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**The Effect of Customer Relationship Management (CRM) Concept  
Adoption on Customer Satisfaction – Customers Perspective**

The Case of Coastal Municipalities Water Utility CMWU- Rafah Branch

**by**

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أعوذ بالله من الشيطان الرجيم

" قل إن صلاتي و نسكي و محياي و مماتي لله رب العالمين ، لا شريك له و بذلك أمرت و أنا أول المسلمين "

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### نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة عمادة الدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحث/ زيدان عبد زيدان دهمان لنيل درجة الماجستير في كلية للتجارة/ قسم إدارة الأعمال وموضوعها:

#### The Effect of CRM Concept adoption Customer Satisfaction- Customers Perspective The Case of coastal Municipalities Water Utility CMWU- Rafah Branch

وبعد المناقشة العلنية التي تمت اليوم السبت 07 ربيع الثاني 1432هـ، الموافق 2011/03/12م

الساعة الواحدة ظهراً، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

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واللجنة إذ تمنحه هذه الدرجة فإنها توصيه بتقوى الله ولزوم طاعته وأن يسخر علمه في خدمة دينه ووطنه.

والله ولي التوفيق ،،،

عميد الدراسات العليا

د. زياد إبراهيم مكّاد

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## DEDICATION

I dedicate my study to my Father, to my Grandmother & to my Brother Motaz - God's mercy be upon them, for which their memories give me the energy to continue.

I dedicate my study to my Mother for whom words is not enough to express my gratitude's.

I dedicate my study to my wife, my daughter Elena, and my sons Yamen and Momen.

I dedicate my study to who encourages me to accomplish my study, all my family members, my friends, and my colleagues in costal municipalities water utility CMWU.

Finally I dedicate my study to my beloved Palestine and all the martyrs who sacrificed for the sake of independence and freedom.

---

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## LIST OF ABBREVIATIONS

CA	Customer Acquisition
CC	Committed Customers
CCS	Customer Complaints Structure
CL	Customer Loss
CMWU	Coastal municipalities water utility
CR	Customer Retention
CRM	Customer Relationship Management
CS	Customer Satisfaction
CsRM	Citizen Relationship Management
IT	Information technology
PCC	Partially Committed Customers
PWA	Palestinian Water Authority
RM	Relationship Marketing
RS	Relationship Share
UCC	Uncommitted Customers

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## **ABSTRACT**

This study aims to investigate the effect of applying the concept of customer relationship management (CRM) on customer's acquisition, satisfaction, retention and decreasing customer's loss in the coastal municipalities water utility (CMWU) from customer's perspectives. The city of Rafah was selected from 14 municipalities that CMWU administrates.

Delivery and collection questionnaire was used, and responses from 393 customers in the city of Rafah were retrieved using stratified sampling. The customers were classified according to their commitment to pay their monthly water bills, and they were categorized into 3 groups, the committed customers' CC, the partially committed customers PCC and the uncommitted customers UCC. The study found that adopting CRM concept in the CMWU was significantly correlated in positive direction with reaching customer acquisition, satisfaction, retention and decreasing customer loss. Moreover, the study reveals that CRM has effect on decreasing customer loss more than the other tested factors. The proportional mean for the customer loss was 82.24%, yet the mean for the other factors together was around 76.00%.

The study recommend that the CMWU should concentrate more on developing the provided services , dealing with customers' complaints, and queries in efficient and proper ways ended with taking customer feedback and involving the customers in any future strategies, and establish continues communication with the customers using different communication channels, in order to reach the ultimate goal of CRM adoption.

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ملخص الدراسة باللغة العربية

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# **CHAPTER 1: INTRODUCTION**

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## **1.1 Introduction**

This chapter start with research background to give an idea about the area of the thesis to the reader. This will be followed by the problem discussion, overall purpose of our study from which the specific research questions will be formulated, main hypothesis, objectives, in addition to illustration for the significant of the study. The chapter will ends with demarcation and dispositions of the thesis along with chapters summary.

## **1.2 Background**

For any organization, either it's a public sector; private sector or semi public, there is a need to understand what kind of service or products it offers, and for whom. The traditional marketing approach concentrates on the first term (the kind of services or products). Questions such as "whether the products are relevant to the customers?" "are the customers have the willingness to pay the amount of money stack on the products?", "are the products or services meets the customer expectation?", "what's the value created to the customers?" as these have not come to the minds of producers or business managers. Over time there has been a gradual move in marketing thoughts and practices , from product centric approach to customer centric approach, and from concentrating on selling as much products as possible to acquiring , keeping , retaining and delighting as many customers as possible. This change in marketing prospective is taking place because of the high competition and the numerous alternatives provided to the customers. "The globally competitive market place provides today's customers with choices never before imaginable by previous generations" (Hoots, 2005). Moreover, the customers in the new marketing approach moved toward the top of the pyramid with new terminologies like "customer is the king" and "customer always right" are intensively used by managers in today's business environment. Hence, "the goal of every enterprise, once it strips away all the activities that keep everybody busy every day, is simply to get, keep and grow customers. Whether a business focuses its efforts on product innovation, operational efficiency and low price or customer's intimacy, that firm must have customers or the enterprise isn't a business". (Peppers & Roggers 2004).

"As more and more enterprises realize the importance of becoming customer-centric in today's competitive economy, they embrace Customer Relationship

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Management (CRM) as core business strategy” (Wu, 2008). Where CRM is away of “developing a comprehensive picture of customers needs, expectation and behaviors and managing those factors to affect business performance” (Hoots 2005). Or it is “about managing customer knowledge to better understanding and serving them”.(Rahimi 2008). It is also involves “continues use of refined information about current and potential customers in order to anticipate and respond to their needs and draws on a combination of business processes and information technology IT to discover knowledge about the customers and answer questions such as “who are the customers?”, “what do they do?”,and “what are they like?”. With such effective use of information and communication technology, organization can offer their customers a variety of products, lower prices and personalized services, at the same time in order to market effectively to the individual customers, companies gather information from both internal and external sources and use it to provide a unified view or profile of the customers for target marketing purposes” (Karakostas, et al., 2004).

For granted, these information will help the organization to better understand its customers and tailor the services or products to meet their expectations and deliver high customer values.

Referring to the above definitions, most CRM initiatives were for the private sector. The scope of this research shall discuss the possibility of applying CRM in a semi public enterprise working in Gaza Strip – Palestine the “Coastal Municipalities water Utility CMWU”. CMWU is a Semi – Public entity financially independent, responsible for the water supply services, wastewater treatment and disposal and storm water collection systems. The CMWU is a consolidation of the Water Services of 25 Municipalities of Gaza five Governorates, and it seeks to become the only provider of water and sanitation services in all Gaza Strip localities.

In the case of the CMWU, the definition of CRM may be slightly different; since the CMWU is considers being the sole services provider for water and sanitation services and no competitors are apparent in the future horizon. The definition of CRM here could be adapted to “improve the level of services, optimizing the cost, and deal with customers as partners”. The problem in applying this concept is that the customers may resist such approach from semi public organization delivers public services. This

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approach may direct the CMWU to apply much more creative ideas to ensure that the adoption of CRM concept will ensure its success in building long lasting relation with its customers, which consequently leads to effective customers' acquisition, satisfaction, retention and eventually decreases customer's loss.

Traditionally, the marketing strategies start with reaching customer acquisition first and then working on achieving customer satisfaction, retention and decreasing customer loss. The case of CMWU is different; hence, the customers have no alternative but to take the water services from CMWU. In other word CMWU already acquire all the customers, therefore the next step is to reach customer satisfaction. Reaching customer satisfaction will lead to customer retention and decreasing customer loss. Moreover, the concept of customer's acquisitions, satisfactions, retentions and customer's loss in this case is also different from the private sector definition. Customer acquisitions within the CMWU case means "turning the customer with no willingness to pay the water bills to a committed customer", customers satisfaction could be redefined as "customers paying the bills and being satisfied from the service", and customer retentions "Customers continuously and with high level of commitment paying the bills and being satisfied from the services", and finally customer loss means "customer refuses or stops paying water bills". These terms shall be used in this research according to the definitions previously specified.

Based on these definitions the research seeks to investigate the possibility of achieving the market objectives in the CMWU using the concept of customer relationship management, in hope that this concept will help the CMWU to build a unique experience with its customers and change their mentality regarding paying the water bills in a monthly basis.

### **1.3 Research Problem**

Water & sanitation services in Gaza Strip may not be perfect in appliance of CRM, or there is a doubt about the effectiveness of CRM and its contribution to long term success. The problem addressed by this research is,

To what extent the adoption of CRM concept, could affect the CMWU in terms of enhancing customer acquisitions, satisfaction, retention, and decreasing customer loss?



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## 1.4 Study Hypothesis

- 1) **Hypothesis 1:** The adoption of CRM concept in CMWU will have a positive effect on customers satisfaction at 5% level of significance.
- 2) **Hypothesis 2:** Adopting CRM concept in CMWU will have a positive effect on Customer acquisitions at 5% level of significance.
- 3) **Hypothesis 3:** Adopting CRM concept in CMWU will have a positive effect on Customer Retention at 5% level of significance.
- 4) **Hypothesis 4:** Adopting CRM concept in CMWU will have a negative effect on customer loss at 5% level of significance.
- 5) **Hypothesis 5:** There is a difference, at 5% level of significance, in customer's response to CRM concept adoption in CMWU due to personal traits (age, educational attainment and standard of living).

## 1.5 The study variables

### 1.5.1 Independent variables:

- 1) CRM Concept adoption.

### 1.5.2 Dependent variables:

- 1) Customer Satisfaction
- 2) Customer Acquisition
- 3) Customer retention
- 4) Customer loss



Figure 1.1: The Study Variables. (conceptualized by the researcher)

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## **1.6 Research Objectives**

This research seeks to address the following objectives:

- Stating the importance of CRM concept adoption for CMWU.
- Explaining how CRM concept adoption could benefit CMWU in reaching customer satisfaction
- Addressing the influence of CRM concept adoption on customer acquisition, retention, and customer loss.
- Proposing suitable recommendations for improving customer partnership based on the study results.

## **1.7 Importance of the Study**

Most of CRM initiatives were tested in the private sector as stated before, conducting CRM study in a semi public organization providing public services “water and sanitation” is believed to be a pioneer and important approach. The research results will provide assistance to the CMWU management to better satisfy its customers, respond to their needs efficiently and on timely manners. Further, adopting CRM in the CMWU would be the platform for building a good partnership with customers which consequently leads to services development and improvement. Moreover, other public sector enterprises could benefit from the study ex.(municipalities, Ministry of Transportation, post offices --- etc) ; as this study would highlight the importance of building a good relation with customers which could result in performance improvements and better decision making process.

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## **CHAPTER 2: LITERATURE REVIEW AND PERVIOUS STUDIES**

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## 2.1 Introduction

The goal of this research is not just to acquaint the reader with the techniques and technology of customer relationship management CRM. The more ambitious goal of this research is to help the readers understand the essence of customer relationship management as necessary and important elements of managing every successful enterprise. Hence, "a firm most valuable asset is its customers, and given the new and unfolding technological capabilities to recognize, measure, and manage relationship with each of those customers in order to thrive, a firm must focus in deliberately increasing the value of the customer base" (Peppers & Rogers 2004). Therefore, "the competitive advantage for any enterprise can be gained only by leveraging knowledge of customers expectations, preferences and behavior, which involve creating an ongoing dialog with customers and exploiting the information and insight obtained at every customers touch points" (Payne 2004). It's worth mentioning that, building the right relation with customers is not a fleeting assignment of the marketing department rather than it's an ongoing process which required the involvement of the entire organization. This is true for nonprofit (when the customers may be donors or volunteers), as well as for-profit, large or small, public or as well as for private enterprise" (Peppers 2004).

The case can be more difficult when talking about adopting the concept of CRM and the new definition of Relationship marketing in the public sector. Hence, the public sector has different objectives and faces different challenges regarding customer management. Adding to this, the fact that, the public sector organization can't choose the people they serve, they oblique to serve all the customers knocking their doors. The segmentation and targeting process which considers essential ingredients for the private sector companies marketing strategy are not valid. Adopting CRM concept on the public sector shall be measured through this research when exploiting its effect on the customers of coastal municipalities water utility CMWU. Linking the working area of CMWU with the new and developing practice of CRM, in order to measure the effect of adopting the concept on customer satisfaction, acquisition, retention and decreasing customer's loss, will be the main goal of this study.

This chapter discusses the concepts of relationship marketing and CRM concept as a tool to support the new marketing approach. The use of CRM in the public sector

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would be considered and its effects on customer satisfaction, acquisition, retention and decreasing customer's loss would be investigated in the contents of water services utility in Gaza Strip. Finally, the chapter would review of the finding of related studies.

## **2.2 Rise of relationship marketing**

The R in CRM stands for relationship. But what do we really mean by the expression relationship? What is a relationship between a customer and suppliers?. Thinking in terms of a dyadic relationship, that is a relationship between two parties, we can define a relationship as follows:

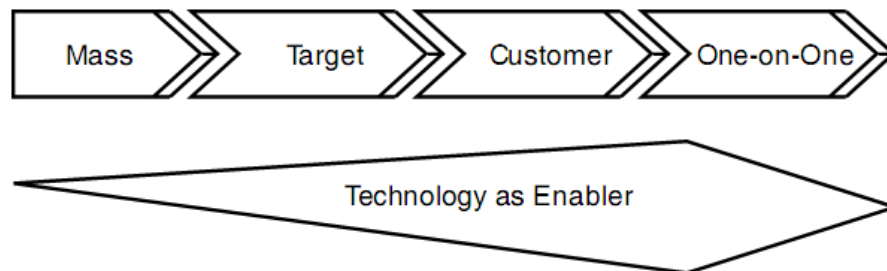
"A Relationship is composed of a series of episodes between dyadic parties over time". Each episode in turn is composed of a series of interactions. Episode are time bound (they have a beginning and an end) and nameable. Episodes such making a purchase , enquiring about a product , putting together a quotation, making a sales call, dealing with a complaints and playing a round of golf make up a relationship. Business relationships are made up of task and social episodes. Task episodes are focused on the business side of the relationship, whereas social episodes are not. Within each episode, each participant will act towards, and interact with, the other. The content of each episode is a range of communicative behaviors including speech, actions and body language. The parties within the dyad may have very different ideas about whether they are in the relationship. Buyers may think they are being tough and transactional. Sellers may feel that they have built a relationship. (Buttle 2004).

The evolution of relationship marketing has been one of the most significant developments in marketing since the 1990'. (Chattananon et al., 2008). RM emerged as a popular new paradigm in the 1980s , this happened , in part , as a result of a shift in focus from customer acquisition to customer retention (Chakravorti 2006). Relationship marketing proposes that closer attention is paid to long term financial growth and other benefits or retained customers, (Heffernan et al., 2008). Although, relationship marketing has been heralded as an effective strategy to attract, maintains and enhances customer relationship (Robert et al., 2003). While transactional marketing tries to make the sale and find new customers (Zineldein et al., 2007), or it's about acquiring customers, rather that retaining them, (Ward et al., 2005). Gronroos (1994) defines relationship marketing as follows: "Marketing is to establish, maintain, and enhance

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relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met. This is achieved by mutual exchange and fulfillment of promises". While, Zinkhan (2002) defines relationship marketing, "as an approach to establish, maintain, and enhance long-term associations with customers and other stakeholders." On the other hand, Copulinsky and Wolf (1990) define relationship marketing from a different perspective with emphasis on the role of the IT as a "process where the main activities are to create a database including existing and potential customers, to approach these customers using differentiated and customer-specific information about them, and to evaluate the life-term value of every single customer relationship and the costs of creating and maintaining them."

Referring to the above definitions, RM can also be called "one-to-one marketing, which shifts the focus of marketing exchange from transactions to relation with individual customers. (Chakravorti 2006) Fig(2.1).



**Figure 2.1: The evolution of Marketing (Sharp 2003).**

The customers in the twentieth century wants to be an individual and wants to be acknowledged as individual by having his or her likes and preferences known and acted upon. Business in every sector need to build individual relationship with customers based on what the customers wants, not on what the business want. Personalized customer communications and special preferences acknowledge that a special relationship exist between a company and each individual customer, this connects one person to another in a positive way, providing an aura of civility and pleasantness for every business experience. It is powerful motivator to repeat this experience again and again. (Sharp 2003).

