analysis of the survey shows that 60.5% are males while 39.5% are females. 44.4% are from 30 less than 40 years old, 39% are 40 less than 50, 14.7% are from 20 less than 30, and 4.1% are from Less than 20. 2.8% are 50 or above.  59.2% are university graduate; especially that the majority of bank clients are university graduates, 21.2 are master's degree, 15.2 are PHD degree, 3.1% are diploma graduate, and 1% is no formal education; especially with the majority of illiterate people being unbanked (Nasr, 2007). 54.8% have an income between L.E. 3000 and L.E. 4000,  16.5% have income between L.E. 2000 and L.E. 3000, 14.7% have income between L.E. 3000 and L.E 4000, 12.9% have income between 1000 and L.E. 2000, and 1% have income less than L.E 1000.

41.6% made transaction with the bank 7 years or above, 32.3% are 5 years - less than 7, 15% are 3 years - less than 5 and 11.1% are 1 year - less than 3. 55.3% deals with private banks and 44.7 deals with public banks. 34% deals with Banque du caire, 21.2% deals with Industrial Development bank of Egypt, 19.4% deals with CIB, 15.5% deals with BNP, and 9.8% deals with Piraeus bank.

## 4.1.3 Variables Frequency

The following frequencies show the percentage of questionnaire respondents who agreed, disagreed or even were neutral to the importance of variables that are related to the research framework.

- The majority of respondents (95%, N = 377) agreed on the importance of Corporate Strategy in affecting e-CRM readiness and 5% disagree as shown in figure 4.3.
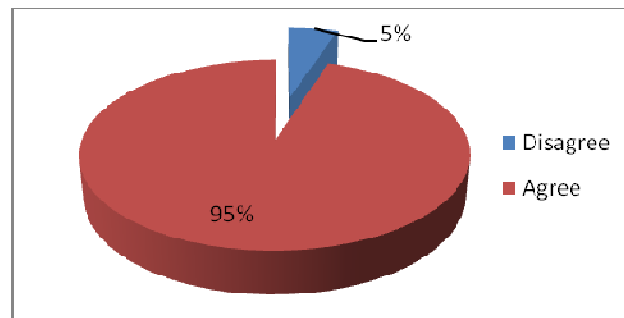


**Figure 4-3: Importance of Corporate Strategy**

- The majority of respondents (95%, N = 377) agreed on the importance of Organisational Cultural in affecting e-CRM readiness while only 5% disagree as shown in figure 4.4 below.
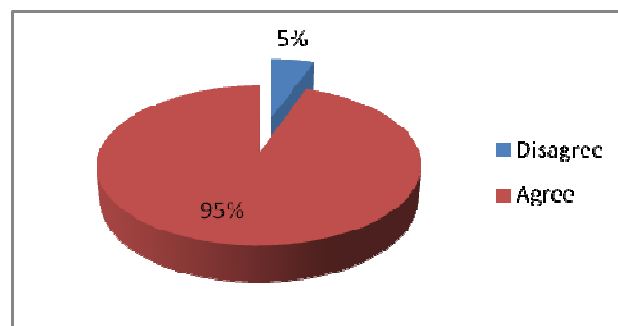


**Figure 4-4: Importance of Organisational Cultural**

94

- The majority of respondents (90 %, N = 377) agreed on the importance of Use of technology in affecting e-CRM readiness, 9% disagree and 1% were neutral as shown in figure 4.5.
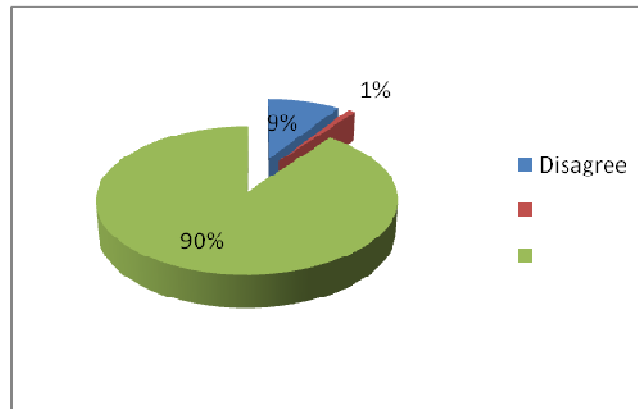


**Figure 4-5: Importance of Use of technology**


- The majority of respondents (80 %, N = 377) agreed that the quality of service is affected by e-CRM readiness, 9% disagree and 1% neutral were as shown below in figure 4.6.
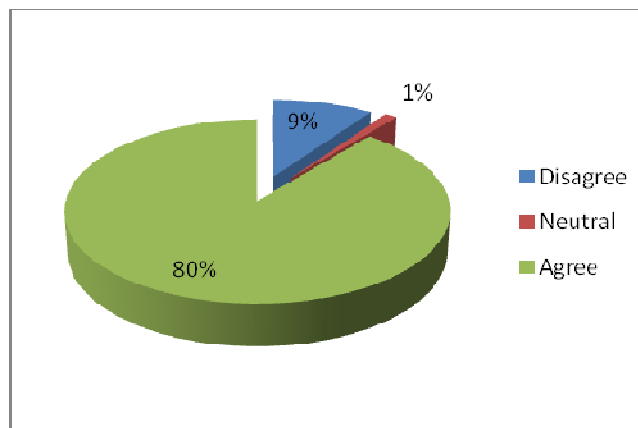


**Figure 4-6: Importance of quality of service**


## 4.2 Reliability of scales

The reliability of a measure refers to its consistency. A measurement is reliable if it supplies consistent results. Reliability is a contributor to validity where it is necessary but not sufficient to calculate validity. There are two types of reliability:

- Internal reliability: refers to the extent to which a measure is consistent within itself and the items that make up scale are internally consistent. Internal reliability is measured by Cronbach alpha which is frequently used to measure internal consistency. If Cronbach alpha is equal or more than 0.5 then the scale is reliable (Sekaran, 2003).

- External reliability: is concerned with the degree of consistency of measure over time.

Three main scales are used in this research, one for measuring e-CRM readiness in Banks in developing countries, given the case of Egypt, and the other for measuring different e-CRM perception. These scales were five point scales (Likert scale). The reliability for each dimension for e-CRM readiness was measured and proved that they are all reliable with Cronbach alpha over 0.5. The overall reliability for the scale was 0.855 which indicates high reliability as shown below in the table 4.1:

Table 4-1: The reliability of each scale

| Scale | Number of items | Cronbach alpha |
|---|---|---|
| Use of technology | 22 | 0.819 |
| Organisational Cultural | 17 | 0.689 |
| Corporate Strategy | 21 | 0.725 |
| Readiness | 9 | 0.723 |
| Overall reliability | 69 | 0.876 |
| Employees perception | 30 | 0.930 |
| Clients perception | 14 | 0.758 |
| Quality of service | 22 | 0.883 |
| Overall reliability for clients | 36 | 0.915 |

The overall Cranach's Alpha for the employees' questionnaire was found to be 0.876; and the overall Cronbach's Alpha for the clients' questionnaire was found to be 0.915. This indicates a high level of consistency. Since the minimum acceptable reliability value is 0.5, therefore the reliability level for the pilot study is more than acceptable (Sekaran, 2003).

The reliability analysis for employees' questionnaire showed that:

- Cronbach's Alpha for the overall questionnaires was found to be 0.876.
- Cronbach's Alpha for Use of technology in commercial banks as a whole was found to be 0.819
- Cronbach's Alpha for organisational cultural in commercial banks as a whole was found to be 0.690
- Cranbach's Alpha for corporate strategy in commercial banks as a whole was found to be 0.725
- Cranbach's Alpha for employees perception for e-CRM in commercial banks as a whole was found to be 0.930

The overall Cronbach's Alpha for the employees' perception for e-CRM readiness questionnaire was found to be 0.930. This indicates a high level of consistency. Since the minimum acceptable reliability value is 0.5, therefore the reliability level for the pilot study is more than acceptable (Sekaran, 2003).

The reliability for each dimension for service quality was measured and all proved to be reliable with Cronbach alpha over 0.58 expect for the Credibility, where its Cronbach alpha was 0.484. The overall reliability for the scale was 0.915 which indicates high reliability as shown below in the table 4.2:

**Table 4-2:Reliability for each dimension**

| Scale | Number of items | Cronbach alpha |
|---|---|---|
| Reliability | 4 | 0.728 |
| Responsiveness | 6 | 0.702 |
| Competence | 2 | 0.599 |
| Courtesy | 2 | 0.582 |
| Credibility | 2 | 0.484 |
| Access | 2 | 0.752 |
| Communication | 2 | 0.775 |
| Continuous improvement | 3 | 0.652 |
| Accuracy | 2 | 0.837 |
| Ease of Use | 4 | 0.925 |
| Security | 1 | |
| Content | 1 | |
| understanding customer | 1 | |
| Timelines | 1 | |
| Aesthetics | 1 | |
| Collaboration | 1 | |
| Over all service online | 1 | |
| Over all service quality | 36 | 0.938 |

## 4.3 Normality Analysis

Normality analysis is a statistical method that uses parametric statistics to show the fact that data related to the study variables came from a normally distributed population (Sekaran, 2003). It is necessary to test whether data was collected from a normally distributed population or not. Therefore a Kolmogrove - Smrnove and P-P plot is used to determine whether it is parametric or non parametric statistics, since every category includes different tests for analysis. The researcher assumed:

H0: data is normally distributed, so parametric test is used

According to Sekaran, 2003, if the significant level is greater than 0.05, therefore we fail to reject the hypothesis. Otherwise if the significant level is smaller than 0.05, therefore hypothesis is accepted. The Significant levels for e-CRM readiness dimensions are listed below:

- Significant level for organisational cultural equals 0.000, so it is < 0.05, therefore we accept the hypothesis. This proves that the research's data is not normally distributed. See Appendix.

- Significant level for corporate strategy equals 0.000, so it is < 0.05, therefore we accept the hypothesis. This proves that the research's data is not normally distributed. See Appendix.

- Significant level for Use of technology equals 0. 000, so it is < 0.05, therefore we accept the hypothesis. This proves that the research's data is not normally distributed. See Appendix.

- Significant level for Readiness equals 0. 000, so it is < 0.05, therefore we accept the hypothesis. This proves that the research's data is not normally distributed. See Appendix.

- Significant level for Customer perception for e-CRM equals 0.001, so it is <0.05, therefore we accept the hypothesis. This proves that the research's data is not normally distributed. See Appendix.

## 4.4 Multi-Collinearity

Multi-collinearity used to measure the relationship among the independent variables (Use of technology, Organisational Cultural, Corporate Strategy, different e-CRM perceptions; employees and customer perceptions). If those variables are highly correlated, so multi-collinearity exists. The correlation test explains the absence of multi-collinearity because the bivariate correlation between four variables (independent) is less than 0.7, otherwise multi-collinearity exists and elimination of variable is needed. (Pallent, 2007)

## 4.5 Statistical treatment

The research addresses seven different Hypotheses; the first four tests the impact of employees' technology perception, Organisational Cultural, Corporate Strategy, different e-CRM perceptions on e-CRM readiness where the fifth hypothesis addresses the impact of e-CRM readiness on quality of service, the six hypothesis address the impact of different perceptions on the quality of service and the seventh hypothesis addresses whether there is a significant difference between private and public banks with regards to stakeholders' perception.

- Kruskal Wallis test was used to analyse whether Employees' Use of technology, Organisational Culture, Corporate Strategy and different e-CRM stakeholders' perceptions (employees and customers' perceptions) have significant relation with e-CRM readiness. The Kruskal Wallis significance test, with a value that is equal to 0.05 or less indicates that the dimension is significant. On the other hand, if the value is larger than 0.05, it indicates that the result is not significant. In other words, we reject the hypothesis.

- Chi-Square test was used to analyse whether Employees' Use of technology, Organisational Culture, Corporate Strategy and different e-CRM stakeholders' perceptions (employees and customers' perceptions) affect e-CRM readiness. According to (Allyn and Bacon, 1999) (Sekaran, 2003) and (Pallant, 2001) the Chi-square significance tests, with value equal to 0.05 or less indicates that a dimension is significant. On the other hand, if the value is larger than 0.05, it indicates that the result is not significant. In other words, we fail to reject the hypothesis.

- Regression analysis is also used to assess how much do Employees' Technology Perception, Organisational Culture, Corporate Strategy and different e-CRM Perceptions (employees and customer) affect and explain e-CRM Readiness. It also gives an indication of the relative contribution of each independent variable.

- For the seventh hypothesis, Mann-Whitney test was used to compare the service quality perceived by customers in both public and private banks.

## 4.5.1 Hypotheses Testing

In order to achieve the research aim of the study, a number of hypotheses were devised and tested as shown below (see appendix B):

### H1: Use of technology affects e-CRM readiness.

Theoretically speaking, technology should be an essential factor for assessing e-CRM readiness, but in order to test whether in reality, the employees' Use of technology will affect e-CRM readiness in banks or not, Kruskal Wallis test was used to examine the significance, followed by a regression test to determine the strength of the relationship between the Use of technology among a series of other factors affecting e-CRM readiness. If the value (p-Value) is equal to 0.05 or less, this indicates that the dimension is significant, where if the p-value is greater than 0.05, this indicates that the result is insignificant. The equation is shown below:

$Y = a + b\ x$, where Y is the dependent variable (e-CRM readiness), a, is the Y intercept, that is the value of Y (e-CRM readiness) when x = 0, b is the regression coefficient which indicates the amount of change in Y given a unit change in x, and finally x is the value for the independent variable (Use of technology). The results were as follows:

- Kruskal Wallis: P-value = 0.000,
- Regression test: P-value = 0.000,
- Chi square: P-value = 0.000.

With the previously mentioned values, the hypothesis is accepted. The interpretation is that the Use of technology highly affects e-CRM readiness and is considered an

important factor that affects e-CRM adoption. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test with significant level equals to 0.000. This shows highly significant because the value equals to 0.000 which is smaller than 0.05

E-CRM readiness = 2.298 + 0.191x. This illustrates the impact of Use of technology on e-CRM readiness, where an increase in Use of technology by 0.191 will cause an increase in e-CRM readiness by this amount.

In order to further measure the significance of the technology perception, chi square test was used and the value for Use of technology was equal to 0. 000, by comparing the value to 0.05, we find 0.000 is < 0.05. Therefore H1 is accepted. In other words, significance was recorded, which proves that Use of technology actually affect e-CRM readiness

By testing this hypothesis, it is now clear that the Use of technology is one of the main factors behind e-CRM failure, which highlights the importance of assessing the e-readiness before actually adopting it (Ward, 2001) (Amsteletal, 2000) (Stahl 2003) (Simpson, 2002) (Chen and Chen, 2004). This contributes to answering the first research question "what are the main factors that affect e-CRM readiness in Egyptian banking industry?"

**H2: Organisational cultural affects e-CRM readiness.**

As Egypt is a developing country with a high rate of illiteracy and according to (ICT, 2011) there are around 33 million Egyptian Internet users it was worth testing whether organisational culture affects e-CRM readiness or not. In order to test this hypothesis, Kruskal Wallis test was used to examine the significance, followed by regression test was used to determine the strength of the relationship between the Use of technology among a series of other factors affecting e-CRM readiness shown in equation: Y = a + b x.

In the above equation, Y is the dependent variable (e-CRM readiness), a is the Y intercept, that is the value of Y (e-CRM readiness) when x = 0, b is the regression

coefficient which indicates the amount of change in Y given a unit change in x, and finally x is the value for the independent variable (Organisational cultural). The results were as follows:

− Kruskal Wallis: P-value = 0.000,

− Regression test: P-value = 0.000

− Chi square: P-value = 0.000.

With the previously mentioned values, the hypothesis is accepted. The interpretation is that the Organisational cultural highly affect e-CRM readiness and is considered an important factor that affects e-CRM adoption. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test with a significant level of 0.000. e-CRM readiness = -2.212 + 1.711x. This illustrates the impact of organisational culture on e-CRM readiness, where an increase in Organisational cultural by 1.711 will cause an increase in e-CRM readiness by this amount.

By testing this hypothesis, it is now clear that the Organisational culture, is one of the main factors behind e-CRM failure, which again emphasises the importance of assessing the e-readiness before actually adopting it (Xu et al., 2002) (Simpson, 2002) (Junior and Regno, 2003) (Ali, 2007). This also contributes to answering the first research question "what are the main factors that affect e-CRM readiness in Egyptian banking industry?"

The researcher found that the value associated with the Organisational Culture when tested using chi square is 0.000. With this value, it has been found that the H2 is accepted. The interpretation is that Organisational Culture affects e-CRM readiness, which indicates that the significance of the organisational cultural.

## H3: Corporate Strategy affects e-CRM readiness.

In order to establish and maintain a good position and be competitive, a corporate strategy should be clarified. E-CRM has been evolving and adopted all over the world, however whether corporate strategy would affect the e-CRM readiness or not was not clear or proven at least in the Egyptian context.

In order to test this hypothesis, Kruskal Wallis test was used to examine the significance, followed by regression test was used to determine the strength of the relationship between the Use of technology among a series of other factors affecting e-CRM readiness shown in equation: $Y = a + b\,x$, where Y is the dependent variable (e-CRM readiness), a is the Y intercept, that is the value of Y (e-CRM readiness) when $x = 0$, b is the regression coefficient which indicates the amount of change in Y given a unit change in x, and finally x is the value for the independent variable (corporate strategy). The results were as follows:

- Kruskal Wallis: P-value = 0.000
- Regression test: P-value = 0.000,
- Chi square: P-value = 0.000.

With the previously mentioned values, the hypothesis is accepted. The interpretation illustrates that the corporate strategy affects e-CRM readiness. Although (Freeland, 2002) (Greenberg, 2002) (CGI Group Inc. 2004) (Grant, 1998) and (Ocker, 2002) have stated that it is considered an important factor that affects e-CRM adoption, the result obtained from Kruskal Wallis test proved the interpretation and was supported by the results obtained from the regression test, where the significant level equals to 0.000 e-CRM readiness = 0.404 +0.824x. This illustrates that the corporate strategy affects the e-CRM readiness in the Egyptian context.

By testing this hypothesis, it is now clear that the corporate strategy is considered a major reason behind e-CRM failure. Despite the many e-CRM models that have identified a number of factors that affect the e-CRM adoption, and although they have been widely used and referenced, extended, and criticized by many information system studies, most of the research done in the field was mainly about e-CRM implementation rather than e-CRM readiness.

The chi square test provided the following value for corporate strategy: 0. 000, by comparing the value to 0.05, we find 0.000 is < 0.05. Therefore H3 is accepted. This indicates that corporate strategy is significant. Accordingly, the result of testing this hypothesis contributes to answering the first research question "what are the main factors that affect e-CRM readiness in Egyptian banking industry?"

**H4: Different e-CRM perceptions affect e-CRM readiness.**

Theoretically speaking, Employee's perceptions should be similar to customer perception in adopting a new technology for facilitating work. It is assumed that the different perceptions do not actually affect e-CRM readiness, but in order to test whether in reality this is true in the Egyptian context or not, Kruskal Wallis test was used to examine the significance, followed by regression test was used to determine the strength of the relationship between the Customer perception among a series of other factors affecting e-CRM readiness shown in equation: $Y = a + b \, x$.

In the above equation, Y is the dependent variable (e-CRM readiness), a is the Y intercept, that is the value of Y (e-CRM readiness) when x= 0, b is the regression coefficient which indicates the amount of change in Y given a unit change in x, and finally x is the value for the independent variable (Customer perception). The results were as follows:

- Kruskal Wallis: P-value = 0.048,
- Regression test: P-value = 0.032,
- Chi square: P-value = 0.138.

With the previously mentioned values, the hypothesis accepted. The interpretation is that the Customer perceptions have an impact on e-CRM readiness. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test with significant level below 0.05. E-CRM readiness = 2.370 + 0.160x. This illustrates the impact of Customer perception on e-CRM readiness, where an increase in perception Customer perception will cause an increase in e-CRM readiness.

By testing this hypothesis, it is now clear that the Customer perception is one of the main factors behind e-CRM failure. This may be because of the cultural importance of assessing the e-readiness before actually adopting it. This is logically expected because the higher the customers' e-CRM perception, the higher the readiness for e-CRM adoption. This contributes to answering the first research question "what are the main factors that affect e-CRM readiness in Egyptian banking industry?"

Here chi square test resulted differently, where it was equal to 0.138. Surprisingly, this would indicate that the customers' perception is not very significant to produce positive

results when tested using chi square too. This could be due to the level of customer perception impact on e-CRM readiness which could be proved significant using Kruskal Wallis showing difference in responses, but was not high enough to be prove a relationship between customer e-CRM perception and their readiness to adopt e-CRM when tested using chi square.

On the side, results concerning employees' perception are shown below:

− Kruskal Wallis: P-value = 0.670,
− Regression test: P-value = 0.763,
− Chi square: P-value = 0.033.

With the previously mentioned values, the researcher fails to prove that the employees' perception affects e-CRM readiness. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test; as both were found insignificant, where e-CRM readiness = 2.843 + (-0.020x). This illustrates the poor impact of employees' perception on e-CRM readiness, where although employees contact customers directly and are more aware of their preferences, concerns, and problems than the top management, and despite the fact that customers' perception was found significant and was proved to affect the e-CRM readiness, employees perception was found to be insignificant.

This could again be the effect of culture where the higher power distance as discussed by Hofstede, is clearly revealed by such a result where the decision makers in banks isolate themselves from the employees that actually carry out the daily operations. This is somehow interesting because employees are the direct contact between the organisation and the customer, and if their perception is margined, the success of the whole system may be endangered.

Decision makers seem to neglect the employees' perception towards e-CRM although they are required to use is effectively. Despite the fact that chi square test was found significant with a value of 0.033, which indicates that the employees perception affect that e-CRM readiness, it was not significant enough to yield positive results in both tests used.

**H5: e-CRM readiness affects quality of service.**

Poor service is considered a major reason for losing business. The core product alone is no longer enough, and service quality is stressed as the key to successful business. According to Donaldson and O'Toole, 2002, quality is one of the main CRM components.

It is assumed that the quality of service is not actually affected by e-CRM readiness, but in order to test whether in reality this is true in the Egyptian context, Kruskal Wallis test was used to examine the significance, followed by regression test to determine the strength of the relationship between the e-CRM readiness and quality of service; as shown in the equation: $Y = a + b \, x$, where Y is the dependent variable (quality of service), a is the Y intercept, that is the value of Y (quality of service) when $x = 0$, b is the regression coefficient which indicates the amount of change in Y given a unit change in x, and finally x is the value for the independent variable (e-CRM readiness). The results were as follows:

− Kruskal Wallis: P-value = 0.000,

− Regression test: P-value = 0.000,

− Chi square: P-value = 0.001.

With the previously mentioned values, the hypothesis is accepted. The interpretation is that the e-CRM readiness highly affects quality of service and is considered an important factor that affects e-CRM adoption. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test with significant level below 0.05. Quality of service = 2.104 + 0.216x. This illustrates the impact of e-CRM readiness on quality of service, where an increase in e-CRM readiness will cause an increase in quality of service.

By testing this hypothesis, it is now clear that the e-CRM readiness is one of the factors behind e-CRM quality of service. This contributes to answering the first research question "what are the main factors that affect e-CRM readiness in Egyptian banking industry?"

The chi square test provided a value equal to 0. 001. By comparing the value to 0.05, we find 0.001 is < 0.05. Therefore H5 is accepted, which indicates that there is a significant difference between e-CRM readiness and the quality of service in banks.

**H6: Different e-CRM perceptions affect quality of service.**

It is assumed that the different perceptions (customers and employees) do not actually affect quality of service, but in order to test whether in reality this is true in the Egyptian context, Kruskal Wallis test was used to examine the significance, followed by regression test to determine the strength of the relationship between the Customer and employees perceptions quality of service. Shown in equation: $Y = a + b x$, where Y is the dependent variable (quality of service), a is the Y intercept, that is the value of Y (quality of service) and finally x is the value for the independent variable (Customer perception and employees) which indicates the amount of change in Y given a unit change in x,. The results were as follows for customer perceptions:

− Kruskal Wallis: P-value = 0.000,

− Regression test: P-value = 0.000.

With the previously mentioned values, the hypothesis is accepted. The interpretation is that the Customer perception affects the quality of service. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test with significant level equal to 0.000. Quality of service = 0.226 + 0.000x. This illustrates the impact of Customer perception on quality of service.  In contrast the result obtained from employees' perceptions illustrates the opposite; as shown below as follows:

− Kruskal Wallis: P-value = 0.994,

− Regression test: P-value = 0.857.

With the previously mentioned values, we reject the hypothesis, failing to prove that the employees' perception affect the quality of service. The result obtained from Kruskal Wallis test is supported by the result obtained from the regression test; as both were found insignificant, where quality of service = 0.226 + 0.857x.

This illustrates the poor impact of employees' perception on quality of service, although employees contact customers directly and are more aware of their preferences, concerns, and problems than the top management, and despite the fact that customers' perception was found significant and was proved to affect the quality of service, employees perception was again found to be insignificant.

This again shows the high power distance as discussed by Hofstede, where the decision makers in banks isolate themselves from the employees that actually carry out the daily operations. They seem to clearly neglect the employees' perception towards quality of service; although they are required to use is effectively.

**H7: There is significant difference between private and public banks with regards to customers' perception of e-CRM quality service**

In order to know whether there is a significant difference between private and public banks with regards to customers' perception of e-CRM service quality, Mann Whitney test was used; especially as this test is a non parametric test for independent samples.

The researcher found the value associated with continuous improvement, courtesy, Credibility and accuracy is greater than 0.05. Therefore the researcher accepts the hypothesis. In other words, there is no significant difference between private banks and public banks when compared based on continuous improvement, courtesy credibility and accuracy. Where the value associated with access, responsiveness, understanding customer, collaboration, content, timeliness, aesthetics, ease of use is smaller than 0.05. In other words, there is a significant difference between private banks and public banks when compared based on those factors.

Each dimension (Use of technology, organisational culture, corporate strategy, and different perceptions) has been tested to examine its effect on the e-CRM readiness. A regression test was used to determine the strength of the relationship among the different dimensions affecting e-CRM readiness. In other words, all dimensions were combined to test their effect on e-CRM readiness.

It was proven that the Use of technology has an effect on e-CRM readiness in the model as shown in equation: $Y = a + b\,x1 + b\,x2 + bx3 + bx4$, where x2 is organisational culture, x3 is the Corporate Strategy and x4 is customer perceptions affects y (e-CRM readiness). Due to the fact that without technology there will be no e-CRM readiness and since banks currently applying e-CRM that is highly characterised by a technology based operations. It shows that employees perceive technology as existing by nature.

The hypotheses tested and their results discussed in Chapter 5, are summarised as shown below in table 4.3.

**Table 4-3: Summary of Hypothesis Results**

| Hypotheses | Dependent | Independent | Results |
|---|---|---|---|
| **H1: Use of technology affects e-CRM readiness.** | e-CRM Readiness | Use of technology affects | Accepted, Use of technology affects e-CRM readiness, since P-value less than 0.05 |
| **H2: Organisational cultural affects e-CRM readiness.** | e-CRM Readiness | Organisational Culture | Accepted, Organizational culture affects e-CRM readiness, since P-value less than 0.05 |
| **H3: Corporate Strategy affects e-CRM readiness** | e-CRM Readiness | Corporate Strategy | Accepted, Strategy affects e-CRM readiness. since P-value less than 0.05 |
| **H4: Different e-CRM perceptions affect e-CRM readiness.** | e-CRM Readiness | Customer and employees perceptions | - Accepted, Customer perception affect e-CRM readiness, since P-value less than 0.05<br>- Rejected, employees' perception does not affect e-CRM readiness, since P-value greater than 0.05 |
| **H5: e-CRM readiness affects quality of service.** | Quality of service | e-CRM Readiness | Accepted, e-CRM readiness affects quality of service, since P-value less than 0.05 |
| **H6: Different e-CRM perceptions affect quality of service.** | Quality of service | Customer and employees perceptions | - Accepted, Customer perception affects the quality of service, since P-value less than 0.05<br>- Rejected, employees' perception does not affect the quality of service, since P-value greater than 0.05 |

| H7: There is significant difference between private and public banks with regards to customers' perception of e-CRM quality of service | Quality of service | Category (private/public) | - There is significant difference between private and public banks in some dimensions (access, responsiveness, understanding customer, collaboration, content, timeliness, aesthetics and ease of use) since P-value less than 0.05.<br>- There no significant difference between private and public banks in some dimensions (courtesy, credibility, security and continuous improvement. since-value greater than 0.05 |
|---|---|---|---|

## 4.6 Discussion

Employees are considered one of the main players in e-CRM adoption, where they are considered the actual providers of the service, whether they are decision makers or subordinates. Accordingly, the employees' perspective has been statistically and interpretively analysed. The following subsections will discuss the findings of both the questionnaire and interview analysis.

### 4.6.1 Employees perspectives

Although the research at hand shows that from an employees' perspective, the Use of technology is an important dimension in e-CRM assessment, Egyptians are infrequent Internet users (Maged, 2010), and most bank websites do not function or allow multiple transactions but are rather only used by clients to check their accounts.

In 2009, Frow and Young have also illustrated the importance of information flow and the integration between various systems, where banks should identify their IT capability and adopt the e-CRM application (King and Burgess, 2007) (Ocker and Mudambi, 2002) (Amsteletal, 2000) (Ward, 2001) (Simpson, 2002) (Stahl 2003) (Chen and Chen, 2004) (Jayachandran et al., 2005) (Griman et al., 2007) (Mylonakis, 2009).

This study supports literature, where Employees believe that in order to let banks website be interactive and better satisfy their customers, banks should integrate all clients' information from different channels, across different types of systems. This would enable employees working at any given bank branch to collect, store, modify and share customer information, which would increase the flexibility and efficiency of work.

From the data collection and analysis of the questionnaires, bank employees claim to consider the Use of technology as an important factor that affects e-CRM implementation. Banks allow clients to access their accounts and order service information using wireless devices, through e-mail requests, fax requests or through telephone inquiries. Information systems are designed to give comprehensive data about customers, making information about bank's clients available at every point of contact.

The questionnaire analysis also revealed that employees believe that banks have the required software and hardware to serve customers in an efficient way, and that they maintain a comprehensive database of their customers, where any employee in any department has access to the same customer information. Moreover, analysis of the employee questionnaire shows that they believe that banks use their websites and e-mails to market their products, as well as faxes, phones, and traditional mail. They provide different channels to enable an ongoing, two way communications between banks' key customers and employees. Finally, employees think that banks' database systems can handle huge amounts of information and yet maintain them easily; especially due to the availability of efficient corporate records keeping systems. This shows the clear steps that banks are taking in order to improve their image and relationship with customers.

Corporate culture is another important dimension in e-CRM readiness, (Ocker and Mudambi, 2002) where employee questionnaire respondents and employee interviewees proved that culture is a major aspect that highly affects the e-CRM adoption readiness. This is also supported by literature where Ali and Altai believe that organisations play a major role in creating value for customers; especially due to the

challenges they face across cultures. They stated that cultural factors affect the success or failure of Information Systems as well as e-CRM (Ali and Altai, 2005).

According to (Simpson, 2002) 30 to 75 percent of CRM initiatives fail because organisations adopt them out without assessing their cultural readiness. They consider CRM applications to be the end of all customer-centric approaches. However, CRM requires cultural re-education for all employees (Junior and Regno, 2003). That is, to start with employees and their commitment and overcome employee resistance to change (Witt, 2000) (Xu et al., 2002) (Kamel, 2003) and lack of motives to change (Jones et al., 1997) (Parthasarathy and Sohi, 1997). Employees must also understand the purpose and changes that CRM will bring. In other words, the organisation must first examine its own culture and business attitudes (Chen and Chen, 2004) (King and Burgess, 2007).

The interpretation indicates that organisational culture seems to highly affect e-CRM readiness, which highlights the importance of paying enough attention to this specific factor. Accordingly, it is important to manage management and staff resistance to change; especially in receiving different training programs, workshops, seminars, or any other educational course that would enhance employees' skills. It is also of equivalent importance to make employees aware and keep them informed about the benefits and value that information technology would bring to their work. This technology utilisation would enable technical support personnel to better serve their customers and maintain stronger customer relationships.

Although, customers expect prompt service from bank employees, managers usually spend much time discussing offering new products with their employees, which normally delays the customer service process. This may cause customers' frustration. This again highlights the need for adopting e-CRM, which enables employees to accomplish their tasks and serve customers in a faster, easier and more efficient way.

Many researchers have identified the importance of an organisational strategy for e-CRM success and the need for a clear framework to adopt e-CRM (Grantner Group, 2001) (Kale, 2004) (Payane and Frow, 2006), or else the e-CRM will fail (Rigby, 2002)

112

(CGI Group Inc. 2004). The employees' questionnaire data analysis supports and confirms literature, where bank employees regard it as an important to e-CRM readiness in the Egyptian context.

Most employees know about the existence of IT plan but they have no idea about its content. Only managers or decision makers are fully aware of the strategy, understand it, and know its content. This may be due to the cultural aspects; as in Egypt there is a clear power distance, where managers separate themselves from employees, and it seems to be an acceptable phenomenon in the Egyptian context. Accordingly, the organisation vision, mission and strategy concerning e-commerce, updating software should be clarified and explained to all employees and managers. This requires a management support.

The interpretation is that the corporate strategy also affects e-CRM readiness in banks. The banks have a well defined mission and business strategy, as well as predefined IT plans with a predetermined budget for updating the system used and for any further implementation. However, they consider IT plans as a technology concern rather than a business concern. Although, most of the employees know the policy and guidelines for using the Internet, they have no idea about what is an IT plan, and what could be its content; as it is considered exclusive information for managers.

On the other hand the banks have established clear business goals related to customer acquisition, development, retention and reactivation. The managers frequently and systematically measures customer satisfaction in order to administer a customer loyalty program. Training programs for employee are designed to develop and enhance the skills required for acquiring and deepening customer relationships as well as the use of IT.

Employee performance is measured and rewarded based on achieving their tasks; meeting customer needs and successfully serving the customer. The bank commits time and resources to manage customer relationships and all customer communications. Building and maintaining long term customer relations would give banks a competitive advantage. Since the bank treats each key customer differently, by providing

customized services and products to key customers, when the managers find that customers prefer to modify a product/service according to his/her needs, managers and employees from the relevant departments that are responsible to achieve this task; usually conduct several meetings and make coordinated efforts to get this task done, in order to better satisfy customers which in turn would lead to customer loyalty.

Interpreting the employee questionnaire, showed that employees' perception does not affect e-CRM readiness nor does it affect the quality of service. This may be because of the corporate cultural impact. This is maybe because although (Sanayei, 2004) stated that CRM builds a relationship between employees and customers in order to satisfy their needs and preferences. (Salman, 2004) has stated that quality of service provided to customer service and methods used in order to meet their needs and preferences is not well established in many developing countries.

This can be due to the unawareness about the benefits of implementing new technology. Employees seem to be satisfied with the way they do with their work. They do not want to take training courses for enhancing their skills; especially because they are going to take their salary at end of month regardless of the quality of service delivered to their clients. This explains the existence of high power distance, where employees believe that they are not the decision makers and will not have an impact on how the business is done. The uncertainty avoidance is another cultural dimension that is clear here because employees do not seem to accept any changes easily (Hofsteds, 2003). This seems to be a common feature in developing countries in general, where a study by (Al-Gahtani et al., 2004) in Saudi Arabia, has shown that Hofstede scores 68 for uncertainty avoidance and 80 for power distance although citizens have relatively high income.

On the other hand the interpretation from employees' questionnaire explained that the employees' perception does not seem to affect the quality of service. However, e-CRM readiness seems to highly affect quality of service. This is again is supported by literature, where, according to Donaldson and O'Toole, 2002, quality is one of the main CRM components and is considered as a key factor for any business success, where according to Rootman et al., 2008, CRM improves the quality of service offered by banks. E-CRM is normally characterized with satisfying customers through delivering

114

high service quality which leads to customer loyalty which is considered another major factor for business success (Ehigie, 2006) (Bennett, 1996).

With regards, to public and private banks, the interpretation illustrated that there is no significant difference between private and public banks when compared based on continuous improvement, courtesy, credibility and accuracy. On the other hand, the data analysis revealed that there is a significant difference between private banks and public banks when compared based on access, responsiveness, understanding customer, collaboration, content, timeliness, aesthetics, and ease of use factors.

Private Banks seem more capable of continuous improvement trying to provide a better service. There is a clear integration between channels within the same organisation and they also provide their employees with training courses to enhance their skills and improve the efficiency. Managers in private banks together with some employees seem to be aware of bank's corporate strategy. On the other hand public banks do not seem to care about the Use of technology. They are not ready to train their employees, or even perform any new task. Finally, employees are not aware of the existence of corporate strategy in their own bank

Measuring different perceptions, both the customers' and the employees' towards e-CRM assessment illustrates that although customers' perceptions was proven to affect e-CRM adoption, employees' perceptions did not seem to affect e-CRM readiness. This is interesting because when employees keep their promises with customers, and when they notice that their customers have a problem or want to modify a specific product or service, they do their best to get it done with no delay and without error. Banks employees are also considered knowledgeable enough to provide clear answers to customer inquiries and address customer complaints in a friendly way.

The employees provide information about the new products/services offered to their customers. The Information is always available online, and is always up-to date. They also make information available through other channels like traditional mail, brochures, phone, and e-mail.  This simply means that there is a continuous improvement in bank offerings through providing a variety of different channels and by improving the customer service.

## 4.7  Customer Perspectives

Customer satisfaction is the main e-CRM objective (Chen et al., 2006), and service quality is the customer's subjective assessment that the service they receive through the e-CRM is the service they expect. Accordingly, if the service quality level experienced exceeds the customers' expectations, the customer will be back again. Otherwise a customer who receives low service quality will easily switch to another organisation in order to fulfil his needs with the accepted quality of service. In this case, customers will be loyal to the organisation.

This is illustrated from the customer questionnaire, where the customer perception seems to affect e-CRM readiness and is considered a factor that affects e-CRM adoption. Otherwise, customers who receive low service quality will not hesitate to migrate to other organisations in an attempt to fulfil their needs with an acceptable level of quality of service. Despite the fact that customer requirements are not an internal factor, the research has tried to develop a stakeholder analysis taking into consideration the main e-CRM factors whether internal or external. This called for an attempt to elicit information from the key e-CRM players, namely, bank decision makers, employees, and customers. Accordingly, a structured questionnaire was designed and distributed over a sufficient number of bank users to assess their usage pattern and opinion of e-CRM services.

The interpretation of testing the customer's perception illustrates that it affects e-CRM readiness. Customers always search for a bank with a good reputation to perform their transactions, which provide customers with a feel of confidence in his/her transactions through using the various channels; especially the website. Bank websites should be easy to access, easy to use and easy to navigate in order to make information on products and service available for customers use online, and helps eliminate possible mistakes.

The customers also expect form bank employees to treat them individually and give them a special attention. They feel frustrated when employees become too busy to neglect responding to customers' requests; especially if they have any complaints or face problems. They also expect employees to keep them informed about new products/ service offered by banks.

According to (Chaudhry, 2009) banking and financial organisations are organized around product rather than being customer-centred. They need to customize their services according to their customers' needs based on accurate analysis and understanding of available historical data (Khedr, 2008). As e-CRM is a customer-centric strategy, organisations can achieve higher returns on invested capital, more profitable customers, lower capital costs (due to the consistency of financial results that comes from long-term customer relationships) and larger investment opportunities due to their understanding of customer finances and unmet needs. Banks' clients do accept the implementation of technology in order to facilitate their communication with employees and decrease the complaints from the service offered. This in turn, requires the integration between communication channels.

## 4.8   Summary

This chapter presents the findings and interpretations of the quantitative results for the five case studies. The next chapter, discuss the findings and interpretations of the qualitative results (interviews and observations) for the five case studies. Then a comparison is made for triangulation which will lead to the development of the framework.

# 5. Qualitative Analysis

**Objectives of chapter 5**

- Presents the data collection and analysis of qualitative approach
- Discuss the findings of the qualitative approach (managers' perspectives).
- Comparison between quantitative and qualitative findings.
- Reflection on the Framework
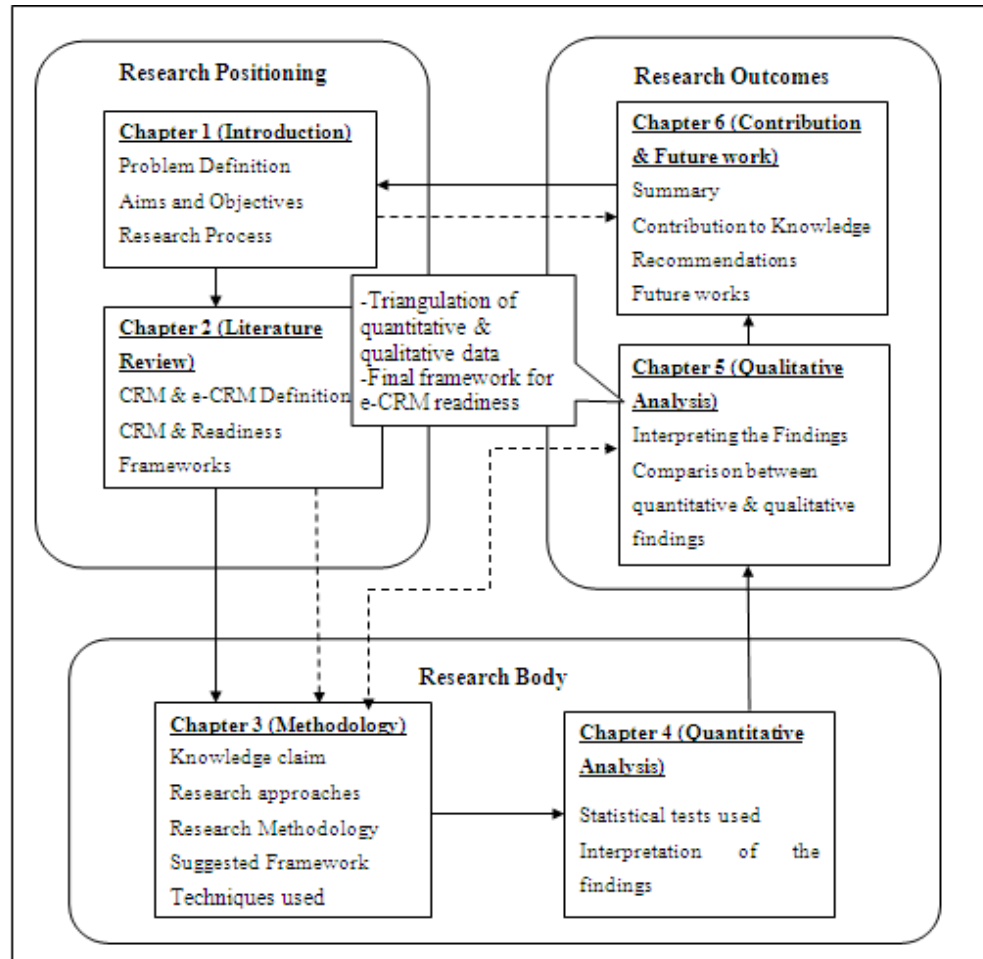


**Figure 5-1**

This chapter presents the findings from qualitative approach and comments on interviews findings in order to identify similarities and difference obtained from the quantitative approach discussed in chapter 4.

## 5.1   Summary of Interview Cases

Interviews with decision makers in banks was summarised here as ten cases. A summary of the cases interviewed is shown in Table 5.1 shows the number of interviews in each case study. It illustrates whether the branch is a public or a private bank, in Cairo or Alexandria, and finally whether it is a main branch.

**Table 1-1: Summary of Cases**

| Bank Name | Number of Interviewees |
|---|---|
| Piraeus Bank | 3 |
| BNP Bank | 2 |
| CIB | 2 |
| Banque due Caire Bank | 2 |
| Industrial Development Bank | 1 |
| **Total Number of Interviews** | **10** |

It is clear from the interviews conducted that the managers know what is meant by customer relationship management. All bank managers in BNP, Piraeus, CIB, and Banque due Caire seem to understand what is meant by CRM and e-CRM. However, managers interviewed in the Industrial Development Bank did not understand what was CRM or e-CRM.

With regards to whether the bank considers the legal issues related to customers' privacy when adopting any software such as the CRM, BNP, Piraeus, and CIB bank managers stated that they always do. Banque du Caire manager stated that the bank takes into considerations the legal issues only as needed. On the other hand, the Industrial Development Bank manager failed to answer the question; especially as he did not know what was meant by CRM.

Concerning whether there is a strategy for IT including updating the software, interviewees in BNP, and Piraeus stated that they actually have a clear strategy for that, whereas the interviewees in CIB, Banque du Caire and Industrial Development banks did not know anything about the bank's strategy regarding this matter. There was a

consensus that the strategy components should be clarified and considered as a top management responsibility.

Choosing adequate CRM-software is a very complex issue in Banque du Caire, Industrial Development Bank and the CIB. On the contrary, managers in BNP and Piraeus ensure that selecting adequate CRM-software is not a complex issue and agree that it depends on what bank needs. Concerning the awareness of the benefits the bank will gain from adopting e-CRM. The top management of BNP, Piraeus and CIB stated that they are aware but the CIB manager said it is difficult to be adopted because it is costly, it needs a big budget. On the other side, the interviewees in Banque du Caire, and Industrial Development Bank did not have any idea about e-CRM nor its benefits.

The interviewees in Piraeus, Banque du Caire bank and the Industrial Development Bank stated that data about customers is distributed over several systems and that they do not provide a consolidated view, which is a major issue. In the BNP bank, the picture was not clear; where a manager in one of the bank's branch stated that data is distributed across systems and there is no consolidated view, while another manager in another branch sated that this was not true. Finally, the only interviewee who stated that they have a consolidated view of their customers' data was that at the CIB bank.

The managers in Piraeus, BNP, Industrial Development Bank and Banque du Caire bank stated that the information technology integration requires additional reorganisation. On contrary managers in CIB bank stated that there is no need for reorganisation for information technology integration. It is shown from interviews that managers of BNP, agreed that it is costly and expensive for Integrating CRM with existing IT infrastructure. Similarly managers in CIB banks confirmed that it is expansive to integrate CRM with the existing IT infrastructure because their systems are old.

Banque du Caire and Industrial Development Bank have also stated that is expensive to integrate CRM with existing IT infrastructure. With regards to the Piraeus bank, there was a conflict between the view of the managers interviewed at two different branches, where one confirmed that it is costly to integrate new software with an existing IT infrastructure and the other manager said that one cannot tell whether it is expensive or not.

The managers in Industrial Development Bank and Banque du Caire stated that CRM adoption requires high expenses for training their employees. Manager Interviewees of BNP stated that CRM adoption does not require high expenses for training; because not all employees need to be trained. Managers interviewed in Piraeus bank stated that is not costly for training their employees but one branch manager said that he has no idea about this issue. The CIB interview revealed that the bank always gives training courses to its employees.

The managers in CIB, Piraeus bank, Banque du Caire and Industrial Development Bank agreed that there is a clear need for an intensive communication to overcome internal resistance to change. Where on the other hand, the manager interviewed in BNP stated that overcoming internal resistance to change doesn't require intensive communication.

According to managers interviewed in Piraeus bank, BNP bank, and CIB bank they categorize the important customers based on the data obtained, while the Banque du Caire bank and the Industrial Development bank do not categorize their customers.

The CIB bank, Industrial Development Bank and the Banque du Caire stated that they can't offer efficient individual service with the data obtained from their customers. Similarly managers in Piraeus bank stated that can't offer efficient individual service with the data obtained from their customers but they think that if they adopt the CRM-software, they may be able to do it. BNP interviewees said that the bank provides efficient individual service with the data obtained. In BNP bank there is online service that can receive feedback and complains from their customers, where in the CIB, Piraeus, Banque du Caire and Industrial Development they don't have this online service.

The corporate strategy and organisational culture are the most important dimensions and take the same rank in terms of their importance for the BNP bank concerning e-CRM readiness followed by the Use of technology and finally the perception regarding the adoption of new applications. In the Piraeus bank, the organisational culture is the most important dimension followed by the Use of technology then corporate strategy

and finally perception regarding adopting new applications seems to be the least important.

It can be depicted from the interviews that the manages believe that main reasons that encourage customers to get their tasks done through physically visiting the banks rather than Internet are mainly the complexity of using the internet followed by the fact that employees think they do not have time to access the bank's website and search for what they want, and finally they assume that it might be costly.

As showed in table below 5.2, the complexity of using the internet is considered as the main reason behind the employees' resistance to use the Internet with Piraeus Bank, then CIB and Banque du Caire. The second reason for not using the Internet was found to be because there is no time and was considered as a major factor for employees in Industrial development bank, Banque du Caire and CIB bank. Finally, the cost is the third reason for not achieving tasks through the internet considered as main reason for Industrial development bank, then Banque du Caire and CIB bank.

Table 5-2: Why Customers don't prefer their tasks through Web Site

| Bank Name | Reasons | | | |
|---|---|---|---|---|
| | No time | Cost | Complexity | Total No. of Interviewer |
| | No. of Interviewee | No. of Interviewee | No. of Interviewee | |
| CIB | 1 | 0 | 1 | 2 |
| BNP | 0 | 1 | 1 | 2 |
| Piraeus | 0 | 1 | 2 | 3 |
| Banque du Caire | 1 | 0 | 1 | 2 |
| Industrial Development | 1 | 0 | 0` | 1 |
| Total | 3 | 2 | 5 | 10 |

It can be shown from the table below 5.3 that the main reason of not providing high level of customer service to customers is due to absence of  customer service culture is major reason for Industrial Development, Piraeus equals and then BNP bank. Although the inadequate technological support is major reason for CIB and BNP bank equals. Where Lack of Information on customer is considers major for Piraeus bank.

**Table 5-3: Main Weaknesses In Providing High Level Of Customer Service**

| Bank Name | Weaknesses | | | Total No. of Interviewer |
|---|---|---|---|---|
| | Lack of Information on Customer | Inadequate Technological Support | Absence of Customer Service Culture | |
| | No. of Interviewer | No. of Interviewer | No. of Interviewer | |
| CIB | 1 | 1 | 0 | 2 |
| BNP | 0 | 1 | 1 | 2 |
| Piraeus | 1 | 0 | 2 | 3 |
| Banque du Caire | 0 | 1 | 1 | 2 |
| Industrial Development | 0 | 0 | 1 | 1 |
| Total | 2 | 3 | 5 | 10 |

## 5.2   Case 1: BNP Interview

An interview was held with private bank branch managers, who seem to be fully aware of the e-CRM adoption advantages. The branch manager states that:

> "e-CRM is a new trend the bank uses to maintain long term relationship with existing and prospecting customers through meeting customers' needs"

All managers agree that choosing adequate CRM-software isn't a complex procedure; as long as it depends on what bank needs and that the bank has a strategy for IT including updating the software. They also take into considerations the legal issues concerning privacy when adopting any software for example CRM.

A conflict was found between managers of different branches, where a branch manager stated that customers' data has to be distributed across systems and there is no consolidated view, while another manager in another branch denied this fact. The interviewees state that they categorize the important customers based on the data obtained, with which they provide efficient individual service. The branch manager states that:

> "The bank categorises customers based on customer's information in order to be tailor products to suit his/ her need. This is not a new thing we have been doing this categorisation for a long time"

They also provide the ability to receiving customers' feedback and complaints. The branch manager states that:

> "The bank provides different ways for receiving complaints such as face to face, phone calls and the new channel, the bank's website"

An interviewee said that the information technology integration requires additional reorganisation; as it will be costly and expensive to integrate e-CRM with the existing IT infrastructure. Although CRM adoption doesn't require expenses for training their employees, because not all employees need training, there is a need for intensive communication to overcome internal resistance to change.

The interviewee stated that the corporate strategy and organisational culture are the most important e-CRM readiness dimensions, followed by the technology perception and finally the perception of adopting new applications is the least important. The interviewees have identified that the main reasons why customers do not prefer getting their tasks done through the Internet are the complexity of using the internet, the fact that customers believe they do not have time to access the bank's website and search for what they want and finally believing that getting served online is costly. Regarding the main reason of not providing high level of customer service to customers, interviewees stated that this is due to the absence of customer service culture, lack of customer information, and the inadequate technological support.

## 5.3   Case 2: CIB Interview

The Interviewees were branch managers in a private sector bank. The main points of this interview shows that the interviewee believes that implementing CRM and e-CRM leads to customer loyalty and attracting, gaining new customers, since they are fully aware about the advantages of e-CRM that bank and their customers will gain. The manager stated that:

> "e-CRM is the same as CRM, it's not considered a new issue. The bank uses different methods for attracting customers."

The managers agree about choosing adequate CRM-software isn't complex procedure, as it depends on what bank needs and that the bank has a strategy for IT including updating the software. As well as, they take into considerations the legal issues concerning privacy when adopting any software for example CRM.

The interviewee stated that customers' data has to be distributed across systems and there is a consolidated view. They categorize the customers according to the data obtained and their importance. With which they provide efficient individual service with the data obtained although they do not   take a feedback and complains from their customers online. The manager stated that the bank classifies clients based on whether they are individual customers or corporate customer:

> "As we provide each category the products as required to satisfy their needs for example phone banking, internet banking, and SMS notifications."

The interviewee stated that the information technology integration requires additional reorganisation, as it will be costly and expensive to integrate e-CRM with the existing IT infrastructure. Although CRM adoption doesn't requires expenses for training their employees, because their employees always have training courses, but there is a need for intensive communication to overcome internal resistance to change that is not required. The manager stated that:

> "Bank employees always take courses from time to time in different fields. For example, marketing and computer courses in order to be aware to any changes or advances in the field."

The interviewee stated that the organisational culture are the most important dimensions affecting e-CRM readiness followed by Use of technology then corporate strategy and finally the perception  of  adopting new applications is the least important. The interviewees identified the main reasons why customers do not prefer getting their tasks done through internet is due to the complexity of using the internet which is considered as the major factor. The fact that customers believe they do not have time to access web site and search for what they wants and finally believing that served on line is costly. Regarding the main reason of not providing high level of customer service to customers interviewees stated that this is due  to the absence of customer service

culture is major reason then inadequate technological support and finally lack of information about customers.

## 5.4   Case 3: Piraeus Interview

The interview was held with private branch managers who seem to be fully aware of the e-CRM adoption benefits All interviewees agree that choosing adequate CRM-software isn't complex procedure, as long as it depends on based on what bank needs as specified by the technical department. The manager stated that:

> "e-CRM is new concept for the Egyptian customers. The bank tries to integrate customer information from different channels like for example personnel visit, internet, and call centre."

And that the bank has a strategy for IT including updating the software, hardware and any changes required. They also take into considerations the legal issues concerning privacy when adopting any software (for example CRM).

The interviewee stated that customers' data has to be distributed across systems and there is a consolidated view. They categorize the customers according to the data obtained and their importance. With which they provide efficient individual service with the data obtained although they do not   take a feedback and complains from their customers online. They receive customers' feedback offline. The manager stated that:

> "The bank receives complaints through personal visits, which is appropriate; especially to Egyptian customers in order to feel comfortable and confident that their problems solved."

A conflict was found between managers of different branches, where interviewees of some branches stated that it will be costly and expensive to integrate a new software for example e-CRM with an existing IT infrastructure, while another interviewee in a different branch has no idea about this issue, although e-CRM adoption doesn't  require expenses for training their employees as stated by interviewees with which it is not costly because they hired well educated employees with specific computer skills, while another interviewee of another branch have no idea about this issue. As well as they stated that there is no need for intensive communication to overcome internal resistance to change. The manager stated that they:

> "Hire well educated employees that go through several exams such as ICDL exams, so there is no need for training courses unless the system is changed."

The interviewee stated that the organisational culture is the most important e-CRM readiness dimension followed by the use of technology. Then, corporate strategy was ranked number three in terms of importance. Finally the interviewee stated that the perception about the adoption of new applications is the least important readiness dimension. Also the interviewees have identified that the main reasons of why customers do not prefer getting their tasks done through the internet are due to the complexity of using the internet considered as the major factor the fact that the customers believe they do not have time to access the bank's web site and search for what they want and finally believing that getting served online is costly. Regarding the main reason of not providing high level of customer service to customers, interviewees stated this is due to the absence of customer service culture is major reason followed by inadequate technological support and finally lack of customer information.

## 5.5   Case 4: Banque du Caire Interview

The interview was held with public branch managers who seem not fully aware of the e-CRM adoption benefits. The manager stated that:

> "CRM is a marketing tool for the bank and the bank reputation does not need advertising tools since the bank is very old and have a wide customer base"

All interviewees agree that choosing adequate CRM-software is complex procedure; the interviewee stated that the bank has IT strategy for IT but they have no idea about it. They only take into considerations the legal issues concerning privacy when adopting any software. The interviewee stated that customers' data has to be distributed across systems and there isn't a consolidated view. As well as they don't categorize the customers according to the data obtained and their importance. They do not receive a feedback and complaints from their customers online. They receive customers' feedback offline. The manager said:

> "We don't categorize customers based on their information. We only offer a list of products and customers choose what suits them. We also make special rates for corporate customers."

Interviewees stated that it will be costly and expensive to integrate new software for example e-CRM with an existing IT infrastructure, also interviewees stated that e-CRM adoption requires expenses for training their employees, because most of their employees don't have computer skills, so there is a need for more training courses which is a burden cost. As well as they stated that there is a need for intensive communication to overcome internal resistance to change.

The interviewee stated that the Use of technology is the most important e-CRM readiness dimensions, followed by the perception of adopting new applications then organisational culture and finally corporate strategy become the least important. The interviewees identified the main reasons why customers do not prefer getting their tasks done through internet is due to the complexity of using the internet, the fact that customer believes that they don't have time to access the bank web site and search for what he wants to do and finally believing that served online is costly. Regarding the main reason of not providing high level of customer service to customers interviewees stated that this is due to the lack of information about customer, followed by the absence of customer service culture and finally inadequate technological support.

## 5.6  Case 5: Industrial Development Bank Interview

The interview was held with public branch managers who were not aware of e-CRM. Managers have no idea about this application. The said:

"I have no idea about what e-CRM is, can you explain more?"

All managers agree that choosing adequate CRM-software is complex procedure; the interviewee stated that the bank has IT strategy for IT but they have no idea about it. They only take into considerations the legal issues concerning privacy when adopting any software as specified by the IT department. The interviewee stated that customers' data has to be distributed across systems and there isn't a consolidated view. As well as they don't categorize the customers according to the data obtained and their importance. They do not receive a feedback and complaints from their customers online. They receive customers' feedback offline. The manager said:

"Our main customers are manufactures and corporate customers, so we do not need to classify them. We offer services and customers select the service that suits them. We also receive any complains face by face and handle it quickly."

From the cost front the interviewees reported two barriers for integrating e-CRM software with the current IT infrastructure; the high cost and IT restructuring. Moreover, training expenses is essential for e-CRM adoption. Lack of computer skills, justifies the need for more training courses. They also reported that the need for an intensive communication to minimise internal resistance to change impact. The manager said:

"The bank is a public bank, so the budget to update the software and hardware will be costly, and the bank will bear expenses for training their employees to enhance their skills. Employees can take computer courses on their own expenses; since recruitment will be based on the time they worked in the bank not on their experience"

From the interviewees view, the lack of customer information, the absence of customer service culture and inadequate technological support were defined as the main reasons of not providing high level of customer service to customers respectively. When asking them to rank the dimensions of e-CRM readiness based on their importance, the interviewees identified the use of technology, the perception of adopting new applications, the organisational culture and the corporate strategy consecutively. The chief reasons of why customers do not prefer getting their tasks done through the Internet were: the complexity of using the internet, the fact that customers believe that they don't have time to access the bank website and search for what they want and finally believing that served online is costly.

## 5.6.1 Interpreting the Results

From the data collection and data analysis of the interviews conducted with bank managers and employees, it is now clear that the organisational culture is the most important dimension in measuring readiness of banks for e-CRM, followed by the corporate strategy, then the Use of technology and finally the perception regarding the adoption of new applications as shown in figure 5.1.
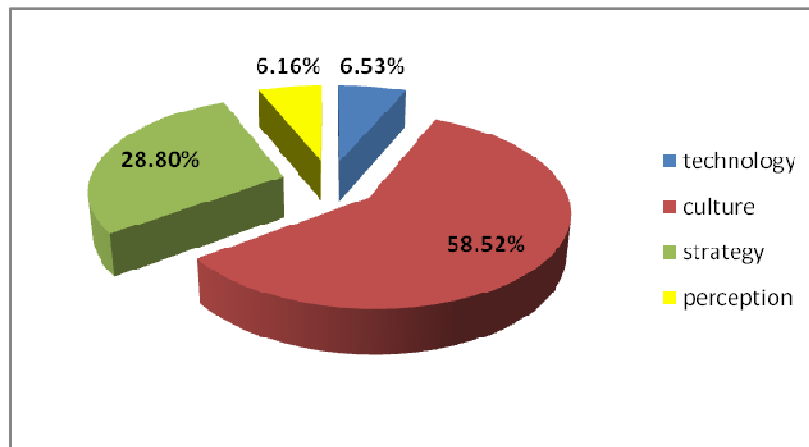
**Figure 5-2: Importance of e-CRM Readiness**

Although, interviews conducted with employees supports literature, where the interviewees stated that organisational strategy is a major factor that affects e-CRM adoption; the interviewees did not have a clear idea of what is their bank strategy could be, or even whether they do have a strategy at all (Grant, 1998) (Freeland, 2002) (Greenberg, 2002) and (Ocker, 2002) (CGI Group Inc. 2004) (King and Burgess, 2007).

The majority of managers are aware about customer relationship management. They agree that they should take into considerations the legal issues concerning privacy when implementing CRM or any other new technology. Most of the bank managers agree that choosing the adequate CRM software depends on banks' needs and that it is not a sophisticated issue. However, some bank managers still see it as a complex issue. This may be due to their unawareness about CRM, and its potential benefits. Some managers state that IT-Integration requires additional reorganisation which provides a consolidated view about customers' data; where other interviewees' state that their customer data is distributed across several systems and that integrating IT requires additional reorganisation, which involves an associated cost that the bank will bear.

Accordingly, integrating the different channels through which customers' information are collected would allow employees to access customers' information from different bank branches, which is not the current case, where clients have to keep on going to the same branch to do any transaction related to their account. There is also a conflict between interviewees' opinions regarding the resistance to change and the training courses provided to their employees.

130

Organisations play a major role in creating value for customers. They face challenges across cultures. Cultural factors affect the success or failure of Information Systems as well as e-CRM. Developing countries with similar cultural dimensions are considered to share the same atmosphere. Egypt is one of the major countries in the Middle East and has a great potential to expand in retail banking activities because, it has the highest population among the Arab countries. Moreover, the rapid development of IT networks and telecommunications in the last 10 years is a key to develop electronic applications (Tooma and Grosser, 2005).

However, although some banks in Egypt have recently recognized the importance of CRM, some of these CRM systems are not necessarily as effective as they could be. Most banks prefer CRM to be offline for security reasons. But customers prefer CRM systems to be electronic, so that banks can better serve their customers at any time and in any place, as the customers need them.

All interviewees state that they provide efficient individual service with the data obtained; as they classify customers according to their data. There is also a consensus among interviewees that complexity is a major reason that prevents them from performing their tasks through their website. The absence of customer service culture is another major reason for not providing high level of customer service. Concerning customers and whether employees get their feedback and measure their satisfaction, the majority of the employee respondents were found to measure their customer satisfaction monthly, other managers ignore customer satisfaction; some measure satisfaction every six month, where other said they measure it quarterly and finally minority have no idea about it. This depends on the bank policy.

It also was found from the interview analysis that the majority of bank managers do contact former customers that are no longer bank clients to obtain information as to why they left the bank. This is considered a component of the customer retention/loyalty strategy used by bank. For tracking and reviewing clients' communication with the bank, some managers do it manually by writing notes, while others use specific software to track clients' communication.

Most interviewees stated that they store customer information in one main data warehouse; others said they use three or more separate functional databases, and surprisingly some managers did not even know how or where they store customers' information. With regards to whether managers export data to independent spreadsheet or database in order to determine the most profitable customers, some interviewees stated that they do it automatically, other make it manually, and a few number of interviewees did not know the answer. Finally, interviewing bank managers revealed that the majority of managers in different departments discuss inter-departmental communications and customer trends on a quarterly basis, others make a monthly meeting, and the minority holds their meeting every six month.

It was depicted from the analysis that in most bank branches approximately around 5 to 10 bank employees are in direct contact with customers on a daily basis, while other bank interviewees stated that in their bank branch around 11 to 25 employees directly contacts bank clients daily. Regarding the way the bank communicates and interacts with its clients, there seem to be a consensus that they all depend on call centre automation for interacting with customers and together with using e-mails and traditional mails.

## 5.7 Validate the Empirical Data

The interpretations of both investigations (questionnaires and interviews) are not exactly the same but we need to find out whether and how these views and perspectives could be combined, what implications would such combination have on our final model, and whether the synthesis can be a basis of suggesting changes to practices in the Egyptian banking industry. Accordingly, similarities and differences between the two investigations should be discussed below. Data collected from interviews showed a deviation in the employees' perspective, where a theme was hard to find, highlighted the fact that there is a clear gap between the two main e-CRM stakeholders, namely the decision makers and the customers.

Not every organisation gain from CRM initiatives as expected (Schoder, and Madeja, 2004), where a study by Gartner 2003, finds that "roughly 50 percent of all CRM projects fail to meet executive management expectations". In 2002, AMR Research

2002 stated that only "16% of projects reach the target and measurably influence business performance", while in 59% of all CRM projects either the technical implementation or business change and adoption fail. Dyche, 2002 pointed out that many CRM projects have failed just because those companies are anxious to implement CRM with currently advanced CRM technologies however they lack a thorough assessment to determine whether the company is ready for CRM. To avoid making the same destructive mistake, CRM-pursuing organisations should thoroughly evaluate their CRM readiness before development.

The decision maker should take into considerations the value added from implementing new technology. Although managers stated that technology enhancement (e-CRM implementation) depends on banks needs it is still seen as difficult by other managers. Accordingly, they also should assess their organisation requirements, starting with technology re-structure, such as the hardware and software required for data integration among different departments as well as different branches; without data redundancy, while maintaining backups in case of data loss or system failure. Also updating and enhancing banks' websites can have a positive effect on both employees and customers. This has been supported by the data collected and analysed from both the questionnaires and interviews.

Decision makers need to understand the Egyptian culture before making an attempt to adopt a new technology. Banks should consider the high avoidance to the uncertainty and resistance to change clear in the Egyptian culture. Technology providers should create awareness, promote the new technology, and highlight perceived gains. They should also make it clear that the logic behind adopting a new technology is to make it work for people and not the other way round. Decision makers must ease the minds of employees, customers, and other business partners regarding implementing e-CRM. Decision makers should also consider their customers as part of a well tied family or group rather than just an individual. They should provide collective benefits.

This supports the interpretation of questionnaire and interviews although there is a conflict between interviewees' opinions regarding the resistance to change and enhancing employees' technical skills, most of employees have stated that they just do

133

their job as ordered by managers. They have no idea about benefits and value they will gain from enhancing their computer skills on their work, which again clarifies the high power distance shown in the Egyptian banking culture. Accordingly, the top management support is a highly important factor that is required in order to get people more involved and committed (King and Burgess, 2007). Both the questionnaires and interviews interpretation have showed that decision makers have to explain and clarify the banks' strategy to their employees regarding its content; as employees are unaware about IT strategy although they should be committed to the banks' strategy.

Although e-CRM has started to be popular in Egypt and regarded as convenient and have high service potential, they are not so far very frequently used. Our findings confirm and extend what was published in literature that Use of technology, corporate culture and organisational strategy are main dimensions for e-CRM assessment in Egyptian banks. This is supported with a study done by Al-Alawi, 2005, in a developing country, namely Bahrain, where although CRM was actually available in organisations, employees were found to be unaware about their business strategy. They did not even have the adequate technology that facilitates the CRM implementation, which they proved to be due to the organisations' culture, lack of information, and high costs.

Finally, significant relation was found between Use of technology, organisational culture, corporate strategy and customers' perception perceptions with regards to e-CRM readiness. On the other hand, there was no significant relationship between employees' perceptions with e-CRM readiness, at least based on the questionnaire data. Moreover, a significant relationship was noted between quality of service and e-CRM readiness. This clearly explains why service quality is considered a success factor for information success and system quality, which again supports the results of the CRM study (Popli and Rao, 2009) held and conducted in another developing country, namely India. The study surveyed Indian banks and found that there is a relationship between CRM and service quality, where 41% of the total variance in service quality could be explained by CRM.

In order to confirm the research hypotheses and in order to validate, it was important to triangulate data obtained from different data sources. The data obtained from the questionnaire is compared with data obtained from interviews and observations. Shown in table 5-1 the first column illustrates the hypothesis tested, the second column presents the result obtained from the questionnaires, the third column demonstrate the result obtained from interviews, and finally the fourth column presents data gathered from observations.

Table 5-4Comparison between Quantitative and Qualitative Data

| Hypothesis | Questionnaire Results | Interviews results | Observations |
|---|---|---|---|
| $H_1$: Employees' Technology perception affects e-CRM readiness. | The Use of technology affects e-CRM readiness | Interviewees believe that the continuous development of bank applications and the integration between communication channels would provide a better service. This translates that technology perception would affect e-CRM readiness. | Although banks use IT in terms of both utilising hardware and software, the system does not seem consistent and integrated. This was particularly clear when some clients had to deal with a number of employees who access different databases to get one service done. |
| $H_2$: Organisational cultural affects e-CRM readiness. | Organisational cultural affects e-CRM readiness | Interviewees believe that training courses are arranged from time to time. They believe that their employees have the required computer skills, which makes them ready to use the e-CRM technology. | Employees' role seem to be minimised where whenever there was a decision to be made, they had to refer to, consult or take the approval of their direct supervisor |
| $H_3$: Corporate Strategy affects e-CRM readiness. | Corporate Strategy affects e-CRM readiness | Managers seem to be aware about the existence of Corporate strategy. On the contrary, most employees are unaware of Corporate strategy, as well as IT strategy; they do not know its content. They related IT strategy as a technology concept. It seems that there is no clear difference between Corporate Strategy and e-CRM readiness. | Most of employees have no idea about bank's IT strategy. This was clear when employees had to refer clients to the bank branch to get to know the banks' IT strategy |

135

| H$_4$: Different e-CRM perceptions affect its readiness. | -Employees' perceptions does not affects e-CRM readiness, -Customers' perceptions affects e-CRM readiness | Interviews conducted with the bank employees revealed that the reason behind low level of customer service provision seems to be mainly due to the absence of customer service culture as well as the inadequate technological support. The lack of information about customers is another main reason. This shows that e-CRM perception would affect its readiness. On the other hand, Customers prefer accessing the bank services through visiting the bank branches rather than electronically. This is mainly due to the complexity of using the Internet. Customers also seem to believe that it is time consuming to enter the bank's web site and navigate its pages in order to search for what they actually want to do. Finally, the third reason was due to the customers' belief that e-banking would be costly. | Customers seemed powerful inside the bank branches, where whenever they faced any problems, they directly ask about the branch manger office to complain. On the other hand, employees felt reluctant to even say their views regarding any matter. They always referred customers to their supervisors, the call center, or even the branch manager |
| H$_5$: e-CRM readiness affects e-CRM quality of service. | -e-CRM readiness affects quality of service | The employees understand that the low level of service provided to customers will let customers switch to another service provider (competitor bank). So quality of service is considered as major reason for e-CRM readiness. | |

| H<sub>6</sub>: Different e-CRM perceptions readiness affects quality of service | -Employees' perceptions does not affects quality of service, -Customers' perceptions affects quality of service | Interviews conducted with the bank employees revealed that they do not accept any changes easily, as they believe that they deliver an acceptable level of service quality to their customers. They justify this by the good reputation of the bank that would have been affected if the quality of service was not up to customers' expectations. They have stated that they already are knowledgeable and have the appropriate skills for delivering the required service. | Frustrated customers often complain about the quality of service and keep mentioning that this is not usually the case in the other banks, where employees pay attention to customer needs and treat their customers in a better way. This has happened in a number of different branches |
|---|---|---|---|
| H<sub>7</sub>: There is a significant difference between private and public banks in customers' perception of e-CRM service quality | -There is significant difference between private and public banks in customers' perception of CRM service quality in terms of Continuous improvement, Courtesy credibility and Accuracy. -There is significant difference between private and public banks in customers' perception of CRM service quality in terms of in Access, Responsiveness, Understanding customer, Collaboration, Content, Timeliness, Aesthetics, Ease of use | There seems to be a significant difference between private banks and public banks. Private banks are capable of continuous improvement in order to provide a better service. There is a clear integration between channels within the same organisation. They also provide their employees with training courses to be enhance their skills and efficiency. Managers in private banks together with some employees seem to be aware of bank's Corporate strategy. On the other hand public banks do not seem to care about the Use of technology. They are not ready to train their employees, or even perform any new task. Finally, employees and even managers are not aware of the existence of Corporate strategy in their own bank. | |

## 5.8 Reflection on the Framework

The feedback from a couple of IT consultants, three decision makers in the selected case study banks and three academics in the information systems field revealed that the model could act as the a roadmap for decision makers. They stated that a clarification of the details associated with each variable, and the impact weight would perhaps strengthen the model. Data collection and analysis of both the interviews and questionnaires conducted with both two main e-CRM players have affected the conceptual model leading to a revised framework (Figure 5.1) in order to reflect the real e-CRM situation.
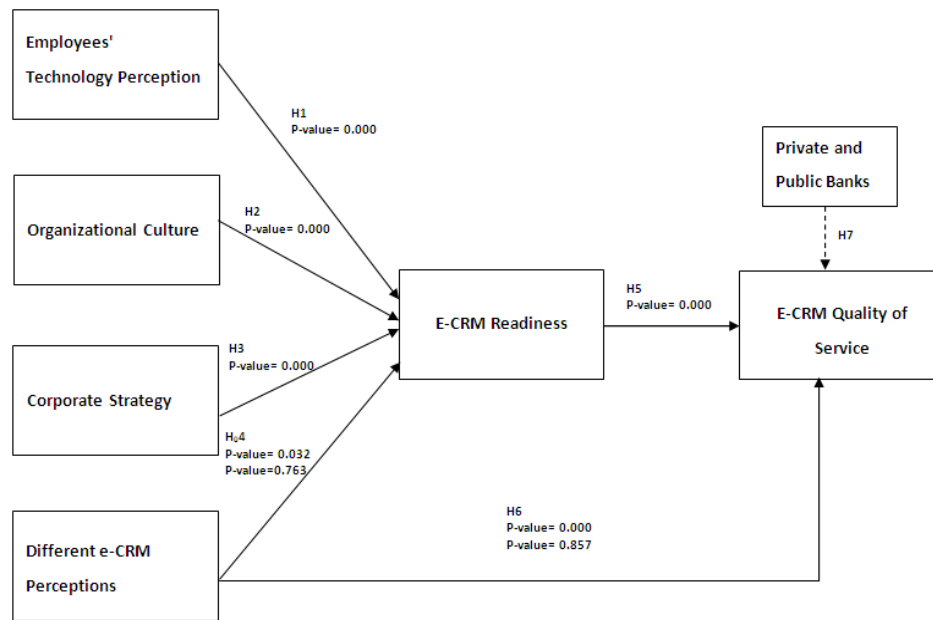


**Figure 5-3 A revised e-CRM Readiness Framework**

After analysing the main factors that affect e-CRM readiness in the Egyptian banking industry, and whether e-CRM different perceptions and e-CRM readiness affect the e-CRM quality of service, the revised model presented in chapter 3 proves to be valid, where almost all factors were proven to be significant, with a positive feedback received ranging from 2.8 to 2.9, except for the employees' perception that was insignificant when tested with both the e-CRM readiness and e-CRM quality of service, where the feedback received was equal to 1.2, given that the ranking scale ranges from 1 to 3. This highlights the fact that inside banks, there is little serious consideration of the staff views while users seem to be an important stakeholder of e-CRM as they represent the system users.

This is justified because the interpretation of the results shows that organisational culture and corporate strategy have strong effect on e-CRM readiness while Use of technology has modest effect. Customer perception seems to affect e-CRM readiness and e-CRM quality of service, where employees' perception does not affect e-CRM readiness nor does it affect the quality of service. Finally, with regards to e-CRM readiness it still seems to highly affect quality of service.

After the e-CRM investigation, the same framework holds itself strong except for the employee perception that was proven to be of minimal impact. So in order to make recommendations on improving e-CRM readiness in Egypt, we suggest that decision makers should take this model as a guideline when assessing e-CRM readiness in the banking industry in Egypt.

## 5.9 Summary

This chapter discusses the findings of the interviews conducted with the managers of the five selected banks and the observations reported for the five case studies. Then a comparison of those findings of both questionnaires and interviews presented in this chapter.

# 6. Conclusion

**Objectives of chapter 6**

- Reflect upon the aims and objectives of this thesis.
- Reflect upon the research question.
- Present the contributions made by this thesis.
- Discuss recommendations for banks
- Discuss limitations and future research.
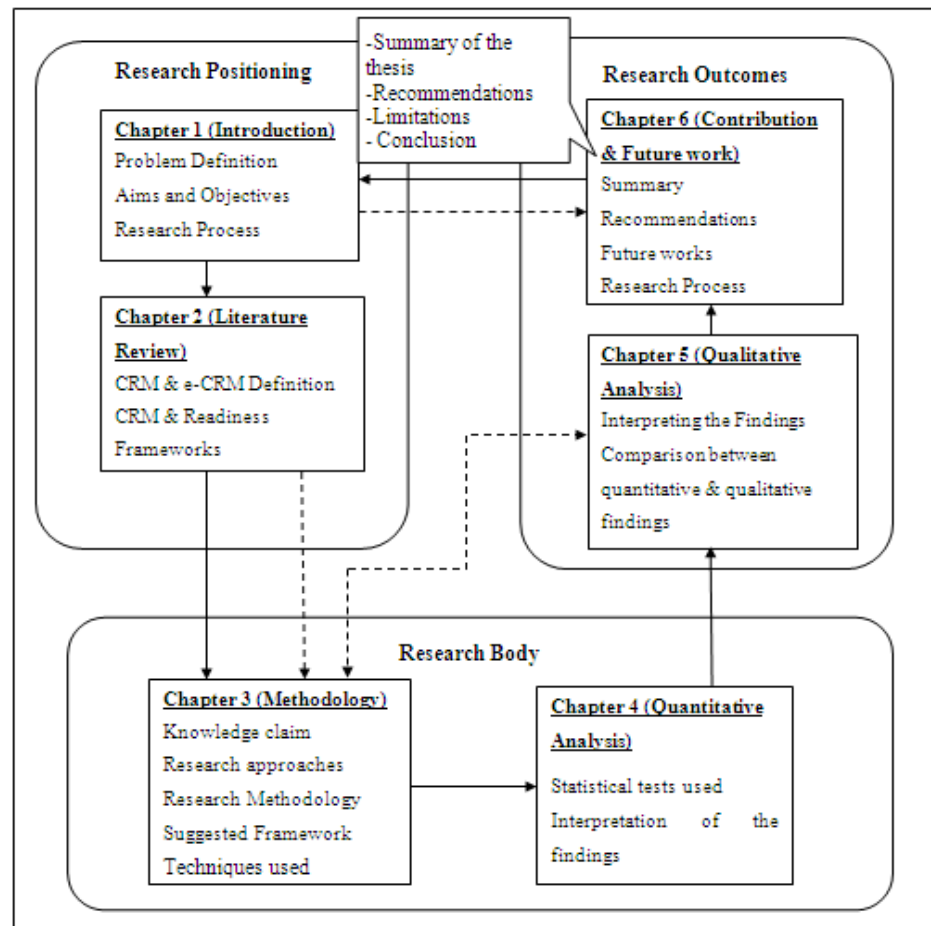


**Figure 6-1**

The chapter concluded that the findings confirmed the research hypotheses, proving the viability of the framework derived from the literature. It summarises the whole thesis through reflecting upon research aims and objectives and answering the research question suggested in chapter 1. Then suggest recommendations for the banks studied, and finally discuss the research limitations.

The purpose of the study was mainly to assess the readiness of financial intuitions, namely banks for e-CRM. Since e- CRM is not just a technology or technological tool. It is a combination between strategy, process and IT (Buttle, 2004; Rigby et al., 2002, Zablah et al., 2004). This could be justified because e-CRM is much more than just a system used to implement the e-CRM. Implementing and adopting e-CRM normally requires changes, which in turn require assessment (Chan, 2005).

The goal was to build a framework for e-CRM readiness by answering research questions. This was done with the illustration of theories presented by different researchers in this field. Literature reviewed mainly concentrated on e-commerce, e-readiness, CRM and e-CRM and service quality. By answering the research questions, the researcher was able to develop a framework that would help banks understand and assess e-CRM readiness in an attempt to avoid system failure.

Although literature is rich with studies related to the technical aspects of corporate Web presence such as design, usability, features, and the acceptance of Web pages, and despite the relevant saturation for marketing topics such as those related with customer behaviour, satisfaction, retention, and trust, there seems to be a clear gap in literature regarding assessing e-CRM readiness in the banking industry; especially in developing countries (Tan et al., 2002).

Accordingly, the study at hand focuses on both the main internal factors that affect e-CRM readiness and how employees and customers perceive e-CRM in Egypt. In order to develop and propose a framework for organisations to help them assess e-CRM readiness, a number of both public and private Egyptian banks were chosen as case studies, and have been surveyed in order to test the suggested framework. The research used mixed methods as it allows the researcher freely use different data collection and analysis methods based on the appropriateness and relevance to the research topic, objectives and questions.

In order to triangulate data and in an attempt to validate and strengthen the study both quantitative and qualitative approaches have been used. The use of different research methods helped reduce bias and produce better value. The variety of research methods used in the current study includes observation, document analysis, structured questionnaires, and semi-structured interviews.

A number of structured questionnaires were designed and distributed over two sets of respondents, namely e-CRM employees and customers. The data collected enabled getting a clear picture of the bank employees' and customers' perception and readiness to e-CRM adoption using three different questionnaires, two of which target employees, while the third questionnaire was distributed over a sufficient number of bank customers.

As the structured questionnaires did not give room for respondents to better express themselves and explain why and how things were done, it was necessary to conduct semi-structured interviews with bank employees in general and top management in particular. This helped complement the questionnaire finding and more depth to the research. This way the researcher ensured that any answers, feelings, opinions in the questionnaire were covered and that uncertainty was clarified (Abd El Aziz, 2009).

The thesis at hand presents an e-CRM framework for e-CRM readiness in banks in the Egyptian context. The framework consists of four dimensions that are believed to affect e-CRM implementation. These dimensions are:  Use of technology, Organisational cultural, Corporate strategy, and Different e-CRM perceptions. The framework developed showed the relationship between those dimensions. Interpretations of the results illustrated that organisational culture and corporate strategy have strong effect on e-CRM readiness while Use of technology have modest effect. The findings also showed that the main barrier for e-CRM adoption is the lack of employees' awareness about the benefits that the organisation will gain, the bank IT strategy, and the lack of management commitment and support.

The employees' resistance to change is highlighted where they were found to be reluctant to take training courses, or use different ways to improve their skills. The lack of integration between various sources of customer information was also found to be a major problem. The complexity of using the internet is another main reason behind the employees' resistance to e-CRM use; especially because they consider it as timely and costly. According to (ICT, 2011) 50 million of the Egyptian population does not use the Internet. With a population over 83 million, only 33 million of population use the Internet.

Finally, the main reason behind the provision of low level customer service is due to the absence of customer service culture, as well as the inadequate technological support such as hardware, software and lack of information about customers.

## 6.1 Answering the research question

In chapter one, the main research questions were introduced with the aim and objectives of providing answers in chapters 2 and 3. The following section points out the research question proposed in the beginning of the thesis with the answers of the research questions. The research question was the following:

- What are the main factors that affect e-CRM readiness in Egyptian banking industry?

- Does e-CRM readiness affect the quality of service in the Egyptian context?

A Framework is developed to answer the research questions. The framework includes the internal factors affecting e-CRM, classified into four main dimensions: Use of technology, Organisational cultural, corporate strategy, and Different e-CRM perceptions. The framework also addresses the effect of e-CRM readiness on quality of service provided to bank customers together with the effect of different e-CRM perceptions on quality of service.

Finally the difference between private and public banks in customers' perception on e-CRM service quality was noted. The research shows high effect of organisational culture and corporate strategy on e-CRM readiness. Technology perception was found

to have modest effect on e-CRM readiness. Although customers' perception was found to affect e-CRM readiness, employees' perception was not significant when questionnaire data was statistically analysed. On the other hand, employees' perception does not affect the e-CRM quality of service.

This was somehow strange because interviews conducted with bank employees and top management revealed that employees' perception affects e-CRM readiness in banks. Moreover, when customer perception was tested to check whether it affects the e-CRM readiness and quality of service, significance was proved revealing that the importance of customer perception and the need to consider it before actually adopting e-CRM.

## 6.2  Recommendations for banks

The current study indicates the benefits of e-CRM for both employees and customers in the Egyptian banking sector as it affects the quality of service and business performance, which in turn leads to customer satisfaction. However with putting the following research recommendations into consideration, e-CRM would have a great potential in the Egyptian banking industry. These recommendations are listed below:

1. The Egyptian banking sector should understand the importance and potential reward of e-CRM adoption and the value added to banks when implementing it. As a result, this could improve the relationship between employees and their clients.

2. The researcher found that most banks that actually adopt CRM at different levels, and their customers are satisfied with the service provided, perceived e-CRM as a business issue rather than technical. Accordingly, banks' readiness needs to be assessed in order to implement e-CRM, which enables them to compete in such a changing and competitive environment. This is particularly important because customers are becoming more powerful where they can easily switch from a bank to another if their needs were not efficiently and effectively met.

3. All employees should be aware about banks policies and strategies in order to be able to update the bank hardware and software as needed. This enabled employees to identify their needs and accordingly enhance their computer skills through determining and taking the appropriate training courses. The bank management should then evaluate employees' knowledge and performance in order to determine their capabilities to perform the required work. This can be accomplished by top management support. Customers' data should also be stored in one warehouse in order to facilitate customer segmentation and decision making process.

4. Bank top management should start taking employees' perception into consideration when taking decisions regarding the bank's customers, and perhaps schedule regular meetings with staff members in order to be updated with customer preferences and concerns. This is regarded as a calling need rather than just an interesting idea; especially because bank employees get in direct contact with customers on a daily basis, which puts them in a strong position to get the full picture and be able to detect customer problems, while at the same time be able to suggest and perhaps implement solutions to customers' requirements and/or complaints.

5. As a result, bank employees have to get more involved and committed to the bank where they work, and feel that their ideas, perception, and suggestions might actually be put into action. This reduction in the currently very high power distance noted, might in turn help empower bank employees and improve the service that they provide to the bank's valuable customers.

6. Finally integration among various channels and a unified database for customer information, previous customer problems and the best practices will help employees in accessing the required information from different access points, and accordingly provide a better and a consistent service to customers.

## 6.3 Reflecting on the research process

Reflecting on the research process, the research study was planned to be conducted over four to five years. The steps of the research process were expected to be as stated in Chapter 3.

Reflecting on the research process as planned; I can now make some comments on how the research worked out in practice and mention things that emerged during the course of study. In broad terms, the research followed the sequence of steps just listed, with a few exceptions. Some examples are listed below:

- The employee questionnaire were conducted in parallel rather than being sequential with decision makers interviews inside banks as planned
- The design of conceptual framework continued to develop during the questionnaire and interview design phases;

In distributing and collecting the questionnaires, I had some help from family members and some friends, which made it easier to reach more respondents. Although the total number of questionnaires distributed at the chosen banks was 400 e-CRM readiness questionnaires and another 400 e-CRM quality of service, only 377, and 176 valid questionnaires were returned.

The statistical analysis of the questionnaire data, using either SPSS or calculator, was time consuming, because I had to learn which formula to apply to each questionnaire question, and how to calculate it. It also required consulting a number of statisticians. However, this effort was worthwhile, because the analysis helped getting deeper knowledge regarding the employees and customer behaviour. On the other hand, interviews with bank staff members, and decision makers in banks were all conducted by the researcher alone.

The interpretive analysis of the interviews surprisingly showed that staff members, have little influence on the decision making process, and are reluctant to express their views, believing that the decision makers are the real rulers. This matches Hofstede's study about Egypt which proved that there is a very high power distance in the Egyptian culture.

Data analysis of the interviews clearly affected and confirmed the conceptual model leading to holding on to the revised conceptual model presented in the Research Design chapter. The revised model adds the customer perception as a key determinant to e-CRM readiness, while at the same time adding a link between the different e-CRM readiness and e-CRM quality of service, and moves the quality of service from a primary focus to a secondary position in the proposed conceptual framework.

From initial understanding of the problem areas it seemed worthwhile to investigate two main e-CRM stakeholders representing the banking industry bank employees, and bank decision makers. Both perspectives were subsequently combined to produce the bank's perspective, which reflects the actual situation. The different perspectives were the basis upon which both the questionnaire and the interview were designed.

A new stakeholder, namely the bank user has emerged as more significant during interviews with bank staff, and led to the design of an extra questionnaire targeting bank users in order to understand their e-CRM awareness, readiness, and perception as the real customer for the adopted system. Questionnaires were distributed, collected, coded, and analysed using SPSS. The user questionnaire is believed to tie up loose ends and provide a clearer picture of e-CRM system.

Investigating the different e-CRM perspectives, revealed the fact that although employees are key players and the actual providers of the service, the role seem to be margined as compared to bank decision maker, which highlights the high power distance that need revisiting in order to reduce the gap between e-CRM interested parties. After the long process of data collection and analysis, I was then ready to write up the final version of the thesis and make suggestions on e-CRM readiness in the Egyptian context.

## 6.4 Limitations and directions for future research

Although this study provides a formal approach in understanding and solving a problem domain that till now was not analysed in full, it still has a number of limitations which are listed below:

- A lack of readily available data on e-CRM studies in Egypt did not permit a more in-depth analysis of possible customer similarities to and differences from overseas markets. A comparative study across different countries might be significant, showing more similarities and differences, and bringing more cultural aspects.

- Since this research only studies the Egyptian banking sector, it would yield better and more comprehensive results if other services such as airlines, hotels, hospitals, and insurance companies are also studied. This is because e-CRM may differ from one service to another.

- A broader study that would test the relationship between the currently adopted e-CRM systems and customer satisfaction would help e-CRM developers enhance and improve future e-CRM systems.

- A more convenient sample that targets more respondents from all Egyptian cities would give a better analysis than that carried only in the second main city, namely Alexandria.

- The study was more inclined towards the internal organisational factors, although there was room for one of the possible external factors, which is, the different e-CRM perceptions. Other external factors that affect e-CRM readiness should be taken into consideration.

- This study provides the road map for e-CRM adoption and may in turn facilitate the adoption of emerging technologies, such as mobile banking.

- To sum up, although the study provides a good base for e-CRM readiness in the Egyptian context, the framework was only limited to managers, bank employees, and bank customers, where they were used as key informants to provide information (Tan and Litschert, 1994), which limited the framework to their beliefs without taking into considerations other e-CRM stakeholders like government and suppliers. However, it paves the road for future investigation into e-CRM adoption in Egypt.

## 6.5 Conclusions

The research reported upon this thesis was undertaken over a period of five years, with one year being suspended, part of this research has contributed to two publications. The main outcome of the thesis was to develop a framework that would allow stakeholders to understand how to better organise their strategy and support for e-CRM readiness. The proposed model provides a good way for assessing each case study against certain dimensions. Although, some solutions may be trivial, such as providing incentives, however by structuring the different dimensions and possible solutions, the model can provide managers a set of guidelines for their actions. It also gives employees the tools to become more aware of e-CRM issues, and allows customers to understand the impact of e-CRM on the services provided by the banks.

The findings of this thesis provide a valuable and practical resource for those researchers wishing to further enquire into e-CRM readiness. It also provides invaluable insight into the working environment of Egyptian banks highlighting the experience of the researcher during conducting the study, and a critique of the overall research process.

By utilising the findings of this study, decision-makers would be better positioned to understand the impact of their policies on the perceptions of employees, and on the overall e-CRM implementation in banks. The conclusions drawn from this study could be used as a tool to enable a greater degree of awareness of things that were previously unconsidered. As has been concluded by this research, e-CRM Readiness of Egyptian banks was assessed using a framework that comprised the main dimensions affecting e-

CRM, which are: use of technology, strategy, corporate culture and different perceptions (employees and customers). There were a number of factors or measuring constructs under each dimension.

The framework developed showed the weight of each dimension in affecting e-CRM, in addition to the relationship between the above four dimensions. Findings revealed that strategy and corporate culture had a high impact on e-CRM as compared to the modest effect technology use. This highlights the need to investigate the means to promote e-CRM through employees training and awareness. Furthermore, by highlighting the key factors in each dimension, policy makers would be able to recognise the importance of those factors in order to prioritise them. It is recommended to conduct further research in the same case studies and in more Egyptian banks as well as, to consider such research as an on-going process to be undertaken regularly.

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# Electronic Customer Relationship Management
# Readiness In The Banking Industry: The Case of Egypt

**Dear Respondent,**

You are invited to participate in our survey about the e-CRM readiness. Your participation in this study is completely voluntary, and will be highly appreciated. Your survey responses will be strictly private and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Thank you for your time and support.

**The researcher**
Nermine El Essawy

*Choose the most appropriate answer according to your Bank*

**1. Which of the following is a component of your customer retention/loyalty strategy?**

◻ Contact former customers to obtain information as to why they left

◻ Communication tracking within all departments

◻ Personalized marketing and sales campaigns

◻ All the above

◻ Don't know

**2. How often do your managers in different departments discuss inter-departmental communications and customer trends?**

◻ Monthly

◻ Quarterly

◻ Every six months

◻ Yearly

◻ Never

◻ Don't know

**3. How do you currently determine who your most profitable customers are?**

◻ Manually

◻ Export data to independent spreadsheet or database

◻ Accounts receivable and purchase history reports

◻ Data-mining software

◻ Don't know

**4. What types of technologies/software do you use while interacting with customers?**

◻ Call centre automation

◻ Companion management

◻ Contact management

◻ Data warehouse

◻ E-mail management

◻ Field service automation

◻ Knowledge management

**5. Please read each statement carefully and choose the degree of agreement or disagreement according to your area of work**.

5 = Strongly agree      4 = Agree      3 = Neutral      2 = Disagree      1 = Strongly disagree

| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| 1. Data within our database is easily maintained | | | | | |
| 2. Bank database system can handle a huge amount of information | | | | | |
| 3. Bank should have a written policy and guidelines defining the use of Internet | | | | | |
| 4. An e-mail system is critical to my work | | | | | |
| 5. There is an efficient corporate record-keeping system in the bank | | | | | |
| 6. There is a corporate records-management system in your bank | | | | | |
| 7. The bank has a predefined IT plan for further implementation | | | | | |
| 8. Electronic customer relationship management enables me to accomplish tasks quickly | | | | | |
| 9. Using electronic customer relationship management improves the quality of work I do | | | | | |
| 10. Using electronic customer relationship management makes it easier to do my job | | | | | |
| 11. Using electronic customer relationship management gives me greater control over my work | | | | | |
| 12. The size of organization affects electronic customer relationship management adoption | | | | | |
| 13. Using electronic customer relationship management affects the quality of banking operation | | | | | |
| 14. Customer interaction information is retained in multiple databases | | | | | |
| 15. Everyone in your bank has access to the same customer information | | | | | |
| 16. The bank maintains an outside sales force | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 17. The bank uses web site to market products | | | | | |
| 18. The bank uses fax to market products | | | | | |
| 19. The bank uses phone to market products | | | | | |
| 20. The bank uses mail to market products | | | | | |
| 21. The bank uses e-mail to market products | | | | | |
| 22. Customers can access their accounts, order and service information via  Personal visits | | | | | |
| 23. The customers can access their account and order service information via  Internet/ wireless devices | | | | | |
| 24. Customers can access their account, order and service information via e-mail requests | | | | | |
| 25. Customers can access their account, order and service information via fax requests | | | | | |
| 26. Customers can access their account, order and service information via telephone inquiries | | | | | |
| 27. The bank has a method to segment its clients | | | | | |
| 28. The bank administers a customer loyalty program | | | | | |
| 29. When the bank finds that customers would like to modify a product/ service, the departments involved makes a coordinated efforts to do so | | | | | |
| 30. Our employee training programs are designed to develop the skills required for acquiring and deepening customer relationships and the use of IT | | | | | |
| 31. The bank has the capable technical personnel to provide technical support for the utilization of computer technology in building customer relations | | | | | |
| 32. The bank frequently and systematically measures customer satisfaction | | | | | |
| 33. The bank has the required sales and marketing expertise and resources to succeed in CRM | | | | | |
| 34. Technology is used to integrate various customer delivery channels. | | | | | |
| 35. Our organizational structure is meticulously designed around our clientele | | | | | |
| 36. Customers can expect prompt service from employees in my organization | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 37. The bank has the technical expertise and resources to succeed in CRM | | | | | |
| 38. The bank has the required software to serve our clients | | | | | |
| 39. The bank has the required hardware to serve our clients | | | | | |
| 40. Individual customer information is available at every point of contact | | | | | |
| 41. The bank maintains a comprehensive database of its customers | | | | | |
| 42. The bank provides channels to enable ongoing, two-way communication between its key customers and its employees. | | | | | |
| 43. Our computer technology can help create customized offerings to our customers. | | | | | |
| 44. The bank shares customer information across all points of contact. | | | | | |
| 45. The bank information systems are designed to give comprehensive data about all aspects of our customers, so that we can be responsive to them. | | | | | |
| 46. IT facilitates the management of customer relationships. | | | | | |
| 47. The bank manages all customer communications so that they are consistently superior and relevant to the customer | | | | | |
| 48. We work with individual key customers to customize our offerings. | | | | | |
| 49. The bank provides customized services and products to our key customers. | | | | | |
| 50. The bank customizes customer interactions to optimize value and loyalty. | | | | | |
| 51. When a problem occurs the technical staff solve it in a timely manner | | | | | |
| 52. Our top management team provides leadership for the building and maintenance of customer relationships as a major goal of my organization. | | | | | |
| 53. The bank commits time and resources to managing customer relationships. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 54. The bank has established clear business goals related to customer acquisition, development, retention and reactivation. | | | | | |
| 55. The bank has a clearly defined mission and business strategy, driven by customer needs and the performance of customer relationships. | | | | | |
| 56. The bank has clear objectives and strategies for updating the system used | | | | | |
| 57. The bank treats each key customer differently | | | | | |
| 58. All employees in my bank understand and share the common goal of building and maintaining customer relationships. | | | | | |
| 59. Our top management supports the use of customer relationship management | | | | | |
| 60. Our top management team spends much time with their employees to discuss offering new products to satisfy customers. | | | | | |
| 61. The bank has established clear business goals related to customer acquisition, development, retention, and reactivation. | | | | | |
| 62. Policies and procedures critical to managing customer relationships are well documented and consistent across all customer touch points. | | | | | |
| 63. The bank fully comprehends the needs of our key customers via knowledge learning. | | | | | |
| 64. Our employees receive different training programs to enhance their skills | | | | | |
| 65. Our employees recognize the value and benefits gained from using new technology | | | | | |
| 66. Our management and staff are resistant to change. | | | | | |
| 67. The bank specifies a budget for updating the system used. | | | | | |
| 68. Our management understands the importance of IT in serving customers | | | | | |
| 69. I am flexible with using new IT technology in my work processes | | | | | |
| 70. I am fully aware of the benefits added to my work because of the new technology | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 71. The training courses that were provided to me helped enhance my skills | | | | | |
| 72. The transactions performed through websites is safety | | | | | |
| 73. The training courses I had, always had a positive impact on accomplishing my work | | | | | |
| 74. I always trained on how to deal with changes due to the implementation of new technology. | | | | | |
| 75. IT enables customers to expect prompt services from employees | | | | | |
| 76. IT enables employees to work with individual key customers to customize | | | | | |
| 77. The overall quality of electronic customer relationship management is good | | | | | |

**Personal Data:**

**6. Gender?**

☐ Female

☐ Male

**7. Age?**

☐ 20-30

☐ 31-40

☐ 41-50

☐ More than 50

**8. Which department do you work in?**

☐ Customer Service Department

☐ Operations Department

☐ Cash Department

**9. Period of employment with the organization**

☐ Less than 2 years

☐ 2 to 5 years

☐ 5 to 8 years

☐ Over 8 years

**10. Educational level**

☐ Less than or equal to secondary education

☐ University degree

☐ Diploma

☐ Master's degree

☐ PHD degree

# CONSENT FORM

**Title of Research: e-CRM Readiness in the Banking Industry: A Case Study of Egypt**

**Name of Researcher: Nermine Salah**

**Please tick √ in initial box**

1. I confirm that I have read and understand the information sheet dated........................... for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ( )

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. (     )

3. I understand that relevant data collected during the study may be looked at by individuals from Middlesex University and the Arab Academy for Science & Technology from regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ( )

4. I agree to take part in the above study. ( )

**Name of Manager taking consent**          **Date**          **Signature**

_____          _____

**1. Did you know about customer relationship management (CRM).**

**2. Do you into considerations the legal issues concerning privacy when implementing CRM?**

**3. Is There a strategy concerning updating the Software?**

**4. Do you think choosing adequate CRM-software is a very complex issue?**

**5. Are you aware bout the benefits that your bank will gain from e-CRM?**

**6. Customer data is usually distributed across several systems and does not provide a consolidated view?**

**7. IT-integration requires additional reorganization?**

**8. Integration of CRM with existing IT infrastructure is extremely costly?**

**9. CRM implementation requires high expenses for training?**

**10. For CRM implementation, an intensive communication is needed to overcome internal resistance?**

**11. Do you categorize important customers with the data obtained?**


**12. Do you have the service where customers can provides feedback, complains online?**



**13. Can you provide efficient individual service with the data obtained?**



**14. What are the main weaknesses in providing high level of customer service as perceived by employees working at banks?**

- ☐ Absence of customer service culture

- ☐ Inadequate technological support

- ☐ Lack of Information on customer


**15. What are the main reasons for not achieving tasks through Internet rather than personnel visit as perceived by employees working at banks.**

- ☐ Complexity of using the internet

- ☐ No time to enter web site and search for what the wants 1

- ☐ It is costly


**16. Approximately how many employees are in contact with customers on a daily basis within your organisation**

- ☐ 5-10

- ☐ 11-25

- ☐ 26-50

- ☐ 51-100

**17. Can you please rank the following factors in terms of their importance for your bank concerning e-CRM readiness? 1 is the most important, 2 is important, 3 is neutral, 4 is not to important, 5 is not important at all**

- ☐ Corporate Strategy

- ☐ Organizational Culture

- ☐ Technology

- ☐ Perception about implementation of new applications

**18. What type of database do you store customer information in it?**

- ☐ One main data warehouse

- ☐ Separate databases

- ☐ Don't know

**19. How do you currently track and review all the communication you have with your clients**

- ☐ Contact Management software
- ☐ Create notes in back-office solution
- ☐ Track e-mail messages only
- ☐ Keep a separate database
- ☐ Call centre

**20. How often do you measure customer satisfaction?**

- ☐ Monthly
- ☐ Quarterly
- ☐ Every six months
- ☐ Don't know

# Electronic Customer Relationship Management Readiness in the Banking Industry: The Case of Egypt

**Dear Respondent,**

You are invited to participate in our survey about the e-CRM usage. Your participation in this study is completely voluntary, and will be highly appreciated. Your survey responses will be strictly private and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Thank you for your time and support.

*The researcher*
*Nermine El Essawy*

1. **Do you have a bank account?** (If you answer is no, please go to question # 9)

☐ Yes

☐ No

2. **How long have been dealing with your bank?**

☐ Less than 1 year

☐ 1 year – less than 3

☐ 3 years – less than 5

☐ 5 years – less than 7

☐ 7 years or above

3. **What is your bank's type?**

☐ Public sector

☐ Private / joint venture sector

4. **How frequently do you use a banking service?**

☐ Every day

☐ A few times a week

☐ A few times a month

☐ A few times a year

5. **When do you most frequently use banking services?**

☐ During bank working hours

☐ After bank working hours but not at weekends

☐ After bank working hours and at weekends

☐ Any time

6. **Where is the bank you most frequently visit?**

☐ Near home

☐ At or near my workplace

☐ At or near a shopping mall or a restaurant

☐ Somewhere else

7. **Where would you prefer to use your banking services?**

☐ At the bank

☐ Via ATMs

☐ Over the Internet

☐ Other

**8. Please use tick the appropriate box for the following questions**

| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| 1. When bank employees promise to do something, they do so. | | | | | |
| 2. When customers have a problem, bank employees show a sincere interest in solving it | | | | | |
| 3. Bank employees provide prompt services with no delay | | | | | |
| 4. Bank employees insist on error free records | | | | | |
| 5. Bank employees always have the will to help customers | | | | | |
| 6. Bank employees are never too busy to respond to customers | | | | | |
| 7. Bank employees are knowledgeable | | | | | |
| 8. Bank employees can solve customers' problems | | | | | |
| 9. Bank employees are always considerate of customers | | | | | |
| 10. Bank employees address customer complaints in a friendly way | | | | | |
| 11. Bank employees give a clear answer to customer inquiries | | | | | |
| 12. Bank employees keep customers aware of new products/service | | | | | |
| 13. Bank employees give each customer an individual attention | | | | | |
| 14. Bank employees work as a team to help customers quickly | | | | | |
| 15. My bank has a good reputation | | | | | |
| 16. I feel confident when making transactions with my bank | | | | | |
| 17. I can easily access my bank account when I am abroad | | | | | |
| 18. My bank branches are conveniently located | | | | | |
| 19. My bank introduces a variety of channels (ATM, phone, e-mail, e-banking) to deal with customers | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 20. My bank provides a good range of services | | | | | |
| 21. My bank continuously improves its offerings | | | | | |
| 22. My bank continuously improves its customer service | | | | | |
| 23. Information is always available online for customers | | | | | |
| 24. Online transactions with my bank are accurate | | | | | |
| 25. Online information is always up-to date | | | | | |
| 26. My bank's website is attractive | | | | | |
| 27. Accessing my bank's website is easy | | | | | |
| 28. Logging in to my bank's website is easy | | | | | |
| 29. My bank's website is easy to navigate | | | | | |
| 30. I am satisfied with my bank's overall customer service | | | | | |

**9. Gender**

☐ Male

☐ Female

**10. Marital status**

☐ Single

☐ Married

☐ Divorced/ Widowed

**11. Age**

☐ 16 – Less than 25

☐ 25 – Less than 40

☐ 40 – Less than 60

☐ 60 and above

**12. Monthly income**

☐ Less than L.E 1000

☐ L.E 1000 – less than 3000

☐ L.E 3000 – less than 5000

☐ L.E 5000 and above

**13. Level of education**

☐ No formal education

☐ Primary / Preparatory/High School

☐ University graduate

☐ University postgraduate

**14. Occupation**

☐ Employed

☐ Unemployed

☐ Student

# Electronic Customer Relationship Management Quality Of Service In The Banking Industry: The Case of Egypt

**Dear Respondent,**

You are invited to participate in our survey about the e-CRM usage. Your participation in this study is completely voluntary, and will be highly appreciated. Your survey responses will be strictly private and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Thank you for your time and support.

*The researcher*

*Nermine El Essawy*

### **Please use the following table in replying to these questions**

| | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| 1. When the bank employees promised the customers to do something, they did so | | | | | |
| 2. The bank employees are committed to solve customer problems | | | | | |
| 3. The bank employees performed their service right the first time | | | | | |
| 4. The bank employees provided the services at the time they promised the customer to do so | | | | | |
| 5. The employees insisted on error free records and confidential documents | | | | | |
| 6. The bank employees told the customers exactly when service will be performed | | | | | |
| 7. The employees usually provide the service in the expected time | | | | | |
| 8. The employees are highly responsive and willing to provide customer support | | | | | |
| 9. The bank employees were never too busy to respond to requests of customers | | | | | |
| 10. The employees are quickly solves the problem | | | | | |
| 11. The employees offers convenient service for customers | | | | | |
| 12. The bank employees had the knowledge to answer a questions of customers | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 13. The employees have the ability to solve customer problems | | | | | |
| 14. The bank employees were consistently courteous to customers | | | | | |
| 15. The employees are usually friendly when dealing with customer complaints | | | | | |
| 16. My banks reputation is a good | | | | | |
| 17. The customer trust bank employees and are confident when making transactions | | | | | |
| 18. The bank employees helps their customers to access their accounts when they are abroad | | | | | |
| 19. There is a Varity of channels (ATM, phone, e-mail)available for customers to deal with the bank | | | | | |
| 20. The bank employees gives a clear answer to any question asked by employees | | | | | |
| 21. The bank employees usually informs me for new products they offer | | | | | |
| 22. The customer are usually given individualized attention by employees | | | | | |
| 23. The employees work collaboratively to be able to help customers quickly | | | | | |
| 24. The banks quality of service online is good | | | | | |
| 25. The bank products are continuously improved | | | | | |
| 26. The customer service is continuously being improved | | | | | |
| 27. Availability of information on products and service online and other information that customer needs online | | | | | |
| 28. Transactions on line are accurate | | | | | |
| 29. Availability of errors in the content online | | | | | |
| 30. The banks web site provides up to date information | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 31. The banks web site is appealing | | | | | |
| 32. The banks web site is easy to use | | | | | |
| 33. Easy to login banks web site | | | | | |
| 34. The bank website navigation is easy and simple | | | | | |
| 35. The speed of the web site response to customer requests is fast | | | | | |
| 36. Overall service quality is good | | | | | |

## Personal data:

**37. Gender?**

☐ Male

☐ Female

**38. Age?**

☐ Less than 20

☐ 20 less than 30

☐ 30 less than 40

☐ 40 less than 50

☐ 50 or above

**39. Education**

☐ Less than or equal to secondary education

☐ University degree

☐ Diploma

☐ Master's degree

☐ PHD degree

**40. Length of the transaction period with the bank**

☐ Less than 1 year

☐ 1 year – less than 3

☐ 3 years – less than 5

☐ 5 years – less than 7

☐ 7 years or above

**41. Monthly income**

☐ Less than 1000 LE

☐ 1000 less than2000

☐ 2000 less than 3000

☐ 3000 LE or above

**42. Bank type**

☐ Public sector

☐ Private and joint venture sector

# Appendices

## Appendix 1:

The following table refers to the number of employees working in Egyptian banks from 2003 to 2006 (Central bank of Egypt, 2005-2006).

| Year | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|
| **Banking Sector** | **Number** | **%** | **Number** | **%** | **Number** | **%** |
| **Commercial Banks** | 65572 | 62.7% | 66592 | 62.6% | 67851 | 62.3% |
| **Business & Investment Banks** | 7029 | 6.7% | 7148 | 6.7% | 7352 | 6.7% |
| **Specialized Banks** | 31901 | 30.6% | 32492 | 30.7% | 33703 | 31% |
| **Total** | 104502 | 100% | 106232 | 100% | 108906 | 100% |

*Table 1: Number of employees working in the Egyptian banks from 2004 to 2006*

Table 1, indicates that the commercial banks sector accounts for the largest share of total number of employees within the Egyptian banking sector.

The following table refers to the amount of the total deposits in Egyptian banks from 2003 to 2006 (Central bank of Egypt, 2005-2006).

| Year | 2003 | | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|---|---|
| **Banking Sector** | **Value** | **%** | **Value** | **%** | **Value** | **%** | **Value** | **%** |
| **Commercial Banks** | 187619 | 86.69% | 201780 | 85% | 218895 | 84% | 244532 | 84% |
| **Business & Investment Banks** | 20327 | 9.4% | 25036 | 10.5% | 30050 | 11.5% | 33996 | 11.6% |
| **Specialized Banks** | 8520 | 4% | 10527 | 4.5% | 11484 | 4.5% | 12696 | 4.4% |
| **Total** | 216466 | 100% | 237343 | 100% | 260429 | 100% | 291224 | 100% |

*Table 2: the amount of total deposits in Egyptian banks from 2003 to 2006*

According to table 2, it can be observed that the commercial banks sector has the largest contribution of deposits of the total deposits of the Egyptian banking sectors.

The following table refers to the amount of loans in Egyptian banks from 2003 to 2006 (Central bank of Egypt, 2005-2006).

| Year | 2003 | | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|---|---|
| Banking Sector | Value | % | Value | % | Value | % | Value | % |
| Commercial Banks | 130348 | 75.6% | 153929 | 75.4% | 172276 | 75.9% | 182627 | 75.6% |
| Business & Investment Banks | 23866 | 13.8% | 28464 | 13.9% | 30478 | 13.5% | 32430 | 13.4% |
| Specialized Banks | 18165 | 10.6% | 21739 | 10.7% | 24022 | 10.6% | 26413 | 11% |
| Total | 172379 | 100% | 204132 | 100% | 226776 | 100% | 241470 | 100% |

Table 3: the amount of loans in Egyptian banks from 2003 to 2006

It can be observed that the commercial banks sector accounts for the largest share of the total volume of loans given to borrowers overall the Egyptian banking sector.
The following table refers to the amount of assets in Egyptian banks from 2003 to 2006 (Central bank of Egypt, 2005-2006).

| Year | 2003 | | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|---|---|
| Banking Sector | Value | % | Value | % | Value | % | Value | % |
| Commercial Banks | 260992 | 79% | 276502 | 78.7% | 300696 | 78.6% | 338396 | 79% |
| Business & Investment Banks | 47229 | 14.4% | 50544 | 14.4% | 55398 | 14.5% | 60681 | 14.2% |
| Specialized Banks | 21341 | 6.6% | 24580 | 6.9% | 26284 | 6.9% | 29285 | 6.8% |
| Total | 329562 | 100% | 351626 | 100% | 382338 | 100% | 428362 | 100% |

Table 4: the amount of assets in Egyptian banks from 2003 to 2006

We can see that table 4 indicates that the commercial banks sector accounts the largest share of the total assets of all the banks in the Egyptian banking sector.

**Appendix 2:**

**<u>Kruskal Wallis test</u>** was used to analyse the significant difference between the independent variables and the dependent variable. The Kruskal Wallis significance test, with a value that is equal to 0.05 or less indicates that the dimension is significant. On the other hand, if the value is larger than 0.05, it indicates that the result is not significant.

**<u>Regression analysis</u>** is also used to assess how much do independent variables affect dependent variable. It also gives an indication of the relative contribution of each independent variable.

**<u>Chi-Square test</u>** was used to analyse whether dependent variables affect independent variables. According to (Allyn and Bacon, 1999) (Sekaran, 2003) and (Pallant, 2001) the Chi-square significance tests, with value equal to 0.05 or less indicates that a dimension is significant, otherwise indicates insignificant if the value is larger than 0.05.

## H1: Use of technology affect e-CRM readiness.

### Chi-Square

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 23.237[a] | 4 | .000 |
| Likelihood Ratio | 16.784 | 4 | .002 |
| Linear-by-Linear Association | 16.746 | 1 | .000 |
| N of Valid Cases | 377 | | |

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is .11.

### Kruskal Wallis

**Test Statistics[a,b]**

| | Technology Mode | StratgyModeV1 | Culture Mode | Percep Mode Customer | Quality Mode Customer | Employee Mode |
|---|---|---|---|---|---|---|
| Chi-Square | 19.804 | 50.916 | 211.931 | 6.055 | 8.993 | .800 |
| Df | 2 | 2 | 2 | 2 | 2 | 2 |
| Asymp. Sig. | .000 | .000 | .000 | .048 | .011 | .670 |

a. Kruskal Wallis Test

b. Grouping Variable: ReadinessMode

### Normality Analysis

**Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | Df | Sig. | Statistic | df | Sig. |
| TechnologyMode | .528 | 377 | .000 | .343 | 377 | .000 |

a. Lilliefors Significance Correction

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .211[a] | .045 | .042 | .51428 |

a. Predictors: (Constant), TechnologyMode

b. Dependent Variable: ReadinessMode

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 4.623 | 1 | 4.623 | 17.480 | .000[a] |
| | Residual | 99.181 | 375 | .264 | | |
| | Total | 103.804 | 376 | | | |

a. Predictors: (Constant), TechnologyMode

b. Dependent Variable: ReadinessMode

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 2.298 | .131 | | 17.506 | .000 | | | | | |
| | TechnologyMode | .191 | .046 | .211 | 4.181 | .000 | .211 | .211 | .211 | 1.000 | 1.000 |

a. Dependent Variable: ReadinessMode

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 4.623 | 1 | 4.623 | 17.480 | .000[a] |
| | Residual | 99.181 | 375 | .264 | | |
| | Total | 103.804 | 376 | | | |

a. Predictors: (Constant), TechnologyMode

b. Dependent Variable: ReadinessMode

192

## H2: Organisational cultural affects e-CRM readiness.

## Chi-Square

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 212.495[a] | 2 | .000 |
| Likelihood Ratio | 92.478 | 2 | .000 |
| Linear-by-Linear Association | 191.383 | 1 | .000 |
| N of Valid Cases | 377 | | |

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .50.

## Kruskal Wallis

**Test Statistics[a,b]**

| | TechnologyMode | StratgyModeV1 | CultureMode | PercepModeCustomer | QualityModeCustomer | EmployeeMode |
|---|---|---|---|---|---|---|
| Chi-Square | 19.804 | 50.916 | 211.931 | 6.055 | 8.993 | .800 |
| Df | 2 | 2 | 2 | 2 | 2 | 2 |
| Asymp. Sig. | .000 | .000 | .000 | .048 | .011 | .670 |

a. Kruskal Wallis Test

b. Grouping Variable: ReadinessMode

## Normality Analysis

**Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| CultureMode | .541 | 377 | .000 | .225 | 377 | .000 |

a. Lilliefors Significance Correction

# Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .713[a] | .509 | .508 | .36867 |

a. Predictors: (Constant), CultureMode

b. Dependent Variable: ReadinessMode

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 52.836 | 1 | 52.836 | 388.743 | .000[a] |
| | Residual | 50.968 | 375 | .136 | | |
| | Total | 103.804 | 376 | | | |

a. Predictors: (Constant), CultureMode

b. Dependent Variable: ReadinessMode

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | -2.212 | .257 | | -8.617 | .000 | | | | | |
| | CultureMode | 1.711 | .087 | .713 | 19.717 | .000 | .713 | .713 | .713 | 1.000 | 1.000 |

a. Dependent Variable: ReadinessMode

**H3: Corporate Strategy affect e-CRM readiness.**

## Chi-Square

**Chi-Square Tests**

|  | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 51.052[a] | 2 | .000 |
| Likelihood Ratio | 26.687 | 2 | .000 |
| Linear-by-Linear Association | 44.274 | 1 | .000 |
| N of Valid Cases | 376 | | |

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .51.

## Kruskal Wallis

**Test Statistics[a,b]**

|  | TechnologyMode | StratgyModeV1 | CultureMode | PercepModeCustomer | QualityModeCustomer | EmployeeMode |
|---|---|---|---|---|---|---|
| Chi-Square | 19.804 | 50.916 | 211.931 | 6.055 | 8.993 | .800 |
| Df | 2 | 2 | 2 | 2 | 2 | 2 |
| Asymp. Sig. | .000 | .000 | .000 | .048 | .011 | .670 |
| a. Kruskal Wallis Test | | | | | | |

## Normality Analysis

**Tests of Normality**

|  | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
|  | Statistic | df | Sig. | Statistic | df | Sig. |
| StratgyModeV1 | .541 | 378 | .000 | .225 | 378 | .000 |
| a. Lilliefors Significance Correction | | | | | | |

## Regression

**Model Summary**[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .344[a] | .118 | .116 | .49469 |

a. Predictors: (Constant), StratgyModeV1

b. Dependent Variable: ReadinessMode

**ANOVA**[b]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 12.252 | 1 | 12.252 | 50.067 | .000[a] |
| | Residual | 91.524 | 374 | .245 | | |
| | Total | 103.777 | 375 | | | |

a. Predictors: (Constant), StratgyModeV1

b. Dependent Variable: ReadinessMode

**Coefficients**[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | .404 | .344 | | 1.174 | .241 | | | | | |
| | StratgyModeV1 | .824 | .116 | .344 | 7.076 | .000 | .344 | .344 | .344 | 1.000 | 1.000 |

a. Dependent Variable: ReadinessMode

**H4: Different e-CRM perceptions affects e-CRM readiness.**

- **Customer perception**

**Tests of Normality**

|  | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
|  | Statistic | df | Sig. | Statistic | df | Sig. |
| PercepModeCustomer | .530 | 387 | .000 | .293 | 387 | .000 |

a. Lilliefors Significance Correction

## Chi-Square

**Chi-Square Tests**

|  | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 6.952[a] | 4 | .138 |
| Likelihood Ratio | 5.806 | 4 | .214 |
| Linear-by-Linear Association | 4.597 | 1 | .032 |
| N of Valid Cases | 377 |  |  |

a. 4 cells (44.4%) have expected count less than 5. The minimum
expected count is .21.

## Kruskal Wallis

**Test Statistics[a,b]**

|  | TechnologyMode | StratgyModeV1 | CultureMode | PercepModeCustomer | QualityModeCustomer | EmployeeMode |
|---|---|---|---|---|---|---|
| Chi-Square | 19.804 | 50.916 | 211.931 | 6.055 | 8.993 | .800 |
| Df | 2 | 2 | 2 | 2 | 2 | 2 |
| Asymp. Sig. | .000 | .000 | .000 | .048 | .011 | .670 |

a. Kruskal Wallis Test

## Regression

**Model Summary<sup>b</sup>**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .111<sup>a</sup> | .012 | .010 | .52290 |

a. Predictors: (Constant), PercepModeCustomer

b. Dependent Variable: ReadinessMode

**ANOVA<sup>b</sup>**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.269 | 1 | 1.269 | 4.641 | .032<sup>a</sup> |
| | Residual | 102.535 | 375 | .273 | | |
| | Total | 103.804 | 376 | | | |

a. Predictors: (Constant), PercepModeCustomer

b. Dependent Variable: ReadinessMode

**Coefficients<sup>a</sup>**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 2.370 | .218 | | 10.891 | .000 | | | | | |
| | PercepModeCustomer | .160 | .074 | .111 | 2.154 | .032 | .111 | .111 | .111 | 1.000 | 1.000 |

a. Dependent Variable: ReadinessMode

- **Employees perceptions**

## Normality analysis

**Tests of Normality**

|  | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
|  | Statistic | df | Sig. | Statistic | df | Sig. |
| EmployeeMode | .513 | 176 | .000 | .408 | 176 | .000 |

a. Lilliefors Significance Correction

## Chi-Square

**Chi-Square Tests**

|  | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 10.502[a] | 4 | .033 |
| Likelihood Ratio | 7.260 | 4 | .123 |
| Linear-by-Linear Association | .092 | 1 | .762 |
| N of Valid Cases | 176 |  |  |

a. 4 cells (44.4%) have expected count less than 5. The minimum
expected count is .20.

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .023[a] | .001 | -.005 | .54748 |

a. Predictors: (Constant), EmployeeMode

b. Dependent Variable: ReadinessMode

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .027 | 1 | .027 | .091 | .763[a] |
|  | Residual | 52.154 | 174 | .300 |  |  |
|  | Total | 52.182 | 175 |  |  |  |

199

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .027 | 1 | .027 | .091 | .763[a] |
| | Residual | 52.154 | 174 | .300 | | |
| | Total | 52.182 | 175 | | | |

a. Predictors: (Constant), EmployeeMode

b. Dependent Variable: ReadinessMode

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 2.843 | .092 | | 30.895 | .000 | | | | | |
| | EmployeeMode | -.020 | .066 | -.023 | -.302 | .763 | -.023 | -.023 | -.023 | 1.000 | 1.000 |

a. Dependent Variable: ReadinessMode

## H5: e-CRM readiness affect e-CRM quality of service.

**Chi-Square Tests**

|  | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 19.065[a] | 4 | .001 |
| Likelihood Ratio | 14.855 | 4 | .005 |
| Linear-by-Linear Association | 12.746 | 1 | .000 |
| N of Valid Cases | 377 | | |

a. 4 cells (44.4%) have expected count less than 5. The minimum expected count is .88.

**Kruskal Wallis Test**

**Test Statisticsa,b**

|  | ReadinessMode |
|---|---|
| Chi-Square | 17.840 |
| Df | 2 |
| Asymp. Sig. | .000 |

a. Kruskal Wallis Test

b. Grouping Variable: QualityModeCustomer

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .517[a] | .267 | .259 | .53923 |

a. Predictors: (Constant), Employee Mode, Percep Mode Customer

b. Dependent Variable: Quality Mode Customer

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 18.333 | 2 | 9.166 | 31.524 | .000[a] |
|  | Residual | 50.304 | 173 | .291 | | |
|  | Total | 68.636 | 175 | | | |

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 18.333 | 2 | 9.166 | 31.524 | .000[a] |
| | Residual | 50.304 | 173 | .291 | | |
| | Total | 68.636 | 175 | | | |

a. Predictors: (Constant), EmployeeMode, PercepModeCustomer

b. Dependent Variable: QualityModeCustomer

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | .226 | .324 | | .698 | .486 | | | | | |
| | PercepModeCustomer | .857 | .108 | .517 | 7.940 | .000 | .517 | .517 | .517 | 1.000 | 1.000 |
| | EmployeeMode | .000 | .065 | .000 | -.011 | .991 | .006 | .000 | .000 | 1.000 | 1.000 |

a. Dependent Variable: QualityModeCustomer

## H6: Different e-CRM perceptions affects quality of service.

## **Regression**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .517[a] | .267 | .259 | .53923 |

a. Predictors: (Constant), EmployeeMode, PercepModeCustomer

b. Dependent Variable: QualityModeCustomer

**ANOVA<sup>b</sup>**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 18.333 | 2 | 9.166 | 31.524 | .000<sup>a</sup> |
| | Residual | 50.304 | 173 | .291 | | |
| | Total | 68.636 | 175 | | | |

a. Predictors: (Constant), EmployeeMode, PercepModeCustomer

b. Dependent Variable: QualityModeCustomer

**Coefficients<sup>a</sup>**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | .226 | .324 | | .698 | .486 | | | | | |
| | PercepModeCustomer | .857 | .108 | .517 | 7.940 | .000 | .517 | .517 | .517 | 1.000 | 1.000 |
| | EmployeeMode | .000 | .065 | .000 | -.011 | .991 | .006 | .000 | .000 | 1.000 | 1.000 |

a. Dependent Variable: QualityModeCustomer

**Mann-Whitney test** was used to compare two independent groups of sampled data. The result is significance tests, with value equal to 0.05 or less indicates that a dimension is significant, otherwise indicates insignificant if the value is larger than 0.05.

**Test Statistics<sup>a</sup>**

| | responsiveness | courtesy | credibility | Access | understanding customer | collaboration | content | timelines | aesthetics | ease_of_use |
|---|---|---|---|---|---|---|---|---|---|---|
| Mann-Whitney U | 621.000 | 766.500 | 759.000 | 492.500 | 521.500 | 567.000 | 409.000 | 576.500 | 422.000 | 347.000 |
| Wilcoxon W | 1216.000 | 1.362E3 | 1935.000 | 1.088E3 | 1116.500 | 1162.000 | 1.004E3 | 1171.500 | 1017.000 | 942.000 |
| Z | -1.851 | -.483 | -.560 | -3.123 | -2.964 | -2.450 | -3.973 | -2.381 | -3.885 | -4.484 |
| Asymp. Sig. (2-tailed) | .064 | .629 | .575 | .002 | .003 | .014 | .000 | .017 | .000 | .000 |

a. Grouping Variable: Bank Type