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**CRM FACTORS THAT AFFECT THE FIRM PERFORMANCE IN  
TELECOMMUNICATION INDUSTRY IN LIBYA**

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## **ABSTRACT**

By combining the abilities to respond directly to customer requests and to provide the customer with a highly interactive, customized experience, companies have a greater ability today to establish, nurture, and sustain long-term customer relationships than ever before in telecommunication industry in Libya. Data were collected through questionnaire and there were 100 respondents. Findings suggest that customer relationship management factors; information gathering, information processing, information management, customer loyalty and customer retention with firm performance in telecommunication industry in Libya.

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## CHAPTER ONE

### INTRODUCTION

#### 1.0 Introduction

Libya has emerged from almost two decades of economic isolation, which contributed to the stagnation of its oil industry, the mainstay of its economy, and invariably its telecoms sector. Despite having an old style state-owned monopoly player for the provision of postal and telecommunications services (LPTIC, GPTC), which also operates the country's only Internet service (LTT) and two mobile networks in parallel, Libya's telecommunications infrastructure is superior to those in most other African countries.

By combining the abilities to respond directly to customer requests and to provide the customer with a highly interactive, customized experience, companies have a greater ability today to establish, nurture, and sustain long-term customer relationships than ever before. Customer Relationship Management (CRM) is the new corporate buzzword. It is vital to retain customers, up sell and cross sell and ultimately customize products and services in order to survive in today's fiercely competitive market and win the marketing warfare. Building a long lasting, mutually beneficial relationship with the customer is becoming increasingly important in the present-day context. Customer relationship management or CRM as it is called has been referred to as "the heart" of marketing. Excellent customer service is about being aware of customer needs and reacting to them effectively. CRM helps a company to understand, anticipate and respond to the customers' needs in a consistent way, right across in that organization.

The terms CRM and relationship marketing are used almost interchangeably (Parvatiyar and Sheth, 2000). For example, Berry (1983) defines relationship marketing as "attracting,

maintaining and enhancing customer relationships.” Harker (1999) proposes the following definition: “An organization engaged in proactively creating, developing and maintaining committed, interactive and profitable exchanges with selected customers (partners) over time is engaged in relationship marketing.” Recently, by broadening the scope of relationship marketing and viewing it in a comprehensive management and social context, Gummesson (2002) defines it as “marketing based on relationships, networks and interaction, recognizing that marketing is embedded in the total management of the networks of the selling organization, the market and society. It is directed to long term win-win relationships with individual customers, and value is jointly created between the parties involved.”

On the other hand, Jackson (1985) suggests CRM to mean “marketing oriented toward strong, lasting relationships with individual accounts.” Payne (2000) asserts that CRM is concerned with “the creation, development and enhancement of individualized customer relationships with carefully targeted customers and customer groups resulting in maximizing their total customer life-time value.” CRM is a multi-dimensional construct consisting of four broad behavioral components: key customer focus, CRM organization, knowledge management, and technology-based CRM (see Figure 1). This is in accord with the notion that successful CRM is predicated on addressing four key areas: strategy; people; technology; and processes (Fox and Stead, 2001), and that only when all these four work in concert can a superior customer-relating capability emerge (Day, 2003). For a business to maximize its long-term performance in such aspects as customer satisfaction, trust, return on sales, and return on investment, it must build, maintain, and enhance long-term and mutually beneficial relationships with its target buyers.

CRM refers to a business strategy that focuses on customers and acknowledges that the ability to understand and interact with customers forms a critical element of success within contemporary

business environments (Psomadakis, 2004). CRM is a business strategy designed to help enterprises meet the expectations of their existing or prospective customers and build a strong business relationship with them over time. Customer data is collected from several departments within a company into a central database and, with the use of technology; it is analyzed and 'distributed' to specific areas within the company. These areas form the so-called customer contact areas'. Such areas include: sales, incoming/outgoing management, as well as all possible areas through which a company is in contact with customers and suppliers.

According to Peppers et al., (1999) the original focus of CRM was to forge closer and deeper relationships with customers by 'being willing and able to change company's behavior toward an individual customer based on what the customer tells them and what else the company knows about the customer', the premise being that existing customers are more profitable than new customers; that it is less expensive to sell an incremental product to an existing customer; that customer retention would be maximized by matching products and levels of service more closely to customer expectations and that attracting new customers is expensive. The central objective of CRM is to maximize the lifetime value of a customer to the organization (Peppard, 2000). As the consulting company Gartner noted, CRM can be defined as a business strategy which can bring results such as increased revenues and profits through customer satisfaction (Thompson and Moscardini, 2002). The CRM market emerged nine or ten years ago. The first systems were designed to support only one division of the company. During the second stage of development more integrated solutions were developed (Kritikou and Rachoutis, 2003). Later the introduction of the Internet changed the situation because it is appropriate for the integration of CRM solutions, thus, CRM became electronic-CRM or e-CRM.

In CRM, the firm is expected to focus on its key customers. The key customers can be defined as those whose needs can be fulfilled by the competencies possessed by the firm (Burnett, 2001). Therefore, at the primary level, firms need to decide the nature of customers that it would be capable of serving. The customers should be chosen not only on the basis of their demographic profiles, but also on the basis of psychographic profiles, nature of need fulfillment, frequency of usage, stage in life cycle etc. The essence of CRM rests on the tenet of differentiation among customers. Therefore, some customers are more equal than others (Peppers and Rogers, 1997). In CRM, the aspect of 'Customer Lifetime Value' has received considerable importance (Berger et al., 2002). The 'Customer Lifetime Value' is a realistic estimate of the total business that can be expected from a customer, if he remained loyal over his lifetime. In this regard, Pfeifer et al. (2005) pointed out that customer profitability has more significance than the lifetime value. The authors have mentioned that it is necessary to distinguish between high profit yielding customers from those that yield low profits. Another issue of concern is that marketers aspire for customer satisfaction, but it is necessary to understand that a positive relationship between satisfaction and profitability cannot be taken for granted (Helgesen, 2006). Therefore, customer profitability is a critical parameter that requires due attention for the success of the CRM initiative.

Customer relationship management (CRM) has generally been assumed to create a competitive edge for an organization, as well as to have a positive impact on organizational performance. However, there is still much debate over exactly what constitutes CRM. In fact, many scholars have claimed that the precise meaning of CRM is not always clear in the literature (Nevin, 1995; Parvatiyar and Sheth, 2001). Furthermore, Nevin (1995) notes that the term has become a buzzword, with the concept being used to reflect a number of differing themes or perspectives.

For example, at a tactical level, CRM may mean database marketing (Peppers and Rogers, 1995) or electronic marketing (Blattberg and Deighton, 1991). At a strategic level, CRM may mean customer retention or customer partnering (Peppers and Rogers, 1993; Vavra, 1992). At a theoretical level, CRM may mean an emerging research paradigm in

### **1.1 Problem Statement**

Telecommunication sectors in Libya is now operating as a monopoly as it is operating by Government only, it should become competitive and operate as a private company. In early 2009 Libya announced it would issue the first ever private telecom license in the country for fixed and mobile services, although the government would take a minority stake in the new operator. A new regulatory authority for the telecom sector, GTA was formed at the same time. The license award has been delayed several times but is expected in 2010. However, due to its bureaucracy the decision of the implementation of a CRM system was a difficult task and a very important step for the Organization's business process reengineering. The implementation of the system should be decided after the agreement of the general management and the departments. The aim was to offer better services to the customers, to improve communication and to establish good relationships with them.

Customers today are becoming increasingly sophisticated and demanding. They expect organizations to be highly responsive and increasingly dependable and to provide more facilities for their convenience. Organizations have also realized the need to get closer to the customers to be able to increase their market share and beat the competition, particularly in the present-day fast moving, turbulent and competitive scenario. In this modern era most of people in Libya are

using the mobile and day by day they are getting new services from the mobile operator companies. Customer satisfaction is the problem all over the world including Libya. There are two mobile operator companies in Libya named Libyana and Al-Madar: ("Orbit") owned by Libyan government. As known is that worldwide any government owned company has some problems to satisfy the customers by providing the better services and Libyan mobile companies are not different than that. Existing systems aren't very good at relating one customer to another and figuring out that while two customers may have different account numbers, they're actually one and the same. They need to be able to manage customer relationships beyond the obvious. It has been seen it is inefficient system which companies are avoiding using and that is one the reason, customer satisfaction is becoming worse (Casey Gollan , 2006). Beside that the lack of skilled people and the willingness of the staff to provide the better service make the mobile companies customer relation service is worse. Customer satisfaction and company profits are often closely related to the speed of solving problems.

In Libya telecommunication service have not been able to capture a lot of information about how their services are performing, and designed systems that allow them to take information about customer data, profitability, customer usage, likes and dislikes, and using that information to extend the customers' relationship with the companies.

## **1.2 Research Objectives**

The main objective of this study will be to observe the factors that affect on Customer Relationship Management in mobile operator companies. The core research objectives of this study are given below:

1. To investigate the CRM practices in mobile operator companies in Libya.
2. To investigate the factors that dissatisfies customers in Libya.
3. To investigate the impact of CRM practice by mobile operator companies on customer mind in Libya.
4. To know the customer needs and expectation to the mobile operator companies in Libya.
5. To know how mobile operator companies can practice more effective customer relation and retain the customers.

### **1.3 Research Question**

This study will answer four basic questions those are as follows:

1. Do mobile phone operators' CRM practices in Libya?
2. What are the factors that dissatisfy customers in Libya?
3. What is the impact of CRM practicing by mobile phone operator companies on customer mind in Libya?
4. What are the customer needs and expectation to the mobile phone operator companies in Libya?
5. How mobile operator companies can practice more effective customer relation and retain the customers?



#### **1.4 Significance of the Study**

This study will provide value to customer and redefining business processes for telecommunication sector in Libya. More efficient and effectively firms can provide the service because of being known about the key factors that affect customer satisfaction. This study will provide the public and private firms solution for problem of implementing customer relationship management technology that currently facing by them.

#### **1.5 Scope of the Study**

This study is focused on the CRM in telecommunication sector in Libya on the basis of customer care service, customer satisfaction, and the solving the problem of customers in telecommunication sectors in Libya. In addition the key factors that affect the CRM in telecommunication sectors in Libya are considered.

#### **1.6 Organization of Chapters**

This study is divided into five chapters. Chapter one highlights the background of the study, problem statement, objective, research questions, significance of the study, and scope of the study.

Chapter two presents the previous studies concerning about the dependent and independent variables investigate in this study. Based on the literature review, theoretical framework of the investigation developed and several hypotheses are formulated.

Chapter three focuses on the methodology used to present and investigate the study. Discussion emphasizes on the research design, variables and measurement, data collection technique, and data analysis technique. Chapter four will represent the result of the statistical analysis. Finally chapter five presents the discussion, conclusion and the implication of the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Internet markets in the Arab countries are in the early development stages. They have yet to experience the substantial subscriber increases that Western Europe encountered when their Internet service providers launched subscription-free services in 1998 (Internet World Stats, 2004). This is to some degree due to the relative lack of adequate infrastructures in the region and low levels of competition. These factors are largely influenced by the negative attitudes toward the Internet by regional governments. Because the Arab governments dictate the rate and type of economic progress in their countries, the benefits of the Internet being recognized across the entire region is substantial. Despite the culturally embedded attitudes against the Internet, the World Market Research Centre reported that the UAE, the regional leader, had a penetration rate of almost 30% in 2001, which is higher than some European countries (Norton, 2002).

#### **2.1 CRM as a Business Strategy**

CRM is a business strategy designed to optimize profitability, revenue and customer satisfaction by organizing the enterprise around customer segments, fostering customer-centric behaviors and implementing customer centric processes (Gartner, 2004). Jain (2005) proposed that profiling of the customer, ensuring satisfied employees and delivering superior value would help the cause of CRM. Studies of successful CRM initiatives have been undertaken to highlight the importance of the customer relationship cycle and its components (Rigby and Ledingham, 2004). Harding et al.

(2004) pointed out the importance of redesigning of business processes and training of users before CRM implementation. Chan (2005) highlighted the importance of integration of activities and the danger of having a disconnected view of customers owing to functional disparities. A number of articles highlighting the best practices on CRM have been published. One such article explains the need for balancing the strategic capabilities of CRM— people, process, technology, and knowledge and insight (Gordon, 2002). McGovern and Panaro (2004) highlighted the importance of proper segmentation of key customers and also the alignment of the salespeople with the processes. Kale (2004) explained the major pitfalls of CRM as the seven deadly sins. However, a framework for enabling a strategic approach to CRM has not been proposed by these authors. Roberts et al. (2005) proposed a ‘CRM Process Model’, but it included very generic strategies (not different from traditional marketing) and also fails to incorporate the need for a CRM vision.

Customer relationship management is a key ingredient in the value chain. The strategy is to maximize the use of CRM technologies. CRM as a success factor, CRM requires considerable investments and changes in operational and organizational structures (Homburg et al., 2000). The ultimate question is therefore whether customer orientation and the implementation of customer relationships are indeed important for a company’s success. Reichheld and Sasser (1990) presented an early and influential study that showed the tremendous impact that customer retention has on profitability. Reichheld and Teal (1996) specifically showed that the longer the customer relationship lasts, the greater its profitability becomes. These authors’ conclusions were supported by Storbacka et al. (1994). Other researchers emphasize that current customers are much cheaper to retain than acquiring new customers (e.g., Blattberg and Deighton, 1996).

## 2.2 e-CRM

A literature review was conducted and issues concerning e-CRM, its aims, its strategic importance, its implementation, as well as the benefits and problems and the success and failure factors of e-CRM applications, were examined and discussed below. According to Peppers et al., (1999) the original focus of CRM was to forge closer and deeper relationships with customers by 'being willing and able to change company's behavior toward an individual customer based on what the customer tells them and what else the company knows about the customer', the premise being that existing customers are more profitable than new customers; that it is less expensive to sell an incremental product to an existing customer; that customer retention would be maximized by matching products and levels of service more closely to customer expectations and that attracting new customers is expensive. The central objective of CRM is to maximize the lifetime value of a customer to the organization (Peppard, 2000). As the consulting company Gartner noted, CRM can be defined as a business strategy which can bring results such as increased revenues and profits through customer satisfaction (Thompson and Moscardini, 2002).

Payne and Frow (2005) proposed a strategic framework for CRM that comprised five major components—the strategy development process, the value creation process, the multichannel integration process, the information management process, and the performance assessment process. However, their work failed to delve into certain important aspects like the methods to be adopted for focusing on key customers and critical aspects of choosing the CRM technology. Another paper attempted to create a strategic approach for successful CRM but fell short in technology considerations that are critical for CRM (Mack et al., 2005). This paper takes into account these aspects as well and also explains the importance of 'CRM Vision'.

Globally the industrial economies are trending towards the knowledge base economies; the basic aim is to make the operation of the firms efficient and effective to improve customer relations, with customer satisfaction and gradually that will influence firm's performance.

### **2.3 CRM Definitions**

Customer relationship management (CRM) is a concept that comprises the establishment, development, maintenance and optimization of long-term, mutually valuable relationships between customers and organizations (Payne and Ryals, 2001).

According to some other authors the reasons for unsuccessful implementation is the inability to integrate with legacy systems, and not having an approach to analytics (McKenzie 2001, Greenberg, 2002 and Bannan 2004).

The marketing philosophy is fundamentally based upon the satisfaction of the needs of customers by their suppliers and the needs of organizations in meeting expectations of profits and efficient management for the good of both their customers and the people they employ. Essentially, it has always been an inclusive aspect of the marketing orientation that there should therefore, be customer care and satisfaction in order to meet customer needs. The terms customer care and customer satisfaction, however, have had their share of being overused and abused (Carson, 2001).

## **2.4 Customer Loyalty**

In business, the important task is that of combining relationship marketing with integrated marketing effectively in a bid to establish customer loyalty. As several studies have indicated, retaining customers perhaps offers a more sustainable competitive advantage than acquiring new ones. Significantly, there is increasing realization among marketers that it is less costly to retain customers than to compete for new ones (Rosenberg & Czepiel, 1984). On the supply side it is more profitable to develop closer relationships with a few suppliers than to work with more vendors (Spekman, 1988). The development of customer loyalty involves building and sustaining a relationship with a customer, which leads to the repeated purchase of products or services over a given period of time. Furthermore, a loyal customer base allows companies to devote their energies to other business matters (Rowley & Dawes, 2000). Customers can demonstrate their loyalty in several ways. They can choose to stay with a firm, whether this continuance is defined as a relationship or not increase the number of purchases, or c) do both (Reinartz & Kumar, 2003; Rowley & Dawes, 2000). For the purpose of this research, loyalty is considered as the final result, or the key element of effective CRM. Since many authors have suggested that loyalty is a relational phenomenon (Chow & Holden, 1997; Sheth & Parvatiyar, 1995; cited by Macintosh & Lockshin, 1997), our purpose is to link loyalty to the emerging theory of CRM. Although some authors, such as Dick & Basu (1994), distinguish between brand loyalty, store loyalty, salespeople loyalty, product and service loyalty, and so on, this study considers the concept of loyalty as the combination of all these types of loyalty.

Some authors such as Evans & Laskin (1994) have also studied the impact of CRM on customer loyalty but have not made any distinction between different types of loyalty. In today's era of hyper competition, marketers are more concerned with customer retention and loyalty (Dick &

Basu, 1994; Reichheld, 1996) and with retaining customers for life rather than with only making a one-time sale (Cannie & Caplin, 1991). The present-day scenario offers greater opportunities for cross-selling and up-selling to a customer who is loyal and committed to the firm and its offerings. Many researchers and consultants advocate fostering customer loyalty by firms (Reinartz and Kumar 2002) but caution that while customer loyalty is very important and enticing, the firm must ensure that it does not seek to enhance customer loyalty as an end in itself.

Available literature on the relations with customers represents the keystone of CRM. It shows that the concept of relations with customers also relates to customer loyalty. Chow and Holden (1997), for example, estimate that firms are oriented towards the benefits that can be reaped from the establishment of customer loyalty. In addition, these authors specify that there has been a paradigmatic change so that the relationship with the customer is now seen as the unit of value. The relations with customers component of CRM relates to the extent, to which firms initiate, develop. Various authors expound on these core ideas, and in doing so, derive varied conceptualizations of CRM and its practice (for a review, see Payne and Frow 2005). For example, customer learning orientation (Voss and Voss 2008), interaction orientation (Ramani and Kumar 2008), customer relationship orientation (Jayachandran et al. 2005), key customer focus (Sin et al. 2005), and customer knowledge process (Jayachandran et al. 2004) are variant terminologies that all relate to the basic premise of the CRM concept—customers are crucial assets that firms should learn from and manage for value. Many of these conceptualizations also accept the perspective that the customer-firm relationship evolves through three stages—initiation, maintenance, and termination. Relationship management, however, emphasizes the organization of marketing activities around cross-functional processes as opposed to



organizational functions or departments. This results in a stronger link between the internal processes and the needs of customers, and results in higher levels of customer satisfaction. CRM evolved from business concepts and processes such as relationship marketing and the increased emphasis on improved customer retention through the effective management of customer relationships. Both RM and CRM emphasize that customer retention affects company profitability in that it is more efficient to maintain an existing relationship with a customer than create a new one (Payne et al., 1999; Reichheld, 1996; Zineldin, 2005, 2000). One good example is CRM strategies implemented by the online dating web sites.

The starting point for a CRM initiative is the CRM Vision. It should be noted that Gartner (2004) has designated 'Vision' as one of the eight building blocks of a successful CRM project. Tamošiuniene and Jasilioniene (2007) explained vision in terms of CRM as the creation of a picture of what the customer-centric enterprise will look like to ensure that a competitive position can be created in the marketplace. Since the CRM implementation has far-reaching impact, a well-considered vision and strategy are essential (Ribgy et al., 2002). However, a suitable process needs to be adopted to formulate the CRM vision. Brown and Gulycz (2002) suggested that the CRM Vision should be decided before embarking on the CRM project and this should be done taking into account the vision, mission, core values and a description of standards against which it can be measured. Another approach that helps in formulating the CRM Vision is based on the attributes that are important to the customer and the company (Gordon, 2002). In this regard, not only the CRM Vision should be integrated with the CRM strategy and the corporate strategy, but also the other issues of CRM guidelines, customer valuation and customer segmentation should be kept in focus (Mack et al., 2005). CRM vision cannot be regarded as

sacrosanct and needs to be revisited and updated based on the changing dynamics of the marketplace. It should take into account the changing competitive position of the company, the changes in the customer's profile, entry into new markets, new legal and environmental compulsions imposed on the company, technological innovations and impact of cultural changes. The modifications in the CRM Vision should be intended to develop the capabilities of customer bonding, a learning relationship and competitive advantage (Gordon, 2002).

Many researchers claimed that CRM applications fail to deliver the expected benefits. There are many causes of failure. Rheault and Sheridan (2002) mentioned the lack of robust implementation approaches and the selection and configuration of the e-CRM tools. The research of Peppard (2000), which was conducted in Financial Service Organizations, has highlighted a rather narrow view of e-CRM and, as such, benefits are limited. For some, it is seen as a technology solution rather than a strategy. Rigby et al., (2002) argued that the lack of strategy can be a serious cause of failure. In addition according to Peppard (2000), in some organizations the e-CRM project is driven by the requirements of one function rather than as part of an overall enterprise wide customer-centric strategy. Bradshaw and Brash (2001) further noted that CRM applications must not only integrate functionally at the front office but also integrate with back office functions such as manufacturing and billing.

In the marketing literature, the terms CRM and relationship marketing are used almost interchangeably (Parvatiyar and Sheth, 2000). For example, Berry (1983) defines relationship marketing as "attracting, maintaining and enhancing customer relationships." Harker (1999) proposes the following definition: "An organization engaged in proactively creating, developing and maintaining committed, interactive and profitable exchanges with selected customers (partners) over time is engaged in relationship marketing." Recently, by broadening the scope of

relationship marketing and viewing it in a comprehensive management and social context, Gummesson (2002b) defines it as “marketing based on relationships, networks and interaction, recognizing that marketing is embedded in the total management of the networks of the selling organization, the market and society. It is directed to long term win-win relationships with individual customers, and value is jointly created between the parties involved.”

## **2.5 Information gathering, processing and Management**

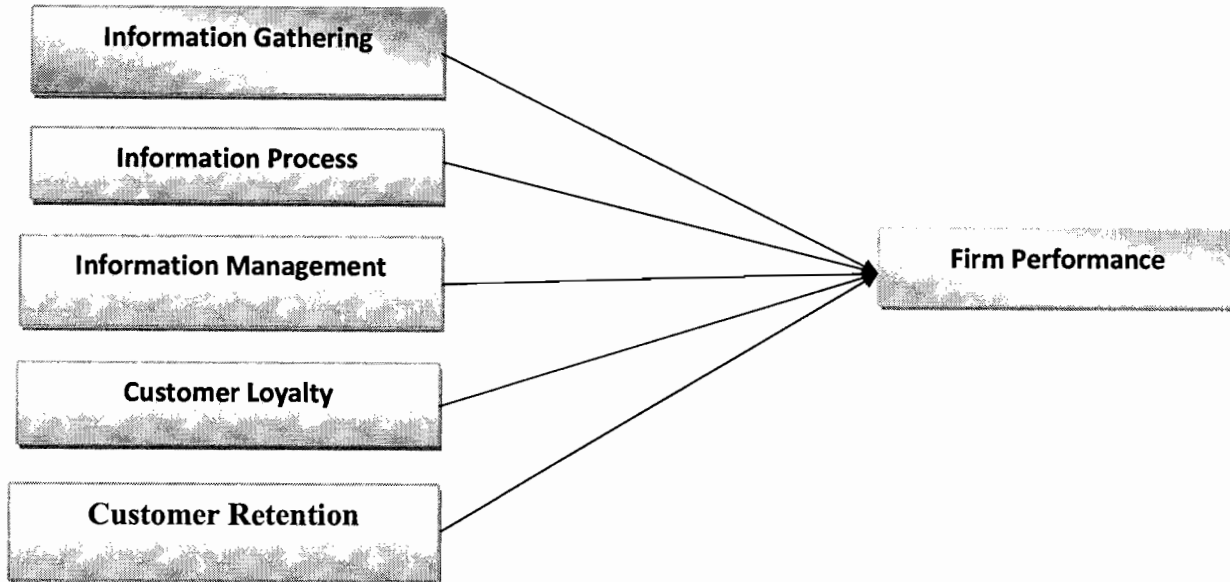
Information Collection" or Information Gathering is a criterion to measure that information sources are logically gathered by CRM systems. All customers' information is useful for CRM strategy-making. CRM information technology collects and updates customers' information continually to understand each particular customer habits. Therefore, the collection of data is come from all possible sources - internal and external resources, like organizations and individuals within the firm as well as outside (Zikmund, McLeod and Gilbert, 2003). The data is stored in a computer-readable format and can easily be transformed to the database. For example, one way to collect CRM data is by using point of sale. When a product is prepared well to sell for a customer, its bar codes could be scanned into CRM system. And this product relates with a certain customer and his or her account information. Sales representatives could address customer's phone number, email address by credit cards. CRM process is recorded by these two types of data. A good information collection method improves effectiveness of CRM performance. If CRM systems gather data from two types of sources, they can record whole business processes and easily deliver information to other organizational managements. When market specialists get data, they can make an appropriate CRM strategy. For customers, they can

search any product's information posted by the Internet or newspapers, particular details help them accomplish their requirements. "Information Collection" criterion is to evaluate CRM systems data collected from internal and external sources. It makes information comprehensive and easy for CRM strategy-making.

The information management process is concerned with the collection, collation, and use of customer data and information from all customer contact points to generate customer insight and appropriate marketing responses. The key material elements of the information management process are the data repository, which provides a corporate memory of customers; IT systems, which include the organization's computer hardware, software, and middleware; analysis tools; and front office and back office applications, which support the many activities involved in interfacing directly with customers and managing internal operations, administration, and supplier relationships (Greenberg 2001).

On the other hand, Jackson (1985) suggests CRM to mean "marketing oriented toward strong, lasting relationships with individual accounts." Based on past related literature (Crosby and Johnson, 2001; Day, 2003; Fox and Stead, 2001; Kalustian et al., 2002; O'Halloran and Wagner, 2001; Paracha and Bulusu, 2002; Ryals and Knox, 2001; Tiwana, 2001) and indepth interviews with CRM manager CRM is a multi-dimensional construct consisting of four broad behavioral components: key customer focus, CRM organization, knowledge management, and technology-based CRM (see Figure 1). This is in accord with the notion that successful CRM is predicated on addressing four key areas: strategy; people; technology; and processes (Fox and Stead, 2001), and that only when all these four work in concert can a superior customer-relating capability emerge (Day, 2003).

## 2.6 Framework



*Source: Weiber & Kollmann (1998)*

In business, the important task is that of combining relationship marketing with integrated marketing effectively in a bid to establish customer loyalty. As several studies have indicated, retaining customers perhaps offers a more sustainable competitive advantage than acquiring new ones. Significantly, there is increasing realization among marketers that it is less costly to retain customers than to compete for new ones (Rosenberg & Czepiel, 1984). The development of customer loyalty involves building and sustaining a relationship with a customer, which leads to the repeated purchase of products or services over a given period of time. Furthermore, a loyal customer base allows companies to devote their energies to other business matters (Rowley & Dawes, 2000). From this perspective in Libyan telecommunication sector it is important to retain

customer than create new customer. In my framework, information gathering is the first component to know about the customer as their choice, what they want from the telecommunication services and or how are they getting the services from telecommunication. To get their satisfaction level or their demanded service to telecommunication service gathers their data such as their age, their service level such as which connection are they using, their addresses are important.

The data repository provides a powerful corporate memory of customers, an integrated enterprise wide data store that is capable of relevant data analyses. In larger organizations, it may comprise a data warehouse (Agosta 1999; Swift 2000) and related data marts and databases. There are two forms of data warehouse, the conventional data warehouse and the operational data store. The latter stores only the information necessary to provide a single identity for all customers.

The information management process is concerned with the collection, collation, and use of customer data and information from all customer contact points to generate customer insight and appropriate marketing responses. The key material elements of the information management process are the data repository, which provides a corporate memory of customers; IT systems, which include the organization's computer hardware, software, and middleware; analysis tools; and front office and back office applications, which support the many activities involved in interfacing directly with customers and managing internal operations, administration, and supplier relationships (Greenberg 2001).

## **2.7 Hypothesis**

*H1:* information gathering is related to the firm performance for telecommunication firms.

*H2:* information process positively related to the firm performance telecommunication firms

*H3:* information management and firm performance is positively related in telecommunication firms.

*H4:* customer loyalty is positively related to the firm performance in telecommunication industry in Libya.

*H5:* Customer retention in CRM is related to the firm performance in telecommunication firms

## **Chapter Three**

### **Methodology**

#### **3.1 Introduction**

This chapter will be discussed the method for successfully conduct the study. Theoretical framework and hypothesis formulation will be discussed in this chapter which will help to construct the structured questioner and statistical analysis to find the solution for this study. The starting point in this chapter will be the research design. It will also covered developing questionnaire, the technique of data collection, sampling method, statistical measurement, analytical tools.

#### **3.2 Research Design**

This was a correlation study which attempted to investigate the statistical relationship between factors affect the CRM in telecommunication industry in Libya. This was a field study whereby all variables were not manipulated or controlled, thus no artificial setting was created. The sample, unit of analysis, sampling method and time horizon were discussed.

#### **3.3 Sample and data collection**

The data for this study were collected from telecommunication firms in Libya. With diverse customer services, these companies provide valuable data, from which we can derive our findings with high generalizability. Moreover, sampling from the telecommunication industry is appropriate. First, as the implementation of CRM is widespread (Peppard, 2000) and more



advanced (Ryals and Payne, 2001) in telecommunication services than in most other industry sectors, the findings of this study can provide some valuable and enlightening insights to organizations in other sectors. Second, despite the fact that telecommunication services constitute a large sector of the economy, there is a scant amount of research conducted to look into the customer services and experiences of firms providing the services through CRM in this sector (Ryals and Payne, 2001). This study can serve as an attempt to fill this research void. The non-probability convenience sampling (Sekaran, 2000) will be chosen as the sampling design in this study. This will be because convenience sampling is most often used during the exploratory phase of a research project and is perhaps the best way of getting some basic information quickly and efficiently. One hundred personnel and staff involved in customer relationship management will have been selected for the instrument presented in this project.

### **3.4 Variables and Measurements**

This section will explain the measurement for CRM in Libya. The questionnaire is designed from objectives, problem and hypotheses of the study to measure the relationship between dependent and independent variables. The questionnaire will measure by five point Likert scale from 1. Strongly disagree, 2. Disagree, 3. Undecided, 4. Agree, 5. Strongly agree.

### **3.5 Data Analysis Technique**

Statistical Package for the Social Science (SPSS) version 16.0 will be used to analyze the data collected in this study. For data processing, four statistical techniques were used for different purposes. These included descriptive statistics, reliability test, correlation analysis and regression analysis.

### **3.6 Descriptive Statistics**

Respondents' demographic variables (gender, age, education level, marital status, and the year of experience) have been analyzed using descriptive statistics, such as frequencies and percentages. Items in the instruments that were measured based on 5-point Likert scale.

### **3.7 Reliability Test**

The reliability test is conducted to ensure the consistency or stability of the items (Sekaran, 2000). The Cronbach alpha is a reliability coefficient. The Cronbach's alpha ( $\alpha$ ) test was used to analyze the reliability of the instruments. According to Nunnally (1994), the reliability acceptance level should be around 0.70.

### **3.8 Correlation Analysis**

To investigate whether all factors of independent and dependent variables were independent or inter-correlated; a Pearson correlation analysis will be conducted.

### **3.9 Regression Analysis**

Regression analyses will be used to test hypotheses formulated for this study. Six variables (information gathering, information process, information management, customer loyalty, customer retention and firm performance) will be entered. The relationship will be discussed through the linear regression model.

The data will be edited to detect errors and certify that data quality standards are achieved. Proportions were the summary measures used to describe the dependent and independent variables.

Seven hypotheses generated. From the hypothesis it gives the clear direction to assess the statistical relationships between the dependent and independent variables.

Data analysis also involved the construction of a model that captured some of the major element that impact CRM in telecommunication sector in Libya. The research questions were addressed and all the variables that impact tourism development in Libya were considered.

## **CHAPTER FOUR**

### **FINDINGS**

#### **4.1 Introduction**

In this chapter, according to data we collected from questionnaire survey, dedicated analysis are operated to select a reliable and valid diagnostic firm performance by implementing CRM in firm. We firstly discuss the demographic variable of the respondents. Reliability analysis conducted to test the consistency of the questionnaire. Then the correlation and regression analysis conducted to test the relationship between independent and dependent variables.

#### **4.2 Demographic profile of Respondents**

Demographic variable has been analyzed to know the frequency and the percentage of respondent's gender, age, education level, their experience to deal with CRM, and the job category in the firm.

##### **4.2.1. Frequency of Gender**

First I have analyzed the respondent's gender, from the 100 Questionnaires. The majority of the respondents are Males, 86 (86%) male and just 14 (14%) female respondents, result and the information of respondent's gender is Shown in table 4.1 follows:

Measure	Item	Respondent (N)	Percent (%)
Gender	Male	86	86%
	Female	14	14%
	Total	100	100%

*Table 4.1: Gender Information of respondents*

#### 4.2.2. The Age of respondents

Second demographic analyze conducted to know the respondent's age. In the result of respondent's age most of the respondents (46) were 30 to 35 years old (46%). Lowest respondent's age was above 40 years old 16%. Age is important part to be considered in answering the questionnaire. Result is shown in the table 4.2.

Measure	Item	Respondent (N)	Percent (%)
Age	25-30	18	18%
	30-35	46	46%
	35-40	20	20%
	Above 40	16	16%
	Total	100	100%

*Table 4.2: The Age of respondents*

#### 4.2.3. Education Level of respondents

47 managers have the Masters Degree (47%), which is the highest percentage in education level of respondents. Where (33.0%) the respondents have Bachelor degree and 9 of the respondents (9%) have Doctoral Degree. Demographic information about education level has shown in the table 4.3:

Measure	Item	Respondent (N)	Percent (%)
Education			
	Diploma Degree	11	11%
	Bachelor Degree	33	33%
	Master Degree	47	47%
	PhD	9	9%
	Total	100	100%

*Table 4.3: Education Level of Respondents*

#### 4.2.4. Dealing with CRM (Experience)

As we see in the table that respondent's dealing with the CRM and their experience; most of the respondents has 10-15 years experience to deal with CRM 36 % and lowest 8% of the respondents have more than 20 years of experiences. The result of the respondent's experience has shown in the table 4.4.

Measure	Item	Respondent (N)	Percent (%)
Status	Below 5 Years	18	18%
	5-10 Years	25	25%
	10-15 Years	36	36
	15-20 Years	13	13
	More than 20 Years	8	8
	Total	100	100%

*Table 4.4: experience of respondents*

#### **4.2.5. Job Category of the Respondents**

In this analysis of job category of respondents, most of the respondents have the managerial post in their organization (56%) and the lowest respondents have the clerical job (9%). The result of the job category of respondents has shown below in the table: 4.5.

Measure	Item	Respondent (N)	Percent (%)
Income	Clerical	9	9%
	Supervisory	25	25%
	Managerial	56	56%
	Senior Management	10	10%
	Total	100	100%

*Table 4.5: Job Category of respondents*

### 4.3 Reliability Analysis

Reliability analysis has been conducted to test the consistency of the variables. In this analysis we also considered the if item deleted. But as we found that all items are reliable even without consider the item deleted.

#### 4.3.1 Reliability Analysis for Information Gathering

We have analyzed the reliability based on the item introduced previously. And alpha values of 0.70 or higher are considered to be acceptable, with 0.60 being acceptable for new scales.

Items were in information gathering variable:



- a. Our CRM collect different information about customers
- b. We have a feedback form to gather information.
- c. The CRM systems can record customers' different information format
- d. We have online survey to gather information about customers

**Table.4.6 Reliability**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.91	0.91	4

**Table: 4.7**

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Information Gathering 1	6.46	4.150	.916	.900	.834
Information Gatherin 2	6.48	4.454	.917	.893	.874
Information Gatering 3	6.40	4.869	.732	.791	.838
Information Gathering 4	6.46	4.130	.781	.802	.810

As we see in the output on table 4.6 it has shown that Cronbach's Alpha is 0.91 which indicates the internal ccontingency of the information gathering variable items in CRM.

### 4.3.2 Reliability Analysis for Information Processing

The items for the information processing are below. To test the reliability of information processing these items were include.

- a. We provide easy billing process
- b. we categorize information about customers
- c. We have database to keep information about customers
- d. We update customers information on time

**Table 4.8**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.822	.835	4

**Table 4.9**

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Information Processing 1	6.52	3.383	.818	.733	.678
Information Processing 2	6.54	3.503	.803	.716	.690
Information Processing 3	6.43	3.581	.514	.439	.829
Information Processing 4	6.28	3.981	.458	.369	.843

As we see in the table that Cronbach's Alpha is 0.82 which means that it is more than the minimum accepted level. So information process items are reliable to continue the analysis.

#### 4.3.3 Reliability analysis for Information Management

Next variable was to test the reliability was information management. The items were as follows:

- a. Customers' complaints are promptly attended
- b. We update customer's information in our website
- c. The company analyses customer information stored in database.
- d. Customers information is secured

**Table 4.10**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.762	.773	4

**Table 4.11**

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Information Management 1	6.45	2.896	.722	.808	.673
Information Management 2	6.42	3.559	.582	.408	.751
Information Management 3	6.44	4.067	.360	.358	.839
Information Management 4	6.40	2.424	.783	.801	.634

Reliability result was in the item information management was  $\alpha = 0.762$ . It indicates that customer information quality items are reliable. So that to continue the analysis this variable can be continued as the result shown that all the items are reliable in this variable.

#### **4.3.4 Reliability Customer Loyalty**

In the questionnaire items were for the variable customer loyalty was as follows:

- a. Would you say customers has the positive attitude toward your organization
- b. Customers Provide positive feedback to us
- c. Number of customers increasing in my organization
- d. Overall customers are loyal to my organization

**Table 4.12**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.924	.926	4

**Table 4.13**

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Customer Loyalty1	4.58	3.034	.900	.857	.917
Customer Loyalty 2	4.57	2.955	.914	.867	.912
Customer Loyalty 3	4.53	2.898	.824	.773	.941
Customer Loyalty 4	4.53	2.979	.835	.780	.936

Cronbach's Alpha for customer Loyalty is 0.92. it means that the items in the customer loyalty were consistent as the minimum accepted value is 0.70.

#### 4.3.5 Reliability Customer Retention

Customer retention items were included to test reliability are as below.

- a. Customer care service show keen interest in knowing customer preferences.
- b. We have a strong desire to maintain a valued relationship with customers.
- c. Our customer care department effectively communicates with customers.
- d. Customer is given due importance in the organization.

**Table 4.14**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.865	4

**Table 4.15**

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Customer Retention 1	5.10	1.465	.699	.586	.793
Customer Retention 2	4.99	1.444	.724	.568	.783
Customer Retention 3	5.21	1.501	.575	.380	.847
Customer Retention 4	5.16	1.348	.726	.540	.780

Table 4.14 and 4.15 we can see that the Cronbach's Alpha for customer retention items is 0.86 which more than 0.70. it indicates that the items of customer retention items are consistent internally. There all the values are lower than if items deleted so we considered the Cronbach's Alpha.

#### 4.3.6 Reliability Firm Performance

Firm performance is important for implementing the CRM in an organization. So that the firm performance items have been analyzed. To test the reliability for firm performance the items are listed here:

- a. We provide more effective service to customers
- b. After implement CRM we have meet our goals easily
- c. My organization fulfils its promises to customers
- d. Over all we improve our performance

**Table: 4.16**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.836	.841	4

**Table 4.17**

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Firm Performance1	5.21	1.723	.714	.534	.872
Firm Performace 2	5.13	1.791	.754	.586	.860
Firm Performance 3	5.20	1.576	.780	.637	.847
Firm Performance 4	5.25	1.523	.788	.659	.845

Table 4.16 and 4.17 has shown that firm performance has Cronbach's Alpha value 0.84 which is is more than minimum value of 0.70. so that the consistency of the firm performance items are accepted.



#### 4.4 Correlation analysis

	Information Gathering	Information Process	Information Management	Customer Loyalty	Customer Retention	Firm Performance
Information Gathering	1	0.126	0.144	0.583(**)	0.481(**)	0.345(*)
Information processing	0.126	1	0.612(**)	0.354(*)	0.360(*)	0.333(*)
Information Management	0.144	0.612(**)	1	.235	0.289(*)	0.438(**)
Customer Loyalty	0.583(**)	0.354(*)	0.235	1	0.775(**)	.665(**)
Customer Retention	0.481(**)	0.360(*)	0.289(*)	0.775(**)	1	.466(**)
Firm Performance	0.345(*)	0.333(*)	0.438(**)	0.665(**)	0.466(**)	1

**Table 4.18: Correlation Analysis**

From the Pearson correlation Analysis we have found that information gathering and firm performance is correlated (0.35) each other at the 0.05 significant levels. Information processing and firm performance has a correlation (0.33) at the 0.05 significant levels. Information management and firm performance correlated (0.04) at the 0.01 significant level. Customer loyalty and firm performance correlated (0.67) at 0.01 significant levels and customer retention and firm performance is correlated (0.47) at significant levels 0.01 as well. From this we can conclude that independent variables are correlated to the dependent variables. Means that

information gathering, information processing, information management, customer loyalty and customer retention has the positive impact on firm performance.

#### 4.5 Descriptive Analysis of the Variable

##### 4.5.1 Information Gathering Variables

**Table: 4.19**

No	Information Gathering	Response	Mean	Frequency	
				<i>Absolute</i>	<i>Percentage</i>
1	Our CRM collect different information about customers	Strongly Agree	2.14	17	17%
		Agree		70	70%
		Neutral		3	3%
		Disagree		8	8%
		Strongly Disagree		2	2%
2	We have a feedback form to gather information.	Strongly Agree	2.12	24	24%
		Agree		63	63%
		Neutral		3	3%
		Disagree		4	4%

		Strongly Disagree		6	6%
3	The CRM systems can record customers' different information format	Strongly Agree	2.20	36	36%
		Agree		54	54%
		Neutral		10	10%
		Disagree		-	-
		Strongly Disagree			
4	We have online survey to gather information about customers	Strongly Agree	2.14	16	16%
		Agree		67	67%
		Neutral		6	6%
		Disagree		9	9%
		Strongly Disagree		2	2%

From the result of descriptive analysis of information gathering variable 70% of the respondents were agreed that the CRM collect different information about customers. 63% respondents were response that they are agreed on they have feedback form to gather information. 54% respondents gave their opinion that The CRM systems can record customers' different information format. 67% respondents agreed that they have online survey to gather information about customers in their firm.

#### 4.5.2 Information Processing Variable

Table 4.20

No	Information Processing	Response	Mean	Frequency	
				<i>Absolute</i>	<i>Percentage</i>
1	We provide easy billing process	Strongly Agree	2.07	23	23%
		Agree		54	54%
		Neutral		17	17%
		Disagree		6	6%
		Strongly Disagree			
2	we categorize information about customers	Strongly Agree	2.05	23	23%
		Agree		63	63%
		Neutral		6	6%
		Disagree		8	8%
		Strongly Disagree			
3	We have database to keep information about customers	Strongly Agree	2.16	26	26%
		Agree		49	49%
		Neutral		16	16%
		Disagree			

		Strongly Disagree		9	9%
4	We update customers information on time	Strongly Agree Agree Neutral Disagree Strongly Disagree	2.31	23 53 10 14	23% 53% 10% 14%

Information processing variable 54% of the respondents were agreed that their company provide easy billing process. 63% respondents were response that they are agreed on they categorize information about customers. 49% respondents gave their opinion that they have database to keep information about customers. And 53% respondents answered the questions and they were agreed that they update customers information on time.

### 4.5.3 Information Management Variable

**Table 4.20**

No	Information Management	Response	Mean	Frequency	
				<i>Absolute</i>	<i>Percentage</i>
1	Customers' complaints are promptly attended	Strongly Agree	1.75	34	34%
		Agree		61	61%
		Neutral		1	1%
		Disagree		4	4%
		Strongly Disagree			
2	We update customer's information in our website	Strongly Agree	1.70	35	35%
		Agree		61	61%
		Neutral		3	3%
		Disagree		1	1%
		Strongly Disagree			
3	The company analyses customer information stored in database.	Strongly Agree	1.76	37	37%
		Agree		52	52%
		Neutral		9	9%
		Disagree		2	2%
		Strongly Disagree			

4	Customers information is secured	Strongly Agree	1.81	34	34%
		Agree		53	53%
		Neutral		11	11%
		Disagree		2	2%
		Strongly Disagree			

As the result of descriptive analysis of information management variable 61% of the respondents were agreed that customers' complaints are promptly attended. 61% respondents were response that they are agreed on that they update customer's information in our website. 52% respondents gave their opinion that the company analyses customer information stored in database. And 53% respondents agreed that customers information is secured.

#### 4.5.4 Customer Loyalty Variable

Table 4.21

No	Customer Loyalty:	Response	Mean	Frequency	
				<i>Absolute</i>	<i>Percentage</i>
1	Would you say customers has the positive attitude toward your organization	Strongly Agree	1.42	61	61%
		Agree		36	36%
		Neutral		3	35%
		Disagree			
		Strongly Disagree			
2	Customers Provide positive feedback to us	Strongly Agree	1.37	66	66%
		Agree		31	31%
		Neutral		3	3%
		Disagree			
		Strongly Disagree			
3	Number of customers increasing in my organization	Strongly Agree	1.42	64	64%
		Agree		32	32%
		Neutral		3	3%
		Disagree			
		Strongly Disagree		1	1%



4	Overall customers are loyal to my organization	Strongly Agree	1.34	70	70%
		Agree		26	26%
		Neutral		4	4%
		Disagree			
		Strongly Disagree			

Descriptive analysis of customer loyalty variable 61% of the respondents was strongly agreed that customers have the positive attitude toward your organization. 66% respondents were response that they are strongly agreed on that customers provide positive feedback to us. 64% respondents gave their opinion that Number of customers increasing in my organization. And 70% respondents said that overall customers are loyal to their organization.

#### 4.5.5 Customer Retention Variable

**Table 4.22**

No	Customer Retention	Response	Mean	Frequency	
				<i>Absolute</i>	<i>Percentage</i>
1	Customer care service show keen interest in knowing customer preferences.	Strongly Agree	1.71	28	28%
		Agree		72	72%
		Neutral			
		Disagree			
		Strongly Disagree			
2	We have a strong desire to maintain a valued relationship with customers.	Strongly Agree	1.83	20	20%
		Agree		77	77%
		Neutral		3	3%
		Disagree			
		Strongly Disagree			
3	Our customer care department effectively communicate with customers.	Strongly Agree	1.61	39	39%
		Agree		61	61%
		Neutral			
		Disagree			
		Strongly Disagree			

4	Customer is given due importance in the organization.	Strongly Agree	1.66	35	35%
		Agree		64	64%
		Neutral		1	1%
		Disagree			
		Strongly Disagree			

Descriptive analysis of customer retention variable 72% of the respondents was strongly agreed that customer care service show keen interest in knowing customer preferences. 77% respondents were response that they are strongly agreed on they have a strong desire to maintain a valued relationship with customers. 61% respondents gave their opinion that and was strongly agreed that our customer care department effectively communicate with customers. And 64% respondents answered the questions and they were agreed that customer is given due importance in the organization.

#### 4.5.6 Firm Performance Variable

Table 4.23

No	Firm Performance	Response	Mean	Frequency	
				<i>Absolute</i>	<i>Percentage</i>
1	We provide more effective service to customers	Strongly Agree	1.62	39	39
		Agree		60	60
		Neutral		1	1
		Disagree			
		Strongly Disagree			
2	After implement CRM we have meet our goals easily	Strongly Agree	1.74	27	27
		Agree		72	72
		Neutral		1	1
		Disagree			
		Strongly Disagree			
3	My organization fulfils its promises to customers	Strongly Agree	1.67	36	36
		Agree		61	61
		Neutral		3	3
		Disagree			
		Strongly Disagree			

4	Over all we improve our performance	Strongly Agree	1.60	43	43
		Agree		54	54
		Neutral		3	3
		Disagree			
		Strongly Disagree			

As the result of descriptive analysis of firm performance variable 60% of the respondents were agreed that they provide more effective service to customers. 72% respondents were response that they are agreed on after implement CRM we have meet our goals easily. 61% of the respondents agreed upon that the organization fulfils its promises to customers. And 54% respondents answered that over all they improve the organization's performance.

#### 4.6 Regression Analysis

In this section we have analyze the regression to prove the hypothesis that we have introduce in the chapter two. Hypothesis those introduced in chapter two are:

**H1:** information gathering is related to the firm performance for telecommunication firms.

**H2:** information process positively related to the firm performance telecommunication firms

**H3:** information management and firm performance is positively related in telecommunication firms.

**H4:** customer loyalty is positively related to the firm performance in telecommunication industry in Libya.

**H5:** Customer retention in CRM is related to the firm performance in telecommunication firms

#### 4.6.1 Information Gathering and Firm Performance

**Result of the Regression analysis for information gathering shown in the table below**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.117 <sup>a</sup>	.073	.076	.42007	.074	3.352	1	98	.000	1.602

a. Predictors: (Constant), Information Gathering

b. Dependent Variable: firm performance

**ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.239	1	.239	3.352	.000 <sup>a</sup>
Residual	17.293	98	.176		
Total	17.532	99			

a. Predictors: (Constant), information gathering

b. Dependent Variable: firm performance

**Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.885	.138		13.682	.000	1.612	2.159
Information gathering	-.071	.061	-.117	-1.163	.000	-.192	.050

a. Dependent Variable: firm performance

As we found that relationship between information gathering and firm performance the significant value is  $\alpha = 0.05$ . in this result  $R^2 = 0.073$  meaning that 7.4% of the cases will be correctly predicted by the regression equation and 92.6% will not. The result revealed that information gathering,  $F$  change = 3.352 and  $p = 0.00 < 0.05$  is positively related to the firm performance. On this basis conclude that there is a positive relationship between information gathering and firm performance.

#### 4.6.2 Regression for Information Processing and Firm Performance

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.103 <sup>a</sup>	.081	.089	.42072	.081	3.048	1	98	.000	1.531

a. Predictors: (Constant), information processing

b. Dependent Variable: firm performance

#### ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.185	1	.185	3.048	.000 <sup>a</sup>
Residual	17.346	98	.177		
Total	17.532	99			

a. Predictors: (Constant), information processing

b. Dependent Variable: firm performance

#### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.581	.154		10.292	.000	1.276	1.886
Information processing	.070	.069	.103	1.024	.000	-.066	.207

a. Dependent Variable: firm performance

After that the second regression analysis between information processing and firm performance the significant value is  $\alpha = 0.05$ . In this result  $R^2 = 0.081$  meaning that 8.1% of the cases will be correctly predicted by the regression equation and 91.9% will not. The result revealed that information processing,  $F_{\text{change}} = 3.048$  and  $p = 0.000 < 0.05$  is positively related to the firm performance. On this basis conclude that there is a positive relationship between firm performance and information processing.



### 4.6.3 Regression for Information Management and Firm Performance

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.075 <sup>a</sup>	.079	.086	.42296	.077	4.003	1	98	.000	1.525

a. Predictors: (Constant), information management

b. Dependent Variable: firm performance

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	1	.000	4.003	.000 <sup>a</sup>
	Residual	17.531	98	.179		
	Total	17.532	99			

a. Predictors: (Constant), information management

b. Dependent Variable: firm performance

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.741	.163		10.700	.000	1.418	2.063
Information management	-.004	.073	-.005	-.051	.000	-.149	.142

a. Dependent Variable: firm performance

To test the relationship between information management and firm performance the significant value is  $\alpha = 0.05$ . In this result  $R^2 = 0.079$  meaning that 7.9% of the cases will be correctly predicted by the regression equation and 92.1% will not. The result revealed that information management,  $F \text{ change} = 4.003$  and  $p = 0.000 < 0.05$  is positively related to the firm performance. On this basis conclude that there is a positive relationship between information management and firm performance.

#### 4.6.4 Regression for Customer loyalty and Firm Performance

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.070 <sup>a</sup>	.064	.083	.42193	.069	4.481	1	98	.000	1.503

a. Predictors: (Constant), Customer loyalty

b. Dependent Variable: firm performance

**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.086	1	.086	4.481	.000 <sup>a</sup>
	Residual	17.446	98	.178		
	Total	17.532	99			

a. Predictors: (Constant), Customer loyalty

b. Dependent Variable: firm performance

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.811	.121		14.999	.000	1.571	2.051
Customer loyalty	.052	.075	-.070	-.694	.000	-.200	.096

a. Dependent Variable: firm performance

To test the relationship between Customer loyalty and firm performance the significant value is  $\alpha = 0.05$ . In this result  $R^2 = 0.064$  meaning that 6.4% of the cases will be correctly predicted by the regression equation and 93.6% will not. The result revealed Customer loyalty,  $F$  change = 4.481 and  $p = 0.000 < 0.05$  is positively related to the firm performance. On this basis conclude that there is a positive relationship between Customer loyalty and firm performance.

#### 4.6.5 Regression for Customer Retention and Firm Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.214 <sup>a</sup>	.046	.036	.41312	.046	4.726	1	98	.000	1.561

a. Predictors: (Constant), Customer retention

b. Dependent Variable: Firm performance

# ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.807	1	.807	4.726	.000 <sup>a</sup>
Residual	16.725	98	.171		
Total	17.532	99			

a. Predictors: (Constant), Customer retention

b. Dependent Variable: firm performance

# Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	1.338	.186		7.184	.000	.968	1.707		
Customer Retention	.232	.106	.214	2.174	.000	.020	.443	1.000	1.000

a. Dependent Variable: effectiveness

Last regression between Customer retention and firm performance the significant value is  $a = 0.05$ . In this result  $R^2 = 0.046$  meaning that 4.6% of the cases will be correctly predicted by the regression equation and 93.1% will not. The result revealed Customer retention, F change = 4.726 and  $p = 0.000 < 0.05$  is positively related to the firm performance. On this basis conclude that there is a positive relationship between Customer retention and firm performance.

## **Chapter five**

### **Discussion and Conclusion**

Customer relationship management (CRM) has generally been assumed to create a competitive edge for an organization, as well as to have a positive impact on organizational performance (Sin et al., 2004) in telecommunication industry in Libya. In this study we have found that information gathering, information processing, information management, customer loyalty, and customer retention has a positive impact on firm performance. Based on the findings we can conclude that it is important to collect the information from the customer to implement CRM and get higher performance. Our findings validate the long-held belief that CRM is a critical success factor for business performance. Firms wishing to improve their relationships with customers need constantly to monitor their behavior and internal processes.

For marketing practitioners, our study emphasizes that CRM factors such as information gathering, information processing, information management, customer loyalty and customer retention will superior CRM performance be realized (Day, 2003). Marketing practitioners should convince top management of the paramount importance of maintaining a genuine key customer focus to make the firm become indispensable to customers (Vandermerwe, 2004). Switching costs then become significant to customers (Burnham et al., 2003) so that customer loyalty is a likely outcome. With top management support on maintaining an overwhelming customer focus (Hart, 1999), internal processes and culture should be customer-centric so that customer relationships can be strengthened (Lavender, 2004). Marketing practitioners should help spread the virtues of being truly customer-centric via internal marketing efforts. Frontline

employees should be empowered so that they can have latitude over their service activities and abilities to address specific customer needs to act in a fully customer-centric manner (Hart et al., 1990).

In this study the findings has supported the framework. In finding it showed that information gathering and firm performance in Libyan telecommunication industries has a positive correlation and in regression analysis it has support this relationship meaning that hypothesis has been accepted. So we can conclude that information gathering in our frame has positive impact on Libyan telecommunication industries. Information processing and firm performance in telecommunication industries in Libya also positively related as found by the analysis. So it is important to the Libyan telecommunication industries to process the customer information. Well information management satisfies customers more and can get the feedback easily from customers. In our study it has been found that firm performance positively related to the information management in telecommunication industry in Libya. If customers are loyal then firm profitability will increase. In this manner in our framework customer loyalty and firm performance has showed the relationship. This has been found in analysis that there are positive relationship between customer loyalty and firm performance. To keep the customers is one of the factor of customer relationship management which has a great impact of firm performance. In our study we analyzed the relationship between customer retention and firm performance and also in our framework. From findings we have found that customer retention and firm performance is positively related. So as conclusion CRM factors Information gathering, information processing, information management, customer loyalty and customer retention has a positive impact on firm performance in telecommunication industry in Libya.

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**Appendix A. Questionnaire and Cover Letter**

**Questionnaire**



**CRM FACTOR THAT AFFECT FIRM PERFORMANCE IN  
TELECOMMUNICATION INDUSTRY IN LIBYA**

Ridowan Mohamed Ahmed

College of Business  
Universiti Utara Malaysia  
06010 UUM Sintok - KEDAH

11 March 2010

Dear Respondent,

**CRM FACTORS THAT AFFECT THE FIRM PERFORMANCE IN  
TELECOMMUNICATION INDUSTRY IN LIBYA**

I am a Master of Science (Management) student, Universiti Utara Malaysia. Currently, I am conducting a study with the above-mentioned title as a partial requirement for the master's degree.

Your honest opinion is sought to ensure the success of the study. All information provided will be kept strictly confidential and used for academic purpose only. In this questionnaire, I would like to answer the question. You would probably take about 20 minutes to answer the questionnaire. Please return the questionnaire to all my friends who already distributed it.

Should you have any queries, please do not hesitate to contact me. Thank you very much for your time and kind support.

Sincerely,

Ridowan Mohamed Ahmed

## Part A

### Demographic Profile

Please fill in the answer, which most describe you at the space beside the question.

1. What is your gender?

- a. Male      b. Female

2. What is your age? :

- a. Less than 25   b. 25-30      c. 30-35      d. 35-40      e. Above 35

3. What is your highest education level?

a. Diploma

b. Bachelor

c. Master

d. PhD

4. How long are you dealing CRM?

a. less than 5 years

b. 5-10 years

c. 10-15 years

d. 15-20 years

e. above 20 years

### Part: B

Please read the description given. Then rate the frequency by circle the corresponding next to the statement. Use the following scale:

1 = Strongly Agree

2 = Agree

3 = Neutral

4 = Disagree

5 = Strongly Disagree

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	<b>Information gathering</b>					
a	Our CRM collect different information about customers					
b	We have a feedback form to gather information.					
c	The CRM systems can record customers' different information format					
d	We have online survey to gather information about customers					
2	<b>Information Processing</b>					
a	We provide easy billing process					
b	we categorize information about customers					
c	We have database to keep information about customers					
d	We update customers information on time					
3	<b>Information Management</b>					
a	Customers' complaints are promptly attended					
b	We update customer's information in our website					
c	The company analyses customer information stored in database.					

d	Customers information is secured					
4	<b>Customer Loyalty</b>					
a	Would you say customers has the positive attitude toward your organization					
b	Customers Provide positive feedback to us					
c	Number of customers increasing in my organization					
d	Overall customers are loyal to my organization					
5	<b>Customer Retention</b>					
a	Customer care service show keen interest in knowing customer preferences.					
b	We have a strong desire to maintain a valued relationship with customers.					
c	Our customer care department effectively communicate with customers.					
d	Customer is given due importance in the organization.					
	<b>Firm Performance</b>					
	We provide more effective service to customers					
	After implement CRM we have meet our goals easily					
	My organization fulfils its promises to customers					
	Over all we improve our performance					