Therefore, In order to put the concept of relationship marketing into practice, firms need to identify the customers they want to enhance and maintain relationship with, differentiate each customer as to their unique needs and preferences , interact with

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those customers to enhance customers learning and finally customized product and services for each customer. This process of customer relationship management requires information and communication process to be in place, as well as technology and data repositories of customer data. The better and more sophisticated these are the more they will enable relationship. (Chakravorti 2006).

### **2.3 Customer Relationship Management - CRM**

Customer relationship management has attracted the attention of both marketing practitioners and researchers over the last decade. Despite, or maybe due to, the attention drawn to the subject, a clear agreement on what CRM is and especially how CRM should be developed remains lacking. CRM is the values and strategies or relationship marketing with particular emphasis on customer relationships turned into practical application. (Peelen et al., 2006).

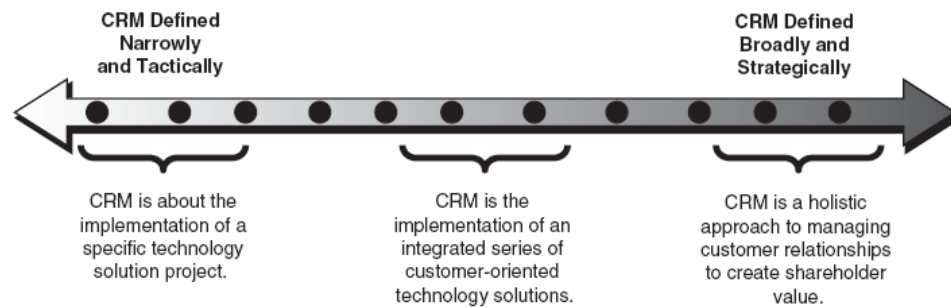
CRM is a strategy view of how to handle customer relationship from a company perspective. “The strategy deals with how to establish developed and increase customer relation from profitability perspective, based upon the individual customer needs and potentials. The basic underlying CRM is that the basis of all marketing and management activities should be the establishment of mutually beneficial partnership relation with customers and other partners in order to become successful and profitable”. (Ghavami et al., 2006).

“CRM is the integration of customer focuses in marketing, sales, logistics, accounting .i.e in all parts of the organization operation and structure. Those are the activities a business performs to identify, qualify, acquire, develop and retain increasingly loyal and profitable customers by delivering the right products or services to the right customer through the right channel at the right time and the right cost” (Johansson & Storm, 2002). CRM can be best describes as an evolution of marketing from product or brand management to customer management. (Peelen 2006).

Before positioning and investigating the components and the business philosophy of CRM. We must first develop our perspective of CRM for the purpose of this research. Hence, several researches have made attempts to define CRM. The definition

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of CRM adopted from different sources ranges from narrowing IT enabling solutions to a broadly and strategically approach to managing customer relationship. Fig(2.2)



**Figure 2.2: The CRM continuum, Payne & Frow 2005**

- "CRM involves using existing customer information to improve company profitability and customer services"( Couldwell 1999).
- "CRM is a management approach that enables organization to identify, attract, and increase retention of profitable customers by managing relationship with them" (Hobby 1999).
- " CRM can be viewed as application of one to one marketing and relationship marketing. Responding to an individual customer one the basis of what the customer says and what else is known about the customers"( Peppers, Rogers, and Dorf 1999).
- "CRM includes numerous aspects, but the basic theme is for the company to become more customers centric. Methods are primarily web-based tools and internet presence"(Gosney and Boehem 2000).
- "CRM comprises the business processes and organization performs to identify, select, acquired, develop, retain and better services customers. (Bondenberg 2001).
- "CRM as those process that address all aspects of identifying customers, creating customer knowledge, building customer relationship and shaping their perception of the organization and its products"( Kotler 2001).



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- " CRM is the technology used to blend sales, marketing, and service information system to build partnership with customers"(Shoemaker 2001).
  - "Defines CRM as enterprise approach to understanding and influencing customer behavior through meaningful communications in order to improve customer acquisition, customer retention, customer loyalty and customer profitability"( Swift 2001).
  - "CRM is a comprehensive strategy and process of acquiring, retaining and partnering with selective customers to create superior value for the company and the customers"( Parvitiyar and Sheth 2001).
  - "CRM is about the development and maintenance of long term mutually relationship with strategically significant customers"( Buttle 2001).
  - "CRM is an enterprise wide mindset, mantra, and set of business process and policies that are designed to acquire, retain and services customers. CRM include the customer facing business process of marketing, sales and customer services" (Greenberg 2002).
  - "CRM is an IT enhanced value process, which identifies, develops, integrates and focuses the various competencies of the firm to the "voice" of the customers in order to deliver long-term superior customer value, at a profit, to well identify existing and potential customer segments." (Starkey 2002)
  - "CRM aligns business processes with customer strategies to build customer loyalty and to increase profits over time." (Reichheld and Schefter 2002)
  - "CRM means obtaining customer information, understanding what different customers are worth, treating different customers differently and improving efficiency" (Newell, 2003).
  - "Customer relationship management is the initiation, enhancement, and maintenance of the mutually beneficial customer and partner long-term

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relationship through business intelligence-generated strategies based on the capture, storing and analyzing of information gathered from all customer and partner touch points and transaction processing system". (Brana 2008).

- “The strategic use of information, process, technology, and people to manage the customer relationship with the company across the whole customer life cycle”.( Kim and Woo, 2008).

In reviewing of the illustrated definitions, we can find that most of definitions concentrate on the terms related to customer's acquisition, retention, satisfaction, profitability and loyalty. As a result, the following can be stated in this regard:

1. CRM is not the target, it's only a tool used to make the entity more customers centric and to develop the concept of relationship marketing.
2. Customer management in the twentieth century is no longer the responsibilities of customer services department only. It's a complimentary process within all various parts of the organization.
3. The customer's data base can be considered as corporate assets. The sufficient use of these assets leads to increase profitability and establish revenue growth.
4. CRM can be used for support management decisions for better segmentation and targeting for the most profitable customers. Moreover, it helps the organization to avoid the unprofitable customers and turn them into competitors.
5. CRM is a comprehensive tool helps the companies build mutual beneficial relationship with its customers.

This research deal with CRM as a business philosophy rather than just a technology.” It is believed that in order to reach a successful CRM implementation, one would need to do much more than just plug in a new technology and assume that it is going to be functional. CRM is not just about call center solutions, direct mail, web pages, or sales force automation, or viewing CRM as an internal activity emphasizing on establishing, maintaining, and enhancing relationships with customers and partners at a profit. ”(Hazobon 2006).

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Therefore, in this study, technology is seen as a supportive tool that facilitates the activities needed to achieve successful customer relationship management implementation

Prior to setting which of the former definitions could be applied for this study, there is a need to understand the nature of CMWU and its unique situation. As indicated in chapter one, CMWU is a semi public enterprise working in Gaza Strip in the field of water and sanitation services. The main goal behind the establishment of the CMWU is to build an independent organization capable of performing the daily services activities and in the same time it can generate sufficient revenue to cover its expenses. Currently, the monthly operational expenses for CMWU's water and wastewater services are covered by international donors (e.g. World Bank, UNICEF). But in order to plan ahead and to ensure the continuity of the provided services, while taking into consideration any emergencies a/o contingencies which can be revealed as result of fund shortage or cut off, CMWU need to enhance its collection efficiency in the areas under its administration. This research will be concentrating in Rafah areas because of the full administration and financial transfer of its employees from Rafah Municipality to CMWU managerial and administration responsibilities. CMWU is now responsible for 140 former municipality employees. The responsibility includes their monthly salaries, health insurance and employee's share in the retirement box. These facts and obligations increase the pressure on CMWU management to secure them and in return to establish more efficient collection system with higher revenues to cover its monthly expenses regarding its operational and managerial aspects.

In reviewing the aforementioned facts, the definition used by (Swift 2001) with slight modification can be used for the purpose of this study.

**“CRM is the enterprise approach to understanding and influencing customer behavior through meaningful communications in order to improve customer satisfaction, customer acquisition, customer retention and decrees customer loss”.**

Modified definition of CRM by the researcher

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### **2.3.1 Why CRM Is Valuable**

The main question remains, is how the substantial effort needed to create the CRM actually pays off? In other words, how does the CRM create value in an organization? In fact, "CRM is not just a technology; it's a philosophy for survival in the customer-centric economy" (Helm, 2002). Successful CRM implementation influences how much customers spend and how loyal they remain. According to Freeland (2003), "CRM is still one of the best strategies for growing revenue and increasing market share, and that CRM offers richer opportunities for developing the customer franchise and increasing brand value than most companies have realized. In fact, for companies that seek to keep customer relationships strong and profitable, acquiring the right mix of CRM processes, workforce management approaches and technologies is critical." (Hazbon 2006)

Xu & Walton (2005), illustrated that, "the motivating factors for companies moving toward CRM technology are to improve customer satisfaction level, to retain existing customers, to improve customer lifetime value, to provide strategic information from the CRM system and to attract new customers". (Zavareh 2008).

The real value to a company lies in the value they create for their customers and in the value the customers deliver back to the company. Accordingly, it is important to mark that the value doesn't lie in more information and in more advanced technology. The value lies in the customer knowledge and in how the companies use that knowledge to manage their relationship. Knowledge is according to Newell 2000 the sole of CRM. Unfortunately, few companies are transforming the information to customer knowledge and therefore they miss the opportunities to provide value to their customers. However, applied in the right way, CRM is the tool that contributes to profit. If companies transforming the customer data into knowledge and then uses that knowledge to build relationship it will create customer satisfaction, acquisition, retention, loyalty, and decrease customer's loss. (Rahimi 2008).

### **2.4 Customer Satisfaction**

Satisfaction is derived from the Latin *satis* (enough) and *facere* (to do or make). Thus, satisfying products and services have the capacity to provide what is being sought to the point of being "enough." Two related words are *satiation*, which loosely means enough up to the point of excess, and *satiety*, which can mean a surfeit or too much of

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enough, as if to say that too much is necessarily undesirable. These terms illustrate the point that satisfaction implies a filling or fulfillment. (Masrujeh 2009).

Clearly defining and understanding customer satisfaction can help any company identify opportunities for product and service innovation and also serve as a basis for performance appraisal and reward systems. It can also serve as the basis for a customer satisfaction surveying program that can ensure that quality improvement efforts are properly focused on issues that are most important to the customer. (LI 2002)

Kotler (2009), defined satisfaction as a person feeling of pleasure or disappointment resulting from comparing a product perceived performance or outcome in relation to his or her expectation. Tse(1988) , describe satisfaction as " the consumers response to and evaluation of the perceived discrepancy between prior expectation (or some other norm of performance ) and the actual performance of the product as perceived after its consumption". This implies that if services provided is better than what is expected , the customers is satisfied, if services provided worse than the customer expectation, the customers is unsatisfied. While Hunt defined consumer satisfaction "as an evaluation rendered that the consumption experience was at least as good as it was supposed to be." Westbrook and Reilly defined satisfaction as not just a response but "an emotional response to the experiences provided by, associated with particular products or services purchased, retail outlets, or even molar patterns of behavior such as shopping and buyer behavior, as well as the overall marketplace." Oliver defined consumer satisfaction as "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience." (Kumar 1996)

Referring to the above definition the concept of customer satisfaction is referring to a pleasurable fulfillment response, while dissatisfaction is an un pleasurable fulfillment response. The experience of some part of it component of the definitions allows the satisfaction evaluation to be directed at any or all elements of the customers experiences. This can include product, service, process and any other component of the experiences.

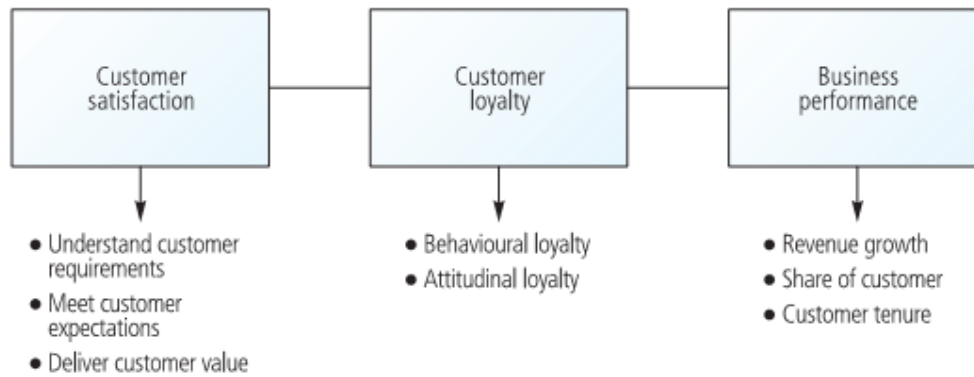
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The most common way of operational sizing satisfaction is to compare the customer's perception of an experience, or some part of it with their expectation. This is known as, the expectation disconfirmation model of customer satisfaction. Basically, the model suggests that if customers perceive their expectation to be met, they are satisfied. If their expectation is underperformed, this is negative disconfirmation and they will be dissatisfied. Positive disconfirmation occurs when perception exceeds expectation. The customers may pleasantly surprise or even be delighted. This model of customer satisfaction assumes that customers have expectations, and that they are able to judge performance. A customer satisfaction paradox has been identified by expectation disconfirmation researchers. At times, customer's expectation but the customer is still not satisfied. This happens when the customer's expectations are low. (Buttle 2004).

Customer satisfaction is a state of mind that a customer has about a company when their expectations have been met or exceeded over the lifetime of the product or service. The achievement of customer satisfaction leads to company loyalty and product repurchase. However, customers who are merely satisfied are only at the first stage and they can easily switch to other companies. At Most Customers range from being moderately satisfied to moderately dissatisfied, which means that most customers are essentially ambivalent in their loyalty to a particular business. These customers would likely defect in the presence of even a modest motivator; such as getting a better price or finding a more convenient store location. (Masrujeh 2009).

The company needs to launch various campaigns to have more communication with their customers, and provide services that reach their expectation which can upgrade the relationship to the next level and reach customer loyalty which consequently leads to more business performance. (CHI 2005). Fig (2.3).

Improving customer relationships and increasing their loyalty isn't simply about managing interaction with customers better or targeting them better. It is about serving them in a fundamentally improved way. This generally requires changes outside the sales and marketing area, in order to redefine the customer's experience with the organization in some meaningful way. (Calhoun 2001).



**Figure 2.3: Customer satisfaction, loyalty and business performance (Buttle 2004)**

Jamal and Naser (2003), found that if customers were satisfied with the services of the firm they will more likely to give more credit to this firm in compared to those firms they were not satisfied and hence less likely to engage in repeat purchases. Similarly, if the customers are satisfied with the services of the firm, then they will be more willing to engage in repeat purchases and develop their relationship with that firm. However, Satisfying customers is not enough to retain them because even satisfied customers defect at a high rate in many industries. Customers Behavior is mainly shaped by their needs and expectations. The desired outcome of expectations is getting what one anticipates from a service encounter as a consumer. Needs focus on obtaining what one seeks from life as a person, therefore the firm should understand that people strive to satisfy core needs in life at a level more fundamental and compelling than meeting their expectations as consumers. (Schneider 1999)

Kotler (2009) pointed out that it is important to measure customer's satisfaction regularly through survey to determine customer's level of satisfaction. He said this is because firms may think that they are getting a sense of customer satisfaction through customer's complaints. However, in reality, 95 percent of dissatisfied customer's do not make any complaints, they just leave. As a result it is important for firms to make it easy for the customers to complain. Dissatisfied customers who usually complains, about 54 to 70 percent will continue to do business again with the organization if their complaints are taken care of and resolved and may even be 95 percent if the complaints receive quick response and action. (Kotler 2009).

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It is worth mentioning that in case of applying kotler definition for the case of CMWU, it leads us to the fact that, CMWU needs to investigate the customers expectation and measure whether its performance fulfill these expectation or not. In such event, mitigation measure needs to be considered. In considering that, CMWU is the sole service provider and the walking away to competitor is not considered. Unfulfilling customer expectation may be reflected to customer's willingness to pay which lead to insufficient revenue stream to cover the monthly expenses. Therefore, reaching customer's satisfaction considered to be the corner stone of any implementation means of customer acquisition and retention strategies.

## **2.5 Customer acquisition**

Customer acquisition is "The process of identifying, approaching, and developing new customer relationships". Knowledge Discovery methods can be very useful in the identification of potentially profitable and loyal new customers. Acquiring the right customers is the first step in Customer Relationship Management." Or it can be simply defined as "Techniques used to gain new customers". (sharp 2003).

The role and relative importance of customer acquisition varies considerably according to a company's specific situation. For example, a new market entrant will be mainly focus on customer acquisition, while an established enterprise will be more concerned with customer retention. The customer's acquisition process is typically concerned with issues such as:

- Acquiring customers at a lower cost
- Acquiring more customers.
- Acquiring more attractive customers, and
- Acquiring customers utilizing new channels.

The starting points in understanding customers value from the perspective of the supplier organization is to determine the existing customer acquisition cost within the major channel used by the company and to identify how these costs vary within different customers segments.



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Customer acquisition considered the first task in managing the customer lifecycle. Customer retention is a pointless exercise if there are no customers to retain. Customer acquisition is always the most important goal during new product launches and with new business start-ups. For small business with ambitions to grow, customer acquisition is often as important as customer retention. One-customer companies can double its customer base by acquiring one more customer. Conversely, the loss of that single customer could spell bankruptcy. Therefore, customer acquisition will always be needed to replace natural attrition. (Buttle 2004).

Several important questions have to be answered when a company puts together a customer acquisition plan. These questions concern targets, channels and offers.

- Which prospects (potential new customers) will be targeted?
- How will these prospects be approached?
- What offer will be made?

These issues need to be carefully considered and programmed into a properly resourced customer acquisition plan. Most marketing plans do not distinguish between customer acquisition and customer retention. They are not separately funded or plotted strategies. It is recommended that companies think about these as separate, but related issue, and develop appropriate strategies. (Buttle 2004).

Customer acquisition in the case of CMWU may have different trend; hence, customers in Gaza Strip – Rafah Area have no alternatives but to receive the services from CMWU. The acquisition in this case starts after providing the services to the customer, and the acquisition plan must concentrate on how to ensure that the customer will pay for the provided services. Several approaches may be used in order to build the proper relationship which will lead to customer acquisition. This research shall discuss and recommend the contribution of CRM concept adoption in customer acquisition. Hence CMWU is newly established entity and improvement plans for water and sanitation services are implemented gradually. The customers located in improved services areas considered highly motivated to be acquired than the customers in others areas with fewer improvements. CMWU efforts in this side should be concentrated on gradual acquisition plan which can be managed in parallel with services improvement plan.

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## 2.6 Customer Retention

Customer retention is increasingly being seen as an important managerial issue, especially in the context of saturated market or lower growth of the number of new customers. It has been also acknowledged as a key objectives of relationship marketing, primarily because of its potential in delivering superior relationship economics, i.e. it cost less to retain than to acquire new customers. (Ghavami 2006).

Bateson & Hoffman (2002), define customer retention as focusing a firm marketing effort towards the existing customer's base. This explain the view that instead of trying to acquire a new customers, firms engulfed in customers retention efforts must make sure that the existing customer are satisfied as so to create and maintain long term relationship. (Payne 2005).

Many companies recognize the importance of customer's retention but relatively few understand the economics of customer retention within their own firms. Since the start of 1990s research has identified the financial benefits of customer's acquisition versus customer retention. Fred Reichard & Earl Sasser, published revealing research which demonstrated the financial impact of customer retention. They found even a small increase in customer retention produced a dramatic and positive effect on profitability: a five percentage points increase in customer retention yielded a very high improvement in profitability in present value terms. These results have had a significant impact in drawing attention to the critical role customer retention has to play within CRM strategy (Payne 2005).

Lovelock et al (1999), said in business context, loyalty is used to describe the willingness of a customer to continue patronizing a firms goods and services over a long period of time and on a repeated and preferably exclusive basis, and voluntarily recommending the firms products to friends and associates. In their view, customers will continue to be loyal to a particular firm if they feel and realize that better value is being offered. (Obeng et al., 2006).

Kotler (2009), assured that most important consideration to attain high customer loyalty is from firms to deliver high customer value. He continued to stress that is has been the practice by firms to devote much attention and effort to attracting new

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customers rather than retaining existing ones, adding to that, traditionally firms emphasize more on making sales rather building relationship, on pre-selling and selling rather than caring for the customer afterward.

When addressing the term of customer retention for CMWU, the definition could be customized to “Customers continuously and with high level of commitment paying the bills and being satisfied from the services”. Therefore and in order to ensure the customer’s continuity of paying the water bills, CMWU needs to achieve customers' satisfaction first. Hence satisfaction leads to retention. The difference between CMWU and private sector cases as illustrated in the above paragraphs is that customer retention will ensure fixed average amount of revenue for CMWU; yet, it will not lead to profitability, customers monthly consumption of water will not change or increase in dramatic degree as a result of satisfaction. Basically, CMWU - besides concentrating its efforts on customer satisfaction which leads to retention - needs to acquire new customers.

#### **2.6.1 Why retention improvement is important to CMWU.**

The following points illustrates why retention is so important for CMWU.

1. Acquiring new customer involves cost and the results may be not encouraging.
2. Retaining existing customer will ensure fixed amount of revenue for CMWU each month which may consider as a base to go the next levels (stable stage).
3. As the relation with retained customer developed, they are more likely to encourage others, which promote revenue generation and reduce the cost of acquiring those customers.

#### **2.6.2 A frame work for customer retention improvement to CMWU.**

Given the importance of customer retention for CMWU, the following outlined a structural approach (designed by Payne 2005) which CMWU can follow to enhance customer's retention and ensure the fixed amount of revenue stream every month. Three major steps are involved in such an approach: the measurement of customer's retention, identification of the roots causes of defection and key services issue and the development of correction actions to improve retention.(Payne 2005).

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### **2.6.2.1 Step 1: Measurement of customer retention**

The measurement of customer retention rates for existing customers is the first step in improving customer willingness to pay on monthly basis. It also involves measuring customer's retention rate over time and customer payment schemes. The outcome of this step should have a clear definition of customer retention, a measurement of current customer retention rate and understanding of the existing and future revenue stream that can be developed from each customer.

### **2.6.2.2 Step 2: Identification of causes of defection and key services issues.**

This step involves the identification of underlying causes of customer defection. Traditional survey to explore customer satisfaction does not always provide accurate answers as to why customers stop paying the bills. The causes of defection should be clearly identified, in order for CMWU to begin implementing successful customer retention programme.

### **2.6.2.3 Step 3: Corrective action to improve retention.**

The final step in the process of enhancing customer retention involves taking remedial action. Therefore, plans to improve retention become highly specific and concerned to CMWU, while any actions taken will be particular to the given context. Some key elements include marshalling top management commitment, ensuring employee satisfaction and dedication to building long-term customer relationship, utilizing best practice techniques to improve performance and developing a plan to improve customer retention strategy.

## **2.7 Customer Loss Rate**

Loss rate is also sometimes called attrition rate or customer churn rate. It is one of two primary factors that determine the steady-state level of customers a business will support. In its broadest sense, churn rate is a measure of the number of individuals or items moving into or out of a collection over a specific period of time. The term is used in many contexts, but its most widely applied in business with respect to a contractual customer base. In a business context, Churn rate is defined as "the percentage of customers who stopped doing business with a company in a period divided by the average number of customer existing in that period". It is a possible indicator of customer dissatisfaction.

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Dissatisfied customers tell far more people about their experience than do routinely satisfied customers. Problem solving and complaint management have a direct correlation with the overall satisfaction of a customer. In order to compete for customers satisfaction " and consequently decreasing churn rate" companies must be able to identify problem areas and establish improvement processes before these having broad impact on customer (Masroujeh 2009).

A companywide total customer experience program with senior management support can help retain the top customers, grow revenues and profits. When you have loyal customers, it is more likely they will be the company's evangelist.(Chennai 2007)

Therefore, any organization seeks to implement successful CRM strategy needs to monitor its churn rate and prepare a proper plan to reduce it. Kotler (2009), illustrates a five step organization can follow in order to reduce the loss rate.

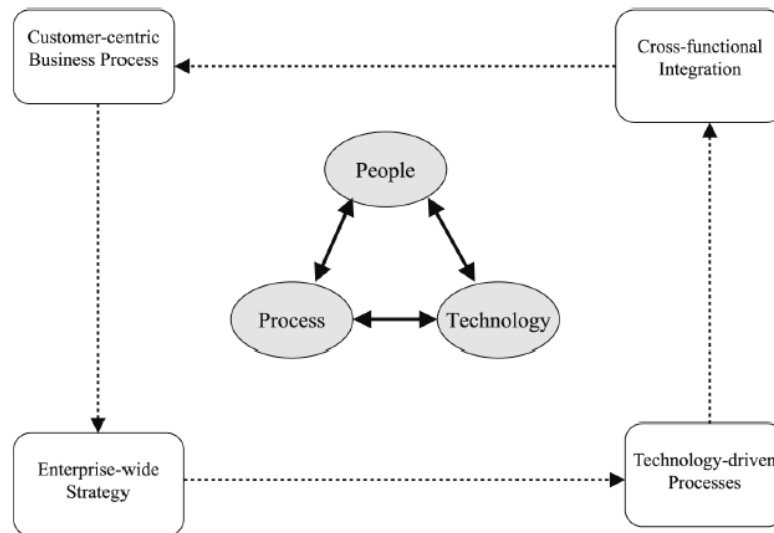
1. The company must define and measure its retention rate.
2. The company must distinguish the cause of customer attrition and identify those that can be managed better.
3. The company needs to estimate how much profit it loses when it loses customers.
4. The company needs to figure out how much it would cost to reduce the defection rate.
5. Finally, listening to customers.

The main ingredient in Kotler's plan to reduce organization loss rate, is to concentrate on customer retention plans and always put the customer first. Applying the resource of the organization in order to satisfy customers, insuring that all their requirements are met within appropriate time and cost and maintain good relationship with the customers, those are the key steps for reducing the loss rate and insuring the development of the organization.(Kotler2009)

## **2.8 CRM Ingredients**

Customer relationship management (CRM) is a combination of people, process and technology that seeks to understand a company's customer. It is an integrated approach to managing relationships by focusing on customer retention and relationship development. CRM has evolved from advanced information technology and organizational changes in customer –centric process. Companies that successfully

implement CRM will reap the reward in customer loyalty and long run profitability. However, successful implementation is elusive to many companies mostly because they do not understand that CRM requires company – wide cross-functional customer-focused business process re-engineering. Although a large portion of CRM is technology, viewing CRM as technology – only solution is likely to fail. Managing a successful CRM implementation requires an integrated and balanced approach to technology, process and people. (Chen & Povich 2003).Fig(2.4)



**Figure 2.4: A CRM implementation Model. Chen & Povich 2007.**

### 2.8.1 People

The process and technology that help implement CRM strategies and achieve CRM goals will only be as effective as the people performing them. Collaboration between people is the key to successful customer relationship management. (Chakravorti 2006).

One of the greatest challenges in CRM implementation is aligning the people with the customer strategy and process (Dickinson et al., 2005). 23% percent of respondents (executives of large North American companies interviewed in a 2003 Forrester survey on organization efforts in implementing customer relationship management , stated that they ran into difficulties in the adoption phase of the CRM , and 46% percent said that one of the biggest obstacles was resistance to process changes (Temkin et al., 2003). CRM entails new processes, the value of which the entire organization must understand

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and appreciated. Due to resistance to change, user acceptance will be hard to attain. Successful CRM implementation takes place only with organizational change, and “change occurs when people understand clearly what changes are expected of them, why they are necessary, and how their efforts to change are shaped, reinforced and rewarded by all the internal systems that are designed to drive behavior. Understanding the need for change is just the beginning. Implementers need to understand what changes are needed, what barriers there are to change, and how the change program will benefit the organization. (Chakravorti 2006).

Deep understanding for the need for the change comes from getting feedback from customers about the product, services, their expectations and competitors' abilities and then doing the assessment of the company's progress toward the change (Day, 2000).

Adding to that, top management commitment is an essential element for bringing an invocation online and ensuring delivery of promised benefits. Customer-centric management requires top management support and commitment to CRM throughout the entire CRM implementation. Without it, momentum quickly dies out. Furthermore, top management should set the stage in CRM initiatives for leadership, strategic direction and alignment of vision and business goals. (Chen & Popovich 2003).

Considering that the most major change efforts, objection and disagreement among various functional departments that arise in the process of business reengineering and CRM implementation can only be solved through personal intervention by top management, usually resulting in change to corporate culture. (Chen & Popovich 2003) conclude that investing in CRM technology without a customer-oriented cultural mindset is like throwing money into a black hole. CRM initiative requires vision and each and every employee must understand the purpose and changes that CRM will bring. Re-engineering a customer-centric business model requires cultural change and the participation of all employees within the organization. Successful CRM implementation means that some jobs will be significantly changed. Management must show its commitment to an ongoing company-wide education and training program. In addition to enhancing employee's skills and knowledge, education boosts motivation and commitment of employees and reduces employee resistance. Additionally, management must ensure that job evaluations, compensation programs, and reward

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system are modified on a basis that facilitate and reward customer orientation. After all, how people are measured will determine their behavior. (Chen & Popovich 2003).

### **2.8.2 Process**

Not long ago, companies with efficient facilities and greater resources were able to satisfy customer needs with standardized products, reaping advantages through productivity gains and lower costs. Mass marketing and mass production were successful as long as customers were satisfied with standardized products. As more firms entered the market, mass marketing techniques, where the goal was to sell what manufacturing produced, started to lose effectiveness. Target marketing, or segmentation, shifted a company's focus to adjusting products and marketing efforts to fit customer requirements. Changing customer needs and preferences require firms to define smaller and smaller segments. (Renner, 2000).

Customer relationship marketing techniques focus on single customers and require the firm to be organized around the customer, rather than the product. Customer-centric organizations seamlessly integrate marketing and other business processes to serve customers and respond to market pressures. Firms that evolve to this stage will benefit from a marketing-manufacturing interface, resulting in the flexibility to meet changing customer needs efficiently and effectively. Figure (2.5) demonstrates the change from weak to strong customer relationships based on changing marketing strategies of mass marketing, target marketing and customer relationship marketing. Despite the technological perspectives, the philosophical bases of CRM are relationship marketing, customer profitability, lifetime value, retention and satisfaction created through business process management. In fact, CRM characterizes as an integrated approach to managing customer relationships with re-engineering of customer value through better service recovery and competitive positioning of the offer. (Renner, 2000).

Couldwell (1998) further depicts CRM as a combination of business process and technology that seeks to understand a company's customer from the Perspective of who they are, what they do, and what they are like. In fact, Companies have been repeatedly warned that failure is eminent if they believe that CRM is only a technology solution (Goldenberg, 2000). Customer relationship management is an enterprise-wide customer-centric business model that must be built around the customer. It is a

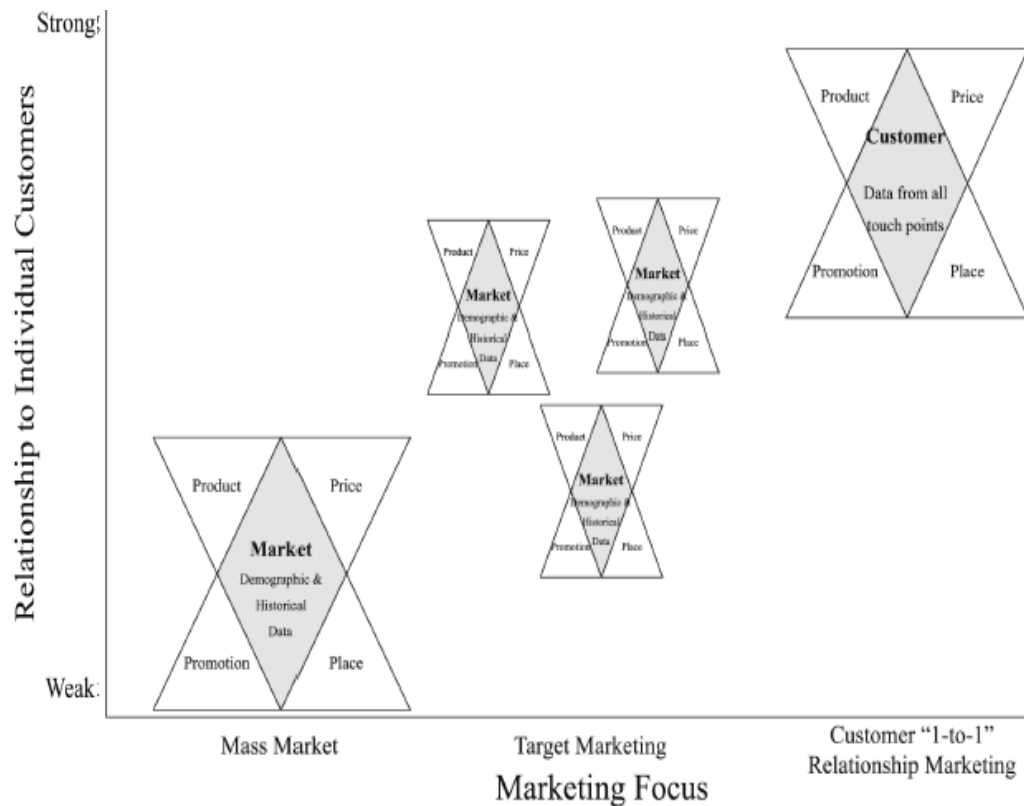


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continuous effort that requires redesigning core business processes starting from the customer perspective and involving customer feedback. The Seybold Group starts this process by asking customers what barriers they encounter from the company. In a product-focused approach, the goal is to find customers for the products using mass marketing efforts. In a customer-centric approach, the goal becomes developing products and services to fit customer needs. In Seybold's work, five steps in designing a Customer-centric organization were suggested:

1. Make it easy for customers to do business;
2. Focus on the end customer;
3. Redesign front office and examine information flows between the front and back office;
4. Foster customer loyalty by becoming proactive with customers; and
5. Build in measurable checks and balances to continuously improve.

The goals of a customer-centric model are to increase revenue, promote customer loyalty, reduce the cost of sales and service, and improve operations. Optimizing customer relationships requires a complete understanding of all customers; profitable as well as non-profitable, and then to organize business processes to treat customers individually based on their needs and their values (Renner, 2000).



**Figure 2.5: Changing Marketing Strategy. (Chen & Popovich 2003)**

### 2.8.3 Technology

Information technology (IT) has long been recognized as an enabler to radically redesign business processes in order to achieve dramatic improvements in organizational performance (Davenport and Short, 1990; Porter, 1987). IT assists with the re-design of a business process by facilitating changes to work practices and establishing innovative methods to link a company with customers, suppliers and internal stakeholders. CRM applications take full advantage of technology innovations with their ability to collect and analyze data on customer patterns, interpret customer behavior, develop predictive models, respond with timely and effective customized communications, and deliver product and service value to individual customers. Using technology to “optimize interactions” with customers, companies can create a 360 degree view of customers to learn from past interactions to optimize future ones. Innovations in network infrastructure, client/server computing, and business intelligence applications are leading factors in CRM development. CRM solutions deliver repositories of customer data at a fraction of the cost of older network technologies. CRM systems accumulate, store, maintain, and distribute customer knowledge

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throughout the organization. The effective management of information has a crucial role to play in CRM. Information is critical for product tailoring, service innovation, consolidated views of customers and calculating customer lifetime value. Among others, data warehouses, enterprise resource planning (ERP) systems, and the Internet are central infrastructures to CRM applications. (Chen & Popovich 2003).

## **2.9 CRM Models**

A review of CRM literature shows that there is a variety of different representations of CRM. Eechambadi describes it as “CRM space where CRM programs may emphasize operation or analytics”. He argues that operation CRM is a purely tactical aspect that focuses on increasing the efficiency of an individual business unit when it is implemented. While analytic CRM is strategy oriented and focuses on increasing effectiveness through behavior modeling and customer evaluation, and it needs analysis when it is implemented. The argument is based on the fact that, as Eechambadi explains, organization regularly focuses on operational CRM, obsessed by customer demand and marketplace challenges. On the other hand, analytic CRM pursues the demand for new infrastructure and processes to build knowledge about customer needs and then use that information in order to perform. Figure(2.6) shows an overlapping between analytical and operational CRM. As Eechambadi concludes, “Companies need to have good quality information, the appropriate processes in place, and the ability to bring everything together in harmony in order to have intelligent dialogue and long lasting relationships with their customers.” (Hazbon 2006).

In addition, the International Data Consultancy (1999) advises another comprehensive CRM model, as shown in Figure(2.7). The model describes CRM as a process divided into four main activities:

- Analyzing data contained in the organization data warehouse,
- Modeling the data through data mining techniques,
- Adjusting the model into an operational field, and
- Tracking the results and closing the circle of CRM strategy.

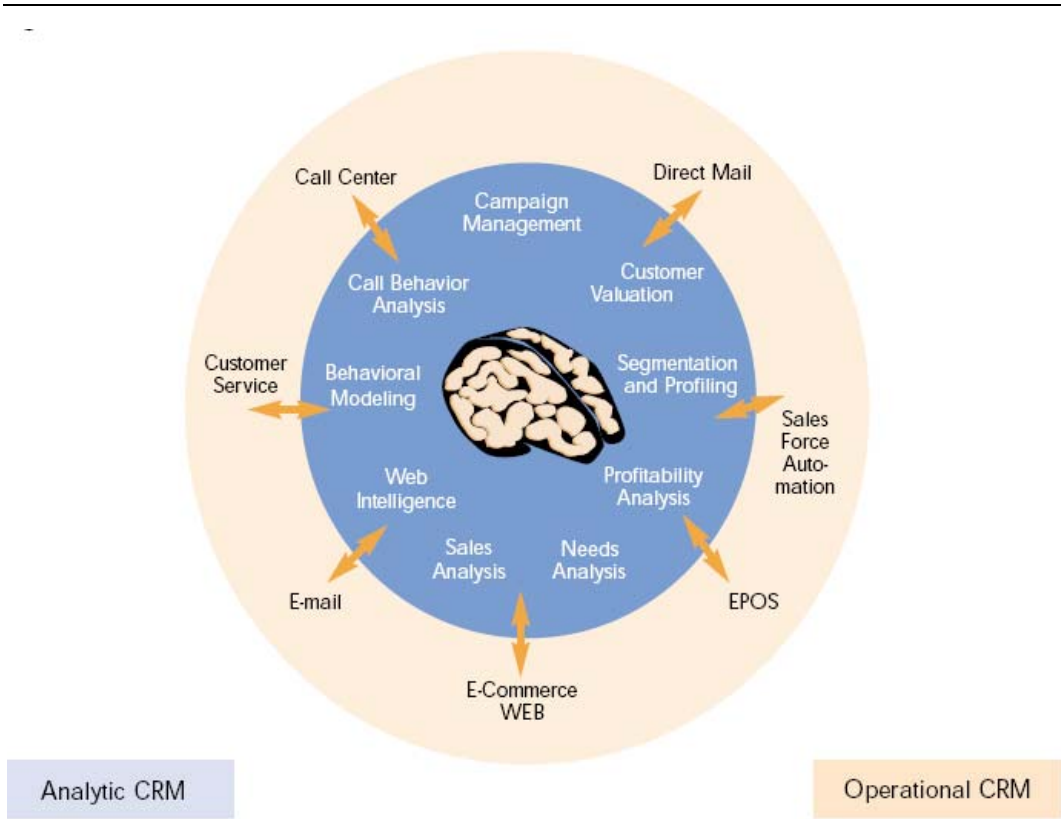


Figure 2.6: CRM Model: Quaero 1999.

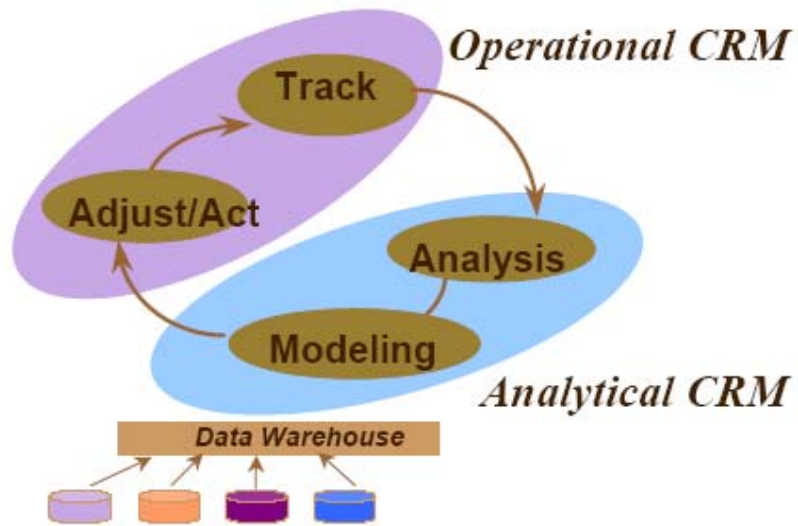


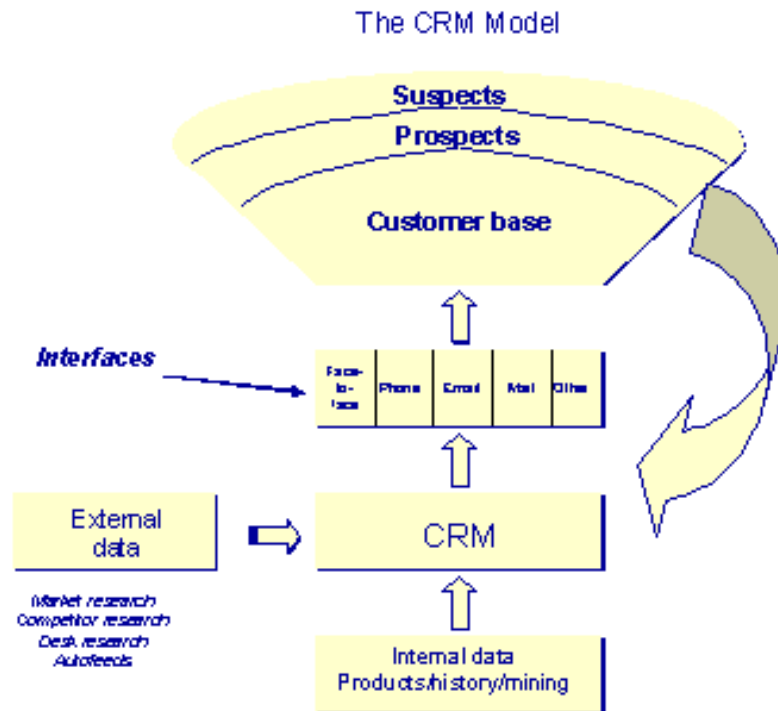
Figure 2.7: International Data Consultancy CRM Model: the International Data Consultancy 1999

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The PHS Management Training recommended another CRM model for their CRM training program which is divided into four major parts as follows:

- “The universe of customers”: This part explains the status of customers that any organization contracts with or would like to contract with at a profit. There are three different statuses current, suspects, and prospects. The essential point is recognizing the key to motivate, attract and retain customers before competitors do so.
- “The number and frequency of interfaces that a customer has”: This part is concerned with identifying which of the channels a customer contacts regularly, infrequently or not at all. Another concern would be identifying the nature and type of business carried out using those channels and whether the customer is charged appropriately or not.
- “The internal information feeds”: This part focuses on the type of information that is gathered on customers and the processes used in order to obtain a better understanding of customer behavior so as to maximize profit.
- “The external information feeds”: This part is concerned with the market regarding competitors, regulations, and the media. Being exposed to the external environment allows organizations to be more responsive to possible customer needs and issues.

The following figure shows the PHS Management Training CRM model:



**Figure 2.8: PHS Management Training CRM Model: PHS Management Training Co.1999**

### 2.10 Factors that affect CRM successful implementation

Customer relationship management seems to be problematic in achieving the desired results. In fact, between 35% and 75% of CRM programs have failed (Rigby, Reichheld, & Schefter, 2002). In addition, CRM program failure went beyond the capability of achieving the economic objectives, and led to the damage of company relationships with customers. As a result, managers decrease their attention and give low priority to CRM programs (Rigby, 2002). Rigby argues that companies are built on unquestioned assumptions and implicit beliefs, thus making planning and managing more problematic. He suggests that to be able to develop relationship strategies, assumptions and beliefs should be explicit and questioned.

Freeland (2003) states: “Thousands of companies, in fact, have embraced customer relationship management concepts and technologies during the past decade, often creating significant benefits. Unfortunately, as a number of industry analyst reports make clear, many customer relationship management (CRM) initiatives have also failed to deliver the expected benefits.” Freeland explains that two reasons led to CRM’s failure:

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1. “The disconnection between customer relationship management vision and execution”: where CRM projects focus on the mechanics rather than the final goal, which is increasing the value of customer relationship. Decisions about technology are made before developing a clear customer strategy, in addition to a lack of senior management support.
  2. “The rising standards for customer relationship management excellence”: the development of new technology is disturbing the stability of entire markets. Competitors in the marketplace, with the help of advanced technology, are able to adapt quickly to changes in the environment and therefore improve their operation. Meanwhile, technology offers customers the ability to learn more and turns them into informed, demanding customers with high mobility. As a consequence, processes and technologies that once provided competitive advantages became basic capabilities; therefore, companies are forced to follow up with each successive customer initiative.

### **2.11 CRM in the public sector**

Whilst most of the focus on CRM is in private sector business applications, in more recent times the adoption of CRM in public sector has become an important issue. In practice, public sector departments worldwide are attempting to increase their customer focus. Recently, it has been predicted that over the next three years the largest growth area for CRM will take place in the public sector. CRM has become an issue for the public sector because there is political and community pressure to provide better customer services more efficiently. (Pollard et al 2006).

The concept of CRM means something different in the public sector to the way that it is used in the private companies. In the public sector, all citizens are customers, but the customer is tied to those services offered by a particular local authority. He is not in a position to shop around. This means that in some services, local authorities are in a monopolistic position. A citizen can't choose to pay council tax in a different borough because it's cheaper. Therefore, the challenges in this situation which faces the public sector organization is to provide an equitable level of service to all citizens, rather than to segment customers in order to concentrate on those that are the highest yield customers (Hewson et al., 2003).

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CRM in the public sector is relatively recent phenomena. Here the definition of CRM is usually “to improve level of services to citizen with optimizing cost to serve”, the rang of public services is wide and varied, from paid for services, such as leisure club membership, to traditional services such as those provided in education, health and policing. However, in many ways the public sector model is similar to the private sector model, except that the former usually lacks the profit motivation, the competitive dimension, and the day to day “services management” activities are fewer.

In the private sector, competitive pressure and the demand for shareholder returns lead to a focus on optimizing customer value often for short-term profits. In the public sector, the pressures are different, and usually much more complex, for several different reasons:

- **Citizen expectations**: Citizens’ expectations of their experience from organizations are rising. Rather than being set by other government bodies, expectations are set by private sector experiences e.g. in retailing, travel, and financial services. The political capital to be gained, or lost, from poor service is immense.
- **Rising demand**: demand is rising not only because of demographic factors (e.g. rapidly ageing populations, increasing numbers of refugees and economic migrants) but also emerging needs, such as national security, personal vetting and environmental concerns.
- **Need for cost reduction**: Financial pressures and budget constraints increase the focus on cost reduction. However, as in the Private sector, piecemeal focus on cost reduction can actually increase overall costs e.g. trying to treat patients quickly can lead to more second treatments, often at higher cost per treatment.
- **Fraud**: Reducing fraud has the double benefit of increasing available revenue with the political benefit of “being tough on the causes of crime”. CRM approaches can allow real-time access to customer data, allowing fraud protection to take place more easily.



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- **Need for increased relevance of government and its services:** In many western countries, voter participation is declining and the proportion of citizens living outside government influence is increasing. Several studies (e.g. of US voting patterns) suggest that this is skewed towards particular ethnic groups. This reduces the relevance of government and the preparedness of these groups to contribute to and participate in government. Relevant, timely and empathetic CRM approaches can help address this trend. (Hewson et al., 2003).

### **2.11.1 What prevent effective public sector CRM**

There are various factors that create problems, such as:

- Audience selection: Unlike private sector organizations, most public sector ones cannot choose the people they serve. In fact, they often have to target citizens who may qualify for the service or benefit, but who resist approaches from public service departments. This raises significantly the cost of acquisition and of continuing service. This means public sector organizations face unique CRM challenges that are less common in the private sector.
- As in the private sector, public sector organizations are often poorly coordinated across departments and geographies, internally and with each other (the interagency problem). Optimizing one part of customer management may increase overall costs and impair the customer experience.
- There is also a resource problem. The public sector has rarely developed resources to design, build and optimize CRM. Where they have, their best people are often enticed away by higher salaries from the private sector. This is likely to lead to a widening skills gap.
- Public sector organizations are starting to understand that CRM philosophy involves not just technology but also changes to the proposition, the way service is delivered, integration of access and delivery channels, improved data, different measurement systems and a new way of managing people. In the public sector, only very senior managers can achieve these kinds of change. Leadership tends to

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be slower to make decisions and act, and this will make it difficult for public sector organizations to manage CRM programmes.

- Lower levels of pay, lower caliber managers, low status or job esteem and a cost minimization culture have created a public sector culture that gives a low priority to customers. A major cultural shift is required in most public sector organizations to deliver CRM through people.
  - In the private sector, databases are often developed as independent initiatives by separate departments. Over time, their integration into an organization-wide database becomes commercially justifiable – it helps the company achieve commercial benefits of improving customer value cost-effectively. Issues such as value optimization motivate the public sector less, and there is usually little history of cross-agency or interdepartmental cooperation. There is also less appetite to understand and optimize the organization’s data capabilities within data protection and privacy constraints. All this suggests that public sector CRM is more likely to be a follower than a leader in terms of using customer data.
  - There is a strong measurement culture in the public sector, but it tends to be activity and work content-based. There is less experience of process, service and value measures. There is less focus on measures based on the perception of customers concerning the quality of service delivery. Because of the public service culture, which tends to penalize any “bad news”, measures which show negative customer perceptions are often avoided or, if in place, disregarded. Effective CRM requires a strong capability of “honest” measures, measuring current performance and designing and implementing improvements, and then measuring whether the planned improvements – as seen by the company - resulted in improvements as seen by customers.
- There has been much outsourcing of functions and processes in national and local government, usually to reduce costs or to finance replacements of large IT systems. Outsourcing agreements tend to focus on just one part of the organization, with performance criteria tightly defined, not usually in customer terms. So outsourcing as usually practiced rarely improves things for customers,

and can make it more difficult to re-engineer processes that cross the interface between the client and the outsourcing company. (Hewson et al., 2003).

### 2.11.2 CRM in the public sector Vs CRM in the private sector

The public and private sector are different in some essential ways:

- Because the government is a monopoly provider of the services, the citizens are often forced to use the services such as registering a change of addresses.
- Unlike the private sector maximization of profit cannot be the object of public sector.
- Different public administrations are not commercial. They should therefore have no competition about sharing experiences and software and interchanging data.
- The citizens, through the government institution, are ultimately the owners of the administrations. The organization has therefore even more reason to be citizen oriented.
- Differential marketing offering a different grade of services to different citizens is likely to be hated in the public sector, and may well raise complaints because it is inherently undemocratic, or violate regulations regarding transparency and fair treatment of citizens. .(Saremi 2009)

**Table 2.1: Differences between CRM in private sector/CRM in the public sector.(Saremi 2009)**

<b>Private Sector</b>	<b>Public sector</b>
Competition	Monopoly
Market orientation	Jurisdiction
Homogeneous product range / controllable quantity	Huge number of heterogeneous products (services)/Uncontrollable due to political decision making
Personalization	“One size first all” approach
Segmentation	Segmentation possible / no termination of unprofitable customers
Budget / Sunk cost	Budget / Sunk cost
Legacy system (IT)	Legacy system (IT)

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## **2.12 Introduction to CMWU**

The Idea of initiating the Coastal Municipalities Water Utility (CMWU) has been realized by the Palestinian Water Authority (PWA) in accordance with the structure of the water sector. Basically, series of procedures towards establishing the Water Utility have been initiated through holding several workshops, international and domestic conferences, including Beir Ziet Conference in 1995 where the idea of establishing water utilities (one in Gaza and three in West Bank ) has been proposed and it recommended the inclusion of it in the Palestinian Water Law. This has been totally approved in Water Law no.3 in year 2002.

These steps were accomplished totally with the administration of the PWA and the direct supervision of Eng. Nabeel Al-Sharif – God's Mercy be upon him – PWA chief at that time.(CMWU 2005).

### **2.12.1 First- establishment steps of the Water Utility: Legal Stage**

During this stage, PWA was able to accomplish the entire legal and managerial requirements necessary to the establishment of the CMWU, through the World Bank project and in coordination with the Ministry of Local Government to complete the following:

- Signing a memorandum of understanding by the 25 municipalities in Gaza Strip on the 30<sup>th</sup> of May 2000.
- Signing an agreement with the World Bank to fund the project of improving water and sanitation services (Gaza I), which was executed and supervised by the PWA in favor of Gaza Strip Municipalities that have signed the memorandum of understanding.
- Starting preparation of the main legal documents constructing the main pillar of the establishment of CMWU, these documents included:
  - A draft for the main system of the Water Utility.
  - Proposed structure of the Water Utility.
  - A draft for the participant's covenant.

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- A job description draft for a number of the Water Utility main employees.
    - A draft for the decision and centers of the Water Utility.
  - Issuing the ministerial decision no.13/22 on the 30<sup>th</sup> of October 2000 - issued by Dr. Saeb Erekat, Minister of the local government at the time – to establish the CMWU (and what was called customer service council according to the decision).
  - Issuing the ministerial decision no.85/5 based on the previous decision by Mr.Jamal Al-Shubaky the former minister of the local government on the 15<sup>th</sup> of January 2005. The previous decision focuses on the formulation of a temporary board of directors for the Water Utility formed by 9 municipality members and chaired by the minister of the local government. (CMWU 2005)

#### **2.12.2 Second: Contracting stage**

Funded by the World Bank, Gaza project II tender was ready on August 2004, with a donation of 20 million dollars to cover the following:

- Signing a contract with successful consulting firm (INFRAMAN – Austrian Co.) to tackle the responsibility of Water and Wastewater sector management consultancy services.
- Operational management fees for water and sanitation facilities in addition to the Project Management Unit (PMU) staff during the coming three years with a predetermined level in the tender.
- Part of the operational expenses for water and sanitation facilities.
- An investment balance nearly equal to 15 million dollars that aims to establish service development projects (e.g. new wells, water tanks, switch carrier lines, network rehabilitations, and pumping stations construction....etc)
- Technical support expenses for the PMU and the utility board of directors ( including the salaries of the project management unit's employees- train the

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municipality staff members, and financing an international technical and financial auditor contract for the project). (CMWU, 2005)

### **2.12.3 Third: CMWU administrated by Local staff**

Gaza project II contract between the PWA/CMWU and the Austrian consulting firm INFRAMAN was terminated on February 2007, and the management unit of the Utility was responsible for completing the Gaza Project II tasks through qualified local staff. The World Bank continued its support to CMWU and signed an additional finance agreement with total amount of 5 million dollars to continue financing the operation and maintenance cost for running the water and wastewater sector and supporting the establishment of CMWU. (CMWU, 2005).

### **2.12.4 Final Stage: Assets and employees transfer**

Following the aforementioned steps, all the municipalities should transfer financially and managerially their tangible and intangible water and wastewater assets and related staff to CMWU. Article 3 of the Decree states that CMWU is an autonomous enterprise and will define its own business plans. After the full transfer of assets, staff and responsibilities to the newly created CMWU it shall be the main stakeholder in the water sector.

Unfortunately and due to the unstable political situation since 2005 in the Gaza Strip and the changes that have taken place at the political and administrative level , until now the transfer occur for the water and wastewater assets only and for 14 municipalities out of 25 which agreed to proceed under the CMWU establishment plan. The full administrative, operational and financial transfer took place only in Rafah Municipality. CMWU on April 2009 has signed an agreement with the municipality of Rafah, whereby, the staff working in the water and sanitation departments shall become under the full responsibility of the CMWU. This transfer means that all the employees' administrative and financial rights shall be claimed from CMWU starting from the date in which the transfer was in effect. (CMWU 2005)

## **2.13 CRM in water services Utility**

CMWU is currently undergoing to significant reforms based on principles of cost recovery, commercialization and demand. CMWU mandate is to provide sustainable services to all customers in Gaza Strip including the marginalized sectors where

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adopting effective management and business strategies to meet these challenges are a must for CMWU. (CMWU 2005)

As we refer to some of the successful international companies, including those in the water sector, we found that the key to success is having a clear customer focus underpinned by an ongoing commitment to raise standards and provide quality services. These companies recognized that sustainable competitive advantage can be achieved through customer-focus-decision making and carefully designed and implemented customer relations management programs.

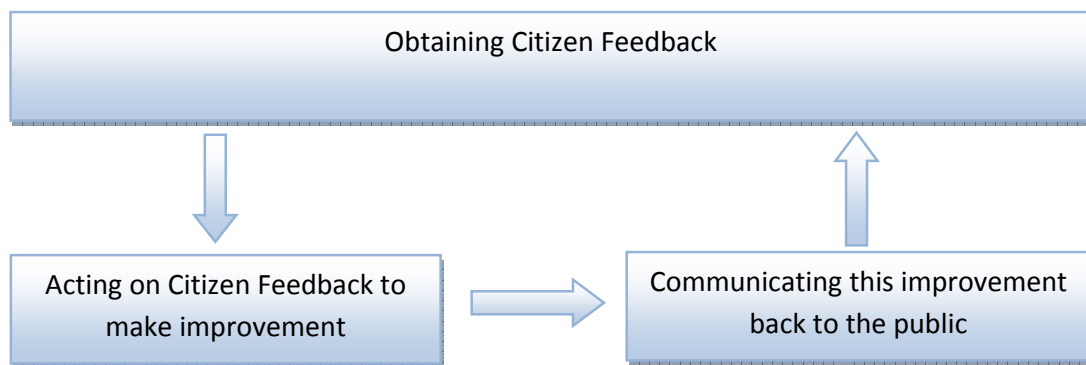
Since 1995 and establishment of PWA, the emphasis on water and sanitation sector has been placed in the issues of constructing and developing the different sector infrastructure. The donors' contribution for this sector was tapping that contest only. Water and sanitation systems operational requirements were not considered nor adopted in any donors' agreements. The Palestinian Authority supported part of the operational activities and secured somehow the salaries of employees whom working in the water and sanitation municipal departments in Gaza Strip, through covering the deficit amount between the expenses required and the net revenue collected. Unfortunately, this is not the case of CMWU, as CMWU has an obligation to secure the monthly salaries for the transferred water and wastewater department's employees. Frankly speaking that neither the authority nor any other organization/donor has the well to support CMWU and secure that financial deficit. As a result, CMWU found itself in the middle, from one hand, it is only being considered as a semi governmental organization responsible of delivering public services, and on the other hand, it has an obligation of securing sufficient revenue in order to support its operational and management costs. This situation places more pressure on CMWU to apply the concept of commercialization of water services and becoming more customer oriented, customer, first, and to think more clearly about adopting the private sector strategies in order to succeed in its mission.

As the challenges ahead become more and more seeable, particularly when the resident of Gaza Strip had already a negative impression about the former providers of water and sanitation services, (i.e. municipalities). CMWU is in crucial need to exert efforts in order to build a positive image and transfer new messages with new services

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outfit to its customers. Good strategies may include: continuous communication with the customers explaining what CMWU provides and how it will improve the services delivered, incorporation customers' inputs into decision making process, and improving customers' satisfaction by the improvement of CMWU performance and development of effective communication of that performance.

Kell 1993, proposed a model emphasizing the major elements for building a more positive image of the public services provider. Those elements are: obtaining citizen feedback; acting on the citizens feed back to make improvements; communicating this improvement back to the public, and obtaining citizens feedback again. Fig(2.9)



**Figure 2.9: Positive Image Building Model. Kell 1993**

The above model proposed by Kell, can be used by CMWU in order to achieve its objectives since it has the fundamental structures to adopt it. Developing a comprehensive customer relations management (CRM) program in CMWU is one way of institutionalizing the principle of ‘think customer first’. Where successful CRM programs are based on innovation and creativity and are facilitated or led by senior management levels. Taking into consideration that the initiating and motivating role of senior managers, and importantly of managing directors, should not be underestimated. Therefore, CRM will only be considered a critical success factor in the utility’s long-term survival if senior managers demonstrate involvement in terms of time, effort, commitment, persistence and visibility. Senior (top) management should also undertake the role of service-oriented leader, to inspire colleagues to successfully implement the CRM program. A service oriented philosophy will not take root unless CRM is seen to be valued by the leaders of the utility, thus Senior Managers must set the right example in all aspects of CRM. The role of senior management should be one of ‘service



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oriented leader', facilitator or coach rather than someone who 'polices' customer oriented systems and procedures.

Basically, there are a number of reasons why a CMWU should consider customer relations management "CRM" as a key component for its effective business (revenue/collection) strategy. These can be summarized as follows:

- To differentiate itself from other water supply and sanitation service providers in the same service areas. (like those municipalities that refused to transfer its water and wastewater wepartments to CMWU responsibilities).
- To increase customer satisfaction
- To improve its profitability and to carry out expansion of service coverage for more and more customers.
- To improve its corporate image in the eyes of the customers, with outstanding services providing impressions.
- To minimize customers' sensitivity to prices (tariff) of water and sanitation services.
- To achieve a maximum number of customers who will sell the organization through positive word-of-mouth.
- To enhance CMWU's reputation as a good employer.
- To improve CMWU's staff morale.
- To increase CMWU's staff productivity.
- To reduce CMWU's operational and managerial costs.
- To encourage CMWU's employee participation.
- To add continuous improvements CMWU's operation.
- To highlight the importance of water services in customers' minds.

#### **2.13.1 Conditions that could impede a successful implementation of CRM in CMWU**

To evaluate the feasibility of implementing new or improved CRM strategies, many issues have to be considered since the water services utility in Gaza strip faces a unique challenging environment that could have very significant influences on the success of any efforts in that regard. Number of issues are expected to work as impediments for a successful implementation of CRM in CMWU:

- Highly unstable political environment with unforeseen risks that might affect the CRM implementation (e.g. Israeli incursions, internal political divide). Moreover

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and due to the political unrest in Gaza, the achievement of some institutional objectives, notably those related to the CMWU restructuring, were delayed and affected the finalization of the unified water and wastewater billing system,

- Deteriorated economical situation in Gaza Strip with increasing unemployment rates along with fewer opportunities on ground could adversely affect the revenue collection and lead to commercial losses in the distribution systems.
- Former municipalities' employees' mentality and routinely working environment they are in, where no motivations a/o willingness to exert efforts in these services. It can be described as unhelpful negative attitude municipal customer services staff.
- Unwilling customers to pay their water services bills. They have legalized the services extortion and basically they have the thought "I am satisfied but I am not willing to pay the bills" which becomes part of their ordinary life's concepts.
- Inability of cutting off the services due to health and hygienic consequences and merely for basic life needs.
- Inability to meet customer's expectation and to deal with their complaints effectively due to current situation.
- Lack of customer's information and background, basic comprehensive customers information and database (demands, no. of beneficiaries, type of demand, property registration, connection size...etc) these basic information can significantly affect the success of implementation of CRM in CMWU.
- Backstopping facilities and services like the electricity where water services dependent on electric pumps are sporadic with intermittent supplies.

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## **2.14 Previous studies**

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### 2.14.1 Local Studies:

#### 1. Masroujeh ,(2009)

##### ”Critical factors for Customer satisfaction and delight in the Palestinian Pharmaceutical market”.

This study tested a five critical satisfaction factors (availability of services, completeness of services, Responsiveness of services, reliability of services and professionalism of services in relation to customer satisfaction and delight in the Palestinian pharmaceutical market. The factors tested by the researcher should be the main ingredient in any CRM strategy any organization willing to adopt.

Written questionnaire responses from 180 pharmacists who own and manage pharmacy in Gaza strip were used. The questionnaire determined the ranking the importance of the factors and gathered data on the characteristics of each factor.

##### The research concluded that:

- All five factors (Availability of service, Responsiveness of service, Reliability of service, completeness of service, and professionalism of service) were positively correlated (proportional mean = 76.56) with the overall customer satisfaction and delight with respect to all customers (pharmacists).
- There is a level of customer satisfaction and delight in the pharmaceutical market related to the availability of service, Responsiveness of service, Reliability of service, completeness of service, and professionalism of service provided by the pharmaceutical companies. The study population agrees that these factors and the actions related to them must be of great importance for the pharmaceutical companies when dealing with the pharmacies.

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**The researcher recommends that:**

- There is a need to adjust organizational processes within the pharmaceutical companies to achieve higher marketing performance. Companies have to transform from being product and process oriented to becoming customer oriented
- A successful pharmaceutical company must build customer knowledge competence through improvement of the current processes that include customer data acquisition and data interpretation.
- Companies should improve their employee evaluation and report systems in order to create motivational behavior driven environments that focus effort toward building strong customer relationship. This can be done by implementing a specific reward system based on behavior, parallel to revenue rewarding system in order to improve customer focus performance.

**2. Hazboun, (2006) “Strategic Application of CRM, The case of the Palestinian Pharmaceutical Industry”**

This Study set out to address the concept of Customer Relationship Management and the managerial reality behind this concept and to determine the scope of adoption, benefits, barriers, and alternatives of the concept for the pharmaceutical industry in Palestine. In addition, the study aims to contribute to the implementation of the CRM initiative of the pharmaceutical industry in Palestinian Authority. The contribution of the study is divided into two parts. First, addressing issues from the literature on this topic. Second, the pharmaceutical industry is analyzed by choosing two companies as a case study. Using the “Marketing Performance Assessment Survey Tool” MAST questionnaire, the analysis is done by using primary and secondary data sources in order to evaluate the implementation of CRM. Those aspects would be culture, organizational alignment, appropriate measurement, actionable strategies, plus many others.

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**The research concludes that:**

- Both companies' current marketing performance is relatively satisfactory. However, there is evidence that current marketing performance has room for improvement.
- Despite the satisfactory score in the structure aspects for both companies, it is believed that there are still serious improvements necessary in the attitude and behavior of employees within both companies.
- The improvement suggestion mentioned for both companies is mainly focused on building customer knowledge competence through developing effective organizational processes as well as becoming customer culture oriented. The improvement of organizational processes is through developing customer information processes, and marketing technology processes. In addition, senior management involvement and improved employee evaluation and reward systems are needed. Becoming customer culture oriented is a vital element for building strong customer relationships. Leaders within both companies should emphasize on influencing employee values and beliefs toward becoming customer culture oriented.

**The researcher recommends that:**

- Improve customer knowledge and insight by increasing customer information through improvement of current processes that include customer data acquisition and data interpretation.
- Improve communication by Develop systems such as Intranet and unify or synchronize software in use.
- Improve marketing measurement frameworks by Develop a comprehensive measurement framework, taking into consideration: input, output, and actions, define key performance indicators, and develop a process for the collection of relevant data necessary to measure performance.

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### 2.14.2 Foreign Studies:

### 3. Saremi 2009 “Critical Success Factors in Citizens relationship management”

In this study, all the concept and elements of CzRM are reviewed; secondly, different models of Critical Success Factors (CSFs) in CRM and e-government are illustrated. Thirdly, frame of references for CSFs are presented. Besides, factors of evaluating CzRM strategies are analyzed. Then the literature review section comes up with the conceptual model which customized for the Municipality of Tahrán. In order to evaluate the effect of CzRM in the municipality and the model variables, quantitative methods were chosen with explanatory research approach by mean of survey strategy. 194 questionnaires have been collected from the major department in the municipality including calls centers in order to investigate the success factor in Citizens relationship management.

#### The research concludes that:

- The CzRM is in good situation, and the top management support has the best situation among the key areas, but the citizen issues are the main concerns for this organization. Therefore, if they want to improve their activities in this regards they must pay more attention to this factor.
- The results of the correlation test suggest that the CSFs of CRM enhance performance of the municipality of Tehran.
- The results for regression modules proposed that success and failure of CzRM is highly depend on the four followings factor: Process, organization, knowledge Management and Citizen Issues. These factors have the most influence on CzRM success.

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**The research recommends that:**

- The municipality of Tehran must emphasize on the CSFs addressed in the study in order to enhance and improve its operations dealing with the citizens.
- The managers of the municipality have to notice the fact technology is not essential in order to improve citizen's orientation in the public sector. Changing office hours, redesigning the waiting area or one stop services center are examples of which have an impact of Citizens satisfaction.
- Presenting vitality and criticality of the CSFs provides managers a great insight for improving decisions making in activity definition and resource allocation during the planning and implementation of CRM program.

**4. Salralk & Fard 2009 "The Impact of CRM on Customer Satisfaction in Agricultural bank"**

The research aims to study the impact of customer relationship management on customer satisfaction in agricultural bank. The researcher used the descriptive survey approach. The statistical analysis methods such as Friedman variance analysis, binomial test as well as single sample student t test were used. Simple random sampling method had been used to determine the numbers of the customers of Qom province Agricultural Bank in Iran among 384 the sample size for this research. In this research CRM was considered to be an independent variable, its variables included services quality, access to services and their properties. Customer office complaints were considered as independent variables while the customer satisfaction was considered as dependant variable.

**The research concludes that:**

- According to the respondents in the Qom province' Agricultural Bank, it can be said that the relationship between customer relationship management and customer satisfaction from the bank was confirmed. In other words, it can be said that the bank customers are satisfied with customer relationship management



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- According to the respondents in the Agricultural Bank of Qom province, it can be said that the quality of the bank-provided services influences on the customer satisfaction
  - According to the respondents in the Agricultural Bank of Qom province, it can be said that the index of access to bank-provided services influence on the customer satisfaction.

**The research recommends that:**

- Promptitude of the employees: Identifying suitable ways for increasing Promptitude of the employees: engaging those with higher Promptitude for providing bank services when there is a crowd around the bank counter; using enough workforces behind the bank counter and adapting new technology to increase the working readiness and quality
- Technical knowledge of the employees: With concentration on and more attention to add their abilities through educating, providing suitable incentives as well as increasing inclination to answering and guiding the customers, the customer satisfaction can be drawn more than the past.
- Customer Awareness: Creating a separate unit in marketing department to do advertisement, design the proper advertising banners and brochures by which suitable information on how to use the services will be given to the customers; as well as obligating the managers of the bank branches to distributing brochures between the customers and/or creating a teller telephone line explaining all organization services and products for the customers

**5. CHI 2009, “An Evaluation of The Customer Relationship Management CRM in Improving Service Quality of the Private Residential Properties in Hong Kong”.**

Due to the intense market condition of the management contracts in the Hong Kong private residential properties market, continuously improve the service quality to

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cope with ever-increasing demand from residents is one of the mission of the property management companies. CRM is introduced to the industry recently to further enhance the service quality. This research examined this fact through conducting and interviews with two private residential properties (Ten residents, five supervisory level staff and five frontline staff of each site).

**The research concludes that:**

- Service quality is one of the vital issues for the property management companies in Hong Kong. As to cope with ever-increasing demand from residents, property management companies have introduced various policies to achieve it, including ISO, TQM, and now CRM.
- Successful CRM can bring lots of benefits to the company, including increase product quality, customer satisfaction, customer retention, customer value and finally company success. Since CRM is new to the industry and not yet fully implemented in every estates, only service quality, which is also important for maintain the competitiveness of the company, was used as an evaluation tools for the effectiveness of CRM to the Hong Kong private residential properties.

**The research recommends that:**

- Implementing CRM to other estates. In the meantime of implementation, support from organization and capable staff who are computer iterated should be available.
- It is believed that CRM is beneficial to the service industry, and some other type of properties' clients is also concern about the service quality of the property management companies, especially in the Grade A office. Further study can be performed in these properties.

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## **6. Bailey 2008, “How Companies Use Customer Insight To Drive Customer Acquisition, Development And Retention”**

In theory, Customer Relationship Management (CRM) technology and processes should help firms to identify the ‘right’ customers, understand their needs, predict their behavior and develop tailored propositions. Yet numerous studies have found that CRM projects have failed to deliver the expected benefits. Academics and practitioners have begun to refer to a key resource required to fulfill the promise of CRM as customer insight’. This research shall examine this fact through exploring how companies use customer insight to drive customer acquisition, retention and development and proposes a theoretical framework for auctioning customer insight. Five case studies with UK-based large companies were undertaken, involving 25 in-depth interviews.

### **The research concludes that:**

- The companies were found to be synthesizing data from five areas: competitors, customers, markets, employees and channel partners. From this data they are generating four types of customer insight: market predictions, customer segments, propensity models and customer analytics.
- Although the researcher found that customer insight is built from multiple data sources, cites specific examples of customer insight. strategic segmentation, loyalty indicators, channel propensity, campaign propensity scores and response value scores.

### **The research recommends that:**

- The companies need to gather data from multiple sources, in order to generate customer insight; there is no empirically-derived list. The researcher propose the following as data sources: customer database analysis, market intelligence, competitor intelligence, feedback from sales and customer service staff, including customer complaints, and financial and planning data, for examples. These were confirmed and several new sub-categories proposed. .

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- The collected data need to be incorporated into five main areas and sub-categories:
    1. Competitive data
    2. Customer data (interactions; transactions; satisfaction; opinions)
    3. Market data (market share; market issues; social, economic and political trends; demographics/population profiles; company profiles; attitudinal data)
    4. Employee data (staff feedback; mystery shopping program; retail standards audits; service performance data; employee satisfaction surveys; buddy program)
    5. Channel data
  
  - The researcher proposed four categories to be used in order to drag customer insight.
    1. Market predictions.
    2. Customer segments.
    3. Propensity models.
    4. Customer analytics.

**7. Rovia Rahimi, (2007), “Feasibility study of application and implementation of CRM in Hotel Industry, Case study of Hamagane Arya Group Hotel”.**

In this study the researcher tries to find that CRM in the form of giving special services with the help of IT, one to one marketing, effective relationship on guest retention and knowing guest needs and meet these needs via giving more and more special services, could be life saver for hotel industry. Written questionnaire responses from 125 hotel guest from 10 different hotels of this chain hotel (Hamagame Arya Croup Hotel-IRAN). The questionnaire determined the effect of implementing CRM system on guest’s satisfaction, loyalty and retention.

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**The research concludes that:**

- Determining the effects of implementation of customer relationship management CRM on guest satisfaction, loyalty and retention showed that, this implementation in the form of gathering information for personalization of services using one to one marketing plan, improving guest services and using IT for giving more services in hotels will increase guest satisfaction loyalty and retention.
- To enhance customers satisfaction and profitability, hotels must focus on implementing CRM strategies that aim to seek, gather and store the right information, validate and share it throughout the entire organization and the use it throughout the entire organization levels for creating personalized, relationship and unique guest, experiences.
- Implementing CRM in the form of gathering information for personalization of services using one to one marketing plans, improving guest services and support and using IT for giving more services in hotels will increase customer satisfaction, loyalty and retention.

**The research recommends that:**

- In hotel industry CRM application should use to empower front officer to efficiently serve services to customers.
- The information gathered through CRM system should be available across all the customer related department in order to establish and effective and correct communication channel.
- The customers should be analyzed and put in special segmentation process that will help hotel managers manage their customers as individuals or small groups and become efficient in analyzing customer's data.

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- According to customer's classifications, CRM strategy needs to ranking the customers to identify the most valuable and then servicing them differently.

**8. Isaksson & Suljanovic , (2007), "Customer Retention in Services Firms, three case studies of companies in transport logistic industry".**

This research studied the case of three Swedish companies in the transport logistic industry, which investigate for how extent the service sector can enhance customer retention through customer relationship management CRM. CRM as business approach that focuses on the ways companies build customer relationship with their customers. The research examined this fact through conducting and 3 interviews with the presidents of highly active top of the list transport logistic industry. The selected companies for the purpose of the study were DHL, Jetpak and Schenker.

**The research concludes that:**

- Each companies included in the study are aware of the responsibility that their employees carry when interacting with customers. One president stated that their employees have the responsibility of evaluating how the services are performed and taking the matter sensuality.
- All the companies included in the study are not sure about the reasons of losing the customers, the companies' works in Sweden and lots of people their carry their own deliveries by themselves. This lead to the fact that the companies should study the customs of the customers they work with.
- All the companies recognize the importance of retaining the existing customers. Hence the retained customers are easy to do business with them, and a lot of vital feedback can be gained from those customers.

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**The research recommends that:**

- Companies should choose to apply different parts of CR to their business through technology and other means of communication with customers, various training programs and other resources devoted to be able to attract and keep customers.
- To increase customer retention rate companies have to adopt a proactive approach – devote time and resources to stay in touch with customer.
- Companies must recognize the impact of local culture and market conditions on company's business performance. Companies have to realize that they not only have to do the right things but have to do the things right. By listening to the customers and adopting a strategy based on common ground with customers a company stands better chance to outrank competitors and be more efficient in building strong relations with their customers, hence increase customer retentions.

**9. Zavareh 2007 "The role of analytical CRM in Maximizing customer profitability in private banking"**

The main objective of this research is to gain better understanding of the role of analytical CRM in maximizing customer profitability in private banking. In order to accomplish the objective of this research, a qualitative research approach was selected and a multiple case study was conducted which consisted of two cases. The cases comprised two leading banks with the largest market share among a 127 bank working in Sweden. The primary data was collected via in-depth interviews with banks managers employing the interview guide.

**The research concludes that:**

- The CRM helped both banks facilitate profitable relationships and establishing long term relationship. Therefore, CRM deployment is positively related to the creation and continuance of profitable and long term relation.

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- In term of utilization of the categories in CRM classification, both banks are applying operational, analytical, collaborative, and e CRM. Handelsbanken Bank is stronger in effectively conveying the information for the customer and more efficiently receiving information by the customer.
  - The results show that the Internet had a positive impact on both banks in terms of customer profitability.

**The research recommends that:**

- The banks should use the analytical CRM in segment , profile and gaining knowledge form their customers on their activities, which will enables them to have a one-to-one relationship and consequently better delivery of products and services.
- Using analytical CRM in advising managers how to make strategic decisions and guide them in order to take advance measures on allocating more resource on growing areas and aggravating activities on the unprofitable, less profitable customers and weak areas of business to improve them.

**10. Zineldin 2005“the quality and customer relationship management CRM as competitive strategy on the Swedish banking industry”**

The main objective of this study is to theoretically and empirically develop a better understanding of the relationship between customer relationship , services quality and bank strategic competitive position. The research conducted over the banks of Sweden and the empirical information and data for the research comes from three sources. The first source is the annual report and accounts of each commercial bank operating in Sweden, the second source is a personal interview with the large five banks directors, the third data source was collected by means of customer questionnaires.



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**The research concludes that:**

- This study provides a good reliable example where banks within the market must respond to changes in the external environment in order to survive, and forget the days of stable environment the banks were working in.
- The banking services are not absolutely price-sensitive. Higher products quality can justify higher prices. Some services will be highly profitable and relatively price-insensitive, while others may be marginal or even negative in rate on return.

**The research recommends that:**

- Banks must not rely on producing only one of few products, such as loan or current accounts. They have to diversify into different and new areas such as fund management, factoring, leasing ... etc.
- The competitive positioning , among other things can be achieved through prodserv quality, CRM and differentiation. The PRODSERV package has to be designed in a special way to reach and to suite prospects the c company is trying to please.
- Competitive positioning decisions are too important to be determined at a tactical and managerial level. We can conclude that positioning activities must be carefully planned and reconciled with other environment and business activities rather that to be the responsibility of sales services providers or marketing people.

**11. Ghavami & Olyaei 2006 “The Impact of CRM on Customer Retention”**

The researchers and through this study aims to investigate the process of CRM and its effects on customer retention. Hence, the main objectives of any CRM initiatives are, helping the companies to survive in today’s competitive environment. The researcher uses the qualitative approach in order to investigate the effect of CRM in

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customer retention. The researcher depend on the secondary data (all qualitative research about CRM and the realted fields CS and CR).

**The research concludes that:**

- CRM has been a key element of the modern marketing in recent year.
- It's a lot cheaper to keep existing customers happy than to attract new ones. But maintaining relation with existing customers in level that constantly encourage them to stay with a company is a dynamic and meticulous job.
- A new emerging approach that recently has been attracting corporations is customer value management. Their goal is to identify the value that can be delivered to customers along with their products through their supportive processes and services.

**The research recommends that:.**

- The companies should use the computerize CRM system carefully hence the right choose of the system can play a critical role on the success of the company.
- Along with sales and marketing, all the other departments of a business should be involved with CRM processes.
- The companies should perform customer's profitability analysis. The results of this analysis, if a customer is not doing well with presented products or services, there is an opportunity for us to find a better solution for that customers before losing it to competitors.
- The researchers recommend that, using proper CRM techniques will help the companies to stay ahead of customers and ensure their retention for the long run.

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**12. Bang (2005), “Understanding customer relationship management from managers and customers perspectives: Exploring the implication of CRM Fit Market orientation and market knowledge competence”.**

First, this study identified critical factors for successful CRM for a business including CRM Fit, Market Orientation, and Market Knowledge Competence. Because of its extensive reliance on CRM, the hotel industry was chosen as the empirical context. Based on hotel managers' responses, the relationships between these factors and CRM performance were examined. Second, based on the research model developed for the businesses, a reflected model of hotel customers' perspectives was developed and tested. 78 hotel managers in Kingston - Road Island USA were completed the survey and respond to the questionnaires, Moreover, and in order to view the customer perspectives an online survey targeted the hotel customers was lunched and a number of 361 customers completed the survey.

**The research concludes that:**

- As expected, not IT but well-designed CRM process was found to be critical for CRM performance in businesses.
- For customers, it was the maintenance stage of CRM process that mostly influenced customers' commitment/satisfaction. Market knowledge competence was found to have significant impact on CRM process.
- The influence of CRM practice worked differently for those customers who were reward-program members of hotel chains than for nonmembers.

**The research recommends that:**

- These findings highlight the importance of well-designed CRM processes and of understanding the perspectives of customers in relationship building.
- Managers should be aware of the different effects of each stage of CRM and of planning appropriate strategies for members and nonmembers to generate and reinforce satisfaction and commitment.

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**13. Thakur 2005 “Customer satisfaction, behavior intention, attitude, and knowledge: Focus on the antecedents of Relationship share in the contest of Customer relationship management”.**

This study offers an in-depth investigation of the factors that influences CWER and RS, and it empirically tested if customer’s satisfaction CS and CWER affect RS. Conceptual model derived from multi disciplinary literature, including marketing management, information system, e-commerce and social psychology. The model is empirically tested to determine 1- the effect of CWER and CS on RS, 2- the effect of customer’s attitude toward the firm on CWER, and 3- how customers knowledge and belief about CRM program affect customers attitude in the Indian Market. 2,148 questionnaires have been collected from customers who owned cell phone that was activated in order to investigate the model 3 points.

**The research concludes that:**

- The finding of this study a significant relationship between CWER and RS. The path coefficient between these two construct was 0.09  $p < 0.0$ . the results indicates that CWER is a predictor of RS.
- The results of this study indicate a positive relationship between satisfaction and relationship share. The path coefficient between these two construct was 0.08, significant at  $p < 0.05$  level, this mean that customer satisfaction is predictor of RS.
- The findings of this study indicated a strong positive relationship, path coefficient of 0.58 significant at  $p < 0.01$  between customer satisfaction and customer attitude toward the firm.
- The findings of this study indicated a strong positive relationship between customer attitude and CWER with path coefficient of 0.4 significant at  $p < 0.01$

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**The research recommends that:**

- The companies must use the CWER in getting priceless information about the customers. Such information can be used by the firm for cross selling different products to the same customers thus increasing their RS with the firm.
- Cell phone service providers need to build a strong personal relationship with their customers and understand their needs. They need to satisfy those needs within the timescale and in the manner that customer's desire.
- Managers should focus more on enhancing customer's knowledge and belief about a CRM program because the results of this research indicated that customer's knowledge about the firms CRM program influences their attitude toward the firm.

**14. Shiah 2005 "Critical Successful factors for the adoption of U.S customer relationship management solutions in Chinese Markets: Explanatory Research in Taiwan and Shanghai"**

The research focuses on customer relationship management CRM and its applicability in the China and Chinese culture. The primary goal is to examine the critical success factors to successfully implement US CRM solution in Chinese markets. The research questions focus on, whether US CRM solution is successfully transplanted into Chinese market? , and Do US and Chinese markets share the same CSFs to implement CRM? Or if variation of CSFs exist, why? Or should we localize US CRM to fit Chinese business situation?

This research employed qualitative approach. With literature reviews, this research author established the conceptual model and conducted pilot study interviews. One purpose of the pilot study was to understand the contemporary CSFs of US CRM implementation. Another purpose was to generate the interview questions for the formal research. The pilot study had completed seventeen interviews. The formal research had conducted thirty two formal interviews. This research author conducted qualitative analysis and concluded the answers to research questions.

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**The research concludes that**

- Every CRM project starts with planning of the business system then followed by the MIS implementations.
- The CRM vendors should avoid promoting CRM as a single product into Chinese market. Hence, the people seem to avoid the term CRM and use something specific like call center to target certain business objectives.
- The differentiation in business organization in both Chinese and Taiwan market means differ approaches in selling CRM packages are required.
- One possible marketing approach for US CRM vendors is to establish better middleware platforms and invite as many as possible local CRM value added remarketers VAR to create localized operational CRM application packages. The approach to sell the full version of a US CRM package is not a good solution in Shanghai (China) or Taiwan. Middle ware is easy to customize to meet the requirements of local customers. Toni Li from Voice Cyber suggest the idea to sell foreign CRM in Shanghai should be
  - Provide a CRM fundamental platform.
  - Open as many as possible system developer and generators of work flow
  - Localize the CRM solution by professional system firms basing on the system for each industry special business situation.

**The research recommends that:**

- The US CRM vendors may consider bringing in more CRM instructor and consultant to cultivate greater China market. More and different levels of CRM education for top executives, middle management team and operational staff in China can provide a full of well organized CRM education program and increase US CRM market awareness and acceptance.

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- It is highly recommended to start the CRM education with the executive level. Hence, the project owners, with the business owners together need to well define the business requirements and CRM project objectives. With a clear goal of CRM project is the first thing to insure the project success.
  - CRM users companies should well define election criteria before inviting (US) CRM vendors to present their solutions. The CRM projects team should select the best-fit proposal based on the firm's best business justification.

**15. Obeing & Loria , (2005), “Customer Relationship Management Implementation , a case of two service companies”.**

In this research a case study involving two Swedish service firms that have been implement CRM were studied in order to find the effect of using the CRM on improving the business. The research examined this fact through conducting and interviews with the top and middle management in large insurance company Lansforsakringar and HSB.

**The research concludes that:**

- The study revealed that the services firms benefited from CRM by way of providing customer value, high level of customer satisfaction, redaction in operation cost, profitability.. Etc.
- The finding proved that service companies can also benefit from CRM implementation. For example the companies studied talk of high level customers satisfaction and retention, high performance in terms of sales volume and profitability.
- It also came to light that service firms that are in the process of CRM implementation can start to enjoy some benefits along the road. This show that service firms can also attain some level of benefits even though the CRM implementation process is in progress.

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**The research recommends that:**

- In order to have a successful implementation of CRM system, the companies need to acquire the right CRM mix and component.
- For successful CRM implementation the companies need to support the CRM system, the other key factors such as strategy, integration and need to be given due attention by service firms.
- For the first time implementation the services firms should re-engineering their business process and strategically using CRM technology to capture a complete view of the customer.

**16. Karakostas, Kardara, & Papathanassiou' (2004), "The state of CRM adoption by the financial services in the UK, an empirical investigation".**

This paper discuss the results of an exploratory survey conducted in the UK financial services sector, it discuss CRM practice and expectations, the motives from implementation it, and evaluates post implantation experiences. It also investigates the CRM tools functionality in the strategic, process, communication, business to customer B2C organizational concepts and reports the extent of their use. In order to reach the study objectives a questionnaire was developed and sent to a selected sample of 46 financial sector companies.

**The research concludes that:**

- The survey indicated optimism about CRM potential and future proliferation although the results supported findings from pervious study that financial institution fail to adopt and appropriate approach to CRM implantation.
- The results show that despite the anticipate potential, the benefits from such tools are rather small.



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- With respect to the strategic potential of collecting and analyzing customer data, no one of the companies in the sample used any of this data to enter new market. In an era of intensive competition, data mining is clearly under deployed.

**The research recommends that:**

- The design of services should include CRM technology as well. The analysis of customer profiles will provide valuable input for new services.
- The implementation of the services should be supported by changes in the organizational process. Customers should be considered an integral part of business process. Such change should integrate all communication channels.
- The evaluation metrics of CRM approaches and system should be the same as those used for process management, customer satisfaction and strategy development.

**17. Lindgreen 2004, “the Design, implementation and monitoring of a CRM program: a case study”**

The role of the research was to understand how CRM has been implemented in real-life settings. The study conducted a single embedded case study on Dagbladet Borsen, the largest publisher of business related material in Scandinavia, by considering key areas of a four year long CRM program, and offer insight into the procedure that has been developed by the firm. The procedure is organized around eight areas: commitment of senior management, situation report, analysis, strategy formulation, implementation, management development, employee's involvement and evaluation of loyalty building processes. To achieve the objective of the case study in depth three hour interviews with the company's sales and marketing director, subscription manager, marketing coordinator and database manager, and the consulting firm managing partner responsible for the CRM project. The main objectives of the interviews was to gain a comprehension of how Dagbladet Borsen has sought to manage its customer relationships, and to extract those factors that can explain how the CRM marketing strategy has been designed and later implemented and monitored.

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**The research concludes that:**

- The case study illustrates that to run a project that falls outside a firm's usual area it is advisable to seek the advice from an external consulting firm. It is key to secure commitment from the organization as well as the necessary resources.
- This case also illustrates how important it is to obtain , and to use in an intelligent way , information about the customers and the business process that drive loyalty.
- The study made the importance of CRM visible to everyone in the organization.

**The research recommends that:**

- In order to insure a successful CRM implementation, it crucial to have an ongoing supply of CRM competencies in the organization.
- When a company wants to realize its CRM strategy the senior management must develop accordingly, employee must be loyal as their creation is important in all essential business situation and process.
- In order to monitor customer loyalty , the following three component should be used in the CRM program
  1. The customer retention rate, which express a company's ability to retain its customer over a year.
  2. The share of customer wallet, and
  3. The ambassador's degree, which means the extent to which the present customers will recommend the company to potential customers.

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**18. Torres, Antonio, Jr.(2004), “Factors influencing customer relationship management (CRM) performance in agribusiness firms**

The objective of this study was to identify the activities/behaviors/outcomes that comprise and impact Customer Relationship Management programs of agribusinesses and identify key differences across the core set of activities/behaviors/outcomes and firm demographic variables by firm size (Small, Medium, and Large), general market segments served (Crop, Livestock, Services, and Diversified), and by primary position in the distribution channel (Direct, One-level, and Complex) of agribusinesses in the USA. The final objective was to develop taxonomy of agribusiness firms based on the perceived performance of their CRM programs. The analysis identified three distinct groups; which were named Leaders, Emerging Leaders, and Underachievers. For each group, a narrative profile was developed that described their activities/behaviors/outcomes and highlighted differences in these core elements across firms. Data for this study was collected from middle and upper level agribusiness managers through a self-administered mail questionnaire. The response rate for the study was 11.7%, resulting in 233 usable questionnaires. Agribusiness managers were asked to provide responses to the core set of activities/behaviors/outcomes identified for this research, they are: CRM performance, CRM objectives, customer data collected or accessed, uses of customer data, approach to market, tactics used to develop and maintain customer relationships, information technology infrastructure assessment, and challenges to making the best use of customer data in an information system/database.

**The research concludes that:**

- Large firms have a resource advantage (i.e., people, process, technology) that they exploit to achieve their high level of performance relative to Medium and Small firms.
- With respect to general market segments served, the Crop segment performed best, relative to Livestock, Services, and Diversified segments, while those operating units that sold directly to customer (Direct) or had one level between themselves and end-users (One-level) had the most effective CRM programs relative to operating units using a complex distribution channel.

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- The narrative profile developed for Leaders, Emerging Leaders, and Underachievers found that those agribusiness firms that performed best had loftier goals, collected more sophisticated customer data, used an array of tactics to develop and maintain customer relationships and encountered fewer challenges to making the best use of customer data in an information system/database.

**The research recommends that:**

- The leaders should reduce or neutralize the impact that challenges to making the best use of customers data in their operations. These challenges include: how to effectively collect and use customer data, and software technology.
- Emerging leaders ought to increase the percentage of their customers base that they collect or have access to data for, especially cost of services and CLV data , so they can compete in equal basis with leaders.
- The top management should support the underachiever employees and give them the tools and access to customer database in order to resolve the customer's issues in time.

**19. Lyttle 2003 , “the influence of customer relationship management to customer satisfaction and retention in property and casualty insurance”**

The primary objective of the research was to examine and prioritize the current customer service standards and to determine which standards should be retained, which needed to be dropped or modified, and what new standards may be needed to increase customer satisfaction. To achieve this goal, data were collected through in-depth telephone interviews with the company's current personal line (property and casualty insurance products designed for and bought by individuals, including homeowners and automobile policies) customers in Cleveland state-USA. The questionnaire was created in conjunction with the insurance company's internal marketing research department and an outside marketing research firm and was defined by past qualitative research and the insurer's predefined needs.

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**The research concludes that:**

- The research supports the importance of CRM on customer satisfaction and retention with the insurance companies. Moreover, the results from the analyses of customers of low- and high-value agents provided support for the impact of the company's internal program focus.
- Ease of billing and explanation of premium costs influenced customers of both high- and low-value agencies; satisfaction with the agent was a significant contributor to their likelihood to renew for customers of high-value agencies.

**The research recommends that:**

- Findings recommend the customer facing benefits from the FOCUS program positively influences the customer's likelihood to renew. It seems that although the customer is unaware of the high-value agency's benefits, the customer has a more positive experience, and in turn, is more satisfied with their agent, leading them to renew.
- The customer data base should be shared among the business units and the parent insurance company in order to avoid the former failure of adopting CRM concept in the company.
- The company should process the compiling a database to allow the implementation of CRM containing the elements of customer Life time value LTV. In the future, LTV may be calculated and compiled for customers. Valuable customers will be identified and profiled and more effort should be directed at these customers. High-value customers can give insight and feedback, allowing the company to improve its customer service.

**2.14.3 Comments on Previous studies**

after reviewing the above previous studies, It has been noticed that most of the studies present the relation between the CRM implementation and one of the marketing objectives (either, Satisfaction such as Salrak and Fard 2009, and Thakur 2005, or retention only such as Ghavami & Olyaei 2006 , Or both Satisfaction and Retention

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such as Baiely 2008 , Royia Rahimi 2007 and Lyttle 2003). The other studied the effect of CRM implementation on improving the services quality such as CHI 2009 and Obeing & Loria 2005. Moreover, the studies of Hazbon 2006, Saremi 2009 and Shiah 2005 deals with the key factors that contribute to successful CRM strategy implementation. Moreover, all the presented studies measure the effect of CRM implementation from the companies or organization's perspectives not from the customer's perspectives.

None of the studies examine the effect of CRM implementation on customer satisfaction, acquisition, retention or decreasing customer loss in Palestinian territories especially for a semi public organization.

The research conducted by Masroujeh 2009 examines the critical factors which need to be considered in order to reach customer satisfaction and delight. Those factors which were studied by Masroujeh are considered corner stone's in any CRM strategy that any organization wants to adopt.

After reviewing the results of the previous studies, it has been noticed that all the studies highlighted the importance of CRM for the companies in today's competitive environment and its contribution of to reach customer satisfaction, loyalty and retention. Moreover, the studies concentrate on the vitality of having updated database on the customers and the importance of using these data efficiently and correctly in order to reach the CRM objectives. Adding to that, the studies revealed that the most important factors for successful CRM implementation are, high management support and the selection of the most appropriate CRM system to adopt.

**This study adds the following important points:**

- The study examines the effects of CRM concept adoption and the four marketing objectives, (satisfaction, acquisition, retention and decreasing customer loss).
- This study is the first to consider (as per the knowledge of the researcher) the effect of CRM concept adoption on a semi public organization providing public services and work in Gaza Strip- Palestine from customer's perspectives.

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- The study is considered the first to classify the customers according to their behaviors toward paying the water bills.
  - The study agreed with the previous studies in the importance of customers database and the continues communication with the customers in reaching customer satisfaction, acquisition, retention and decreasing customer loss.

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## **CHAPTER 3: RESEARCH METHODOLOGY**



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### **3.1 Introduction**

The purpose of this chapter is to describe the research methodology. The methodology refers to the procedural framework within which the research is conducted. This chapter will present how the current study was designed and providing a clear description of the specific steps that were taken to address the research problem and test each of the **five** hypothesis laid out in chapter one. First, the research design will be discussed followed by population, sample, research sitting, questionnaire design, statistical data analysis content validity, pilot testing and the ethical aspect of the research.

### **3.2 Study Design**

The researcher followed the descriptive analytical approach in conducting the research. This research is categorized under applied researches that depend mainly on data collection from primary sources through distributing designed questionnaire for research purposes.

- The data was collected by distributing a questionnaire on the target population.
- The cover letter that accompanied the questionnaires presents a definition of CRM and its use in order to minimize the misunderstanding amongst the responders.
- The researcher used secondary sources such as Business journals, books, previous research papers and business letters that are related to the research topic.
- Statistical analysis carried out on the questionnaire. Frequencies and percentages were calculated in the model along with accuracy conditions.
- The statistical analysis results were examined and the final research conclusion and recommendation were formulated based upon.
- At the end of the research the researcher suggests further studies.

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### 3.3 Population and sample

The study population consists of CMWU customers in Rafah City with household subscriptions representing 90% of the total registered customers. The governmental and institutional subscriptions have been removed out of the sample population range because these institutes follow certain policy procedures and the personals in charge in Rafah city has no effect regarding paying the water bills to the CMWU. The total number of the registered customers is 15,272 which represent the research population; that sample was collected from (CMWU billing system Records March2010). The researcher classified the customers according to their areas (Rafah City is divided into seven areas), and the sample was selected from the area with largest customer numbers in order to ensure the randomness and the diversification of the customers in Rafah. Moreover, and after reviewing customers' bill paying behavior in different areas, the figures showed similar behavior for the customers in this regards. Adding to that, the sharing mentality and social behavior among Rafah city residents support the sample representativeness in order to fulfill the purpose of the study. Basically, the customers in the selected areas were categorized according to their bill paying behaviors as seen below:

- Committed customers (CC): customers pay the bills on monthly basis.
- Partially Committed customers (PCC): Customers pay the bills every 2-5 months.
- Uncommitted customers (UCC): Customers don't pay the bills or pay the bills in more than 6 months.

Table 3.1, illustrates the sample selection producers.

**Table 3.1: No of customers / Area. CMWU billing record.**

Area No.	1	2	3	4	5	6	7
No. Of customers	2894	2539	2218	1936	3294	2191	200

The study sample was selected from area no. 5, (3,294 customers) and divided according to bill paying behavior.

Table 3.2 illustrates customer's classification in Area no. 5:

**Table 3.2: customer's classification in area no.5 CMWU billing Record**

Rafah Area No	Total No. of customers	Customer Classification	Customers No.
5	3294	UCC	2367
		PCC	796
		CC	131
	<b>Total</b>		<b>3,294</b>

The study sample was selected according to the following criteria

1. All the committed customers (CC) were included in the sample, because they represent small group and the researcher is interested in reviewing all the CC opinions.
2. The UCC & PCC groups were selected randomly according to the following equation.

$$n = \left( \frac{Z}{2m} \right)^2 \dots\dots\dots(1)$$

Where:

Z: Normative values for known level of significant (ex. Z=1.96 for confidence interval of 95% and level of significance  $\alpha = 0.05$  ).

m = marginal error expressed as decimal mark (ex.  $\pm 0.05$ ).

The sample size was corrected for the final sample size according to the following equation:

$$n_{\text{mod}} = \frac{nN}{N + n - 1} \dots\dots\dots(2)$$

Where n: represents the total population size.

Using equation 1 to calculate the sample size

$$n = \left( \frac{1.96}{2 \times 0.05} \right)^2 \cong 384$$

Hence, the population size equal = 3163 (PCC + UCC)

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The modified sample size using equation no.2 is:

$$n_{\text{mod}} = \frac{384 \times 3163}{3163 + 384 - 1} \cong 343$$

Thus, the appropriate sample size in this case will be at least 343.

Distributing the sample size for the PCC & UCC

The PCC sample will be its fraction from the total size multiplied with the modified sample size (343) and this will be equal to  $\left[ \frac{796}{3163} \right] \times 343 = 86$  customers.

Thus, the UCC sample size is  $= 343 - 86 = 257$  customers.

In concluding the total sample size, is the sum of CC + PCC + UCC

i.e.  $= 131 + 86 + 257 = 474$  customer.

The customers were randomly selected as per the list prepared for each customer classification using pre-prepared random selection software. The governmental and institutional subscriptions shall be removed from the list and replaced with alternate customers with subscription meets the sample specifications.

### **3.4 Inclusion and Exclusion Criteria**

- **Inclusion Criteria**

- Customer in the subarea No.5 Rafah City.
- Customers with household subscriptions.

- **Exclusion Criteria**

- Customers with commercial, industrial, institutional, governmental and agricultural subscriptions.
- Customers in areas No. (1,2,3,4,6,7).

### **3.5 Questionnaire Design and Preparation**

The Questionnaire consisted of two sections; the first section was concerned with personal traits (age, educational attainment, Monthly income, how and where the

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customer pays the bills, investigating whether the customer visited the CMWU customer services offices and web site or not).

The second section focused on the four objectives of the study: **The adoption of CRM concept in CMWU has positive effect on customers**

- Satisfaction, (first objective with 13 section)
- Acquisition ( second objective with 14 section),
- Retention ( Third objective with 10 section ) and finally,
- Decrease customer loss (fourth objective with 11 section), at 5% level of significant,

The Questionnaire was drawn in Arabic in order to be understood by the entire sample. The questions were arranged in logical order and proper sequencing starting with personal data and ending with suggestions.

The questionnaire which was distributed to the CC contained the attributes related to satisfaction, retention and decreasing customer loss only, hence the CMWU already acquire this group.

The questionnaire which was distributed to the PCC contained the attributes related to satisfaction, acquisition, retention and decreasing customer loss. This group is similar to the CC group, the only difference is that the CMWU did not acquire them totally. So, there is a need to study the acquisition objective for this group.

The questionnaire which was distributed to the UCC contained the attributes related to satisfaction, and acquisition only, hence it's not reasonable to study the retention and decreasing the customer loss with the customers that CMWU did not acquire yet.

The questionnaire design depended mainly on researcher experience in the topic of customer relationship management CRM, and it was refined and adjusted after reviewing several questionnaires models such as: **Masroje 2009, Chi 2009, Saremi 2009, Rahimi 2008, Shiah 2005.**

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### 3.6 Response Rate

The response rate according to customers' classification as follows.

**Table 3.3: Response rate according to customer classification**

Customers' Classification	Response Rate (%)
CC	100%
PCC	97.60%
UCC	69.20%
Response Rate for PCC and UCC	76.40%
<b>Response Rate</b>	<b>82.90%</b>

### 3.7 Data Collection

The data collection phase was performed under the direct supervision of the researcher. Workshop was conducted for the employees in the customer services department of CMWU headquarter and Rafah branch, to explain the purposes of the questionnaire and its objectives, how to distribute the questionnaire, and how to encourage the customers to fill in the required data. The employees (volunteers) distributed and collected the questionnaires. It was noticed that there was no duplication occurred because of the distribution phase, as it was performed according to pre-prepared customers list and officially reviewed database produced for this purpose.

### 3.8 Ethical Matter

The study and the questionnaire purpose were printed in the water bills remarks section for the period pertaining the distribution of the questionnaires. The customers' services employees visited the selected customers in appropriate time and kindly encouraged the customers to fill in the questionnaire.

### 3.9 Data Coding and Entry

Questionnaires were coded numerically in different numbers from serial numbers to enable the researcher to enter the data systematically and efficiently and to maintain no missing questionnaires. Data were entered using SPSS (the Statistical Package for Social Science). An expert statistician was consulted for guidance. Data screening was performed through frequency to assure check for any error.

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### 3.10 Data Measurement

In order to be able to select the appropriate method of analysis, the level of measurement must be understood, for each type of measurement, there is/are an appropriate method/s that can be applied and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the important (1, 2, 3, 4, & 5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on Likert scale the following is illustrated:

**Table 3.4: Likert scale**

<b>Item</b>	Strongly agree	Agree	Don't know	Disagree	Strongly Disagree
<b>Scale</b>	5	4	3	2	1

### 3.11 Statistical analysis Tools

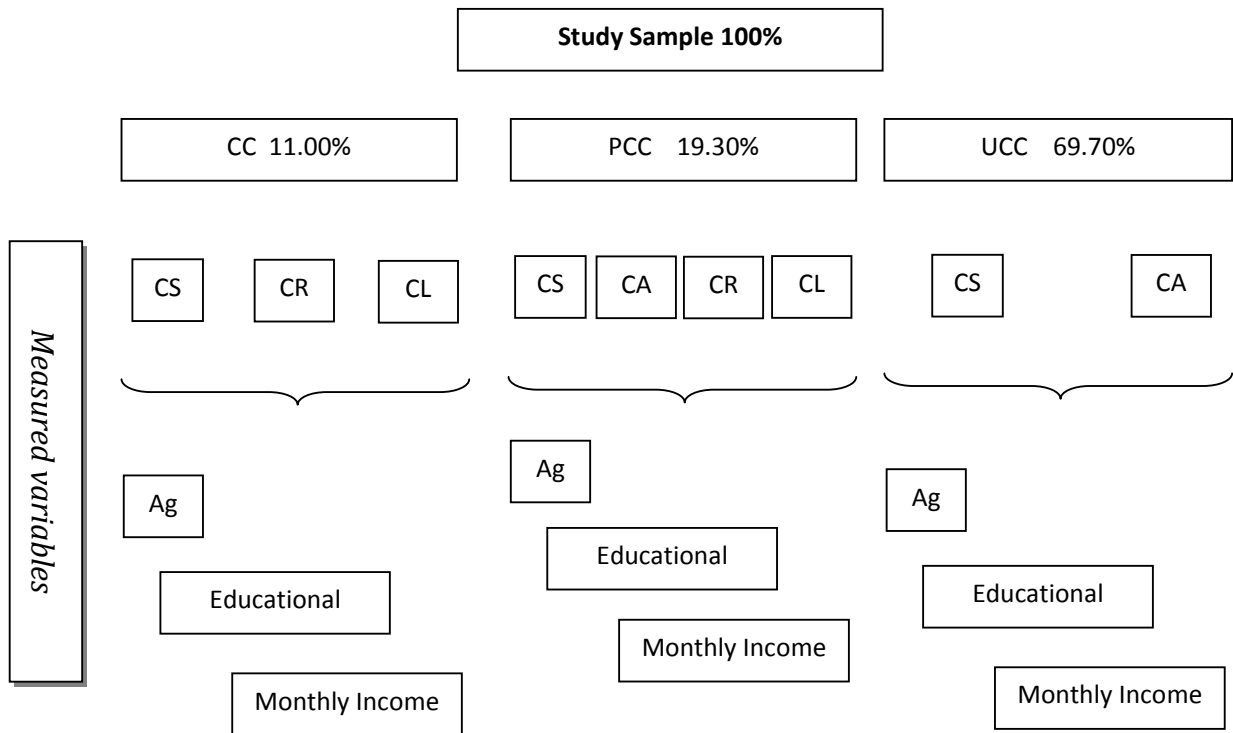
The researcher used data analysis both qualitative and quantitative data analysis methods. The Data analysis was made utilizing (SPSS 15). The researcher utilized the following statistical tools:

- Cronbach's Alpha for Reliability Statistics
- Spearman Rank correlation for Validity
- Frequency and Descriptive analysis
- Nonparametric Tests (Sign test, and Kruskal-Wallis test)

Sign test is used to determine if the mean of a paragraph is significantly different from a hypothesized value 3 (Middle value of Likert scale). If the P-value (Sig.) is smaller than or equal to the level of significance,  $\alpha = 0.05$ , then the mean of a paragraph is significantly different from a hypothesized value 3. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 3. On the other hand, if the P-value (Sig.) is greater than the level of significance,

$\alpha = 0.05$ , then the mean a paragraph is insignificantly different from a hypothesized value 3.

Kruskal-Wallis test is used to examine if there is a statistical significant difference between several means among the respondents toward the Effect of CRM Concept Adoption on Customer Satisfaction - Customers Perspective due to Personnel information (age, educational attainment and standard of living. Fig(3.2) shows the data analysis flow chart.



CS: Customer Satisfaction

CC : Committed Customers

CA: Customer Acquisition

PCC: Partially committed customers

CR: Customer Retention

UCC: Uncommitted customers

Cl : Customer Loss

**Figure 3.1: Data Analysis flow chart.(conceptualized by the researcher)**

### 3.12 Piloting

Pilot test was made to check whether the questionnaire is according to reliable scientific bases or not, and to check the extent to which it meets the survey objectives and to identify any defect in the questionnaire design. The total pilot sample size was 40



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customers. In light of the pilot study modifications were made, and the final form of the questionnaire was produced.

### **3.13 Validity of the Questionnaire**

Validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include criterion-related validity and construct validity.

### **3.14 Statistical Validity of the Questionnaire**

Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Pilot and Hungler,1985). Validity has a number of different aspects and assessment approaches.

To ensure the validity of the questionnaire, two statistical tests were applied. The first test is Criterion-related validity test (Spearman test) which measures the correlation coefficient between each paragraph in one field and the whole field. The second test is structure validity test (Spearman test) that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one filed and all the fields of the questionnaire that have the same level of similar scale.

### **3.15 Internal Validity**

Internal consistency of the questionnaire is measured by a scouting sample, which consisted of 30 questionnaires through measuring the correlation coefficients between each paragraph in one field and the whole filed.

### **3.16 Reliability of the Research**

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (Polit & Hunger, 1985). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient (Polit & Hunger, 1985).

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### **3.17 Cronbach's Coefficient Alpha**

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

### **3.18 Split Half Method**

This method measures the relationship between the odd and even paragraphs.

### **3.19 Internal Validity**

The researcher assessed the fields' internal validity by calculating the correlation coefficients between each paragraph in one field and the whole field. Table (3.5) clarifies the correlation coefficient for each Paragraph of the "?" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at  $\alpha = 0.05$ , so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

**Table 3.5: Correlation coefficient of each item of customers Satisfaction measure and the total of this field**

<b>No.</b>	<b>Item</b>	<b>Spearman Correlation Coefficient</b>	<b>P-Value (Sig.)</b>
1.	I'm satisfied of CMWU performance of the provided services)	0.632	0.000
2.	I feel satisfied if CMWU called to ask for my opinion regarding the provided services	0.735	0.000
3.	I feel satisfied if CMWU contact me by phone, cell phone, or Email	0.691	0.000
4.	I feel satisfied if I received greetings flyers or cards from the CMWU in religious and public events.	0.743	0.000
5.	I feel satisfied if I received greetings flyers and cards from the CMWU on personal events.	0.747	0.000
6.	I feel satisfied when I pay the water bill on monthly basis.	0.597	0.000
7.	I feel satisfied when I pay the water bill on regular basis.	0.575	0.000
8.	I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances.	0.495	0.000
9.	I feel satisfied if I found answers to my questions in CMWU website	0.412	0.003
10.	I feel satisfied when the CMWU asks me about the suitable time to visit and record my water meter by the water meter reader.	0.539	0.000
11.	I feel satisfied incase the CMWU developed effective communication tools with the customers.	0.636	0.000
12.	I feel satisfied incase the information of the provided services was found in the CMWU website.	0.537	0.000
13.	I feel satisfied incase the CMWU has committed a water distribution schedule and no schedule changes to be added without prior notice.	0.504	0.000

\* Correlation is significant at the 0.05 level

Table (3.6) clarifies the correlation coefficient for each Paragraph of the customer acquisition measure and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at  $\alpha = 0.05$ , so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

**Table 3.6: Correlation coefficient of each item of customer’s acquisition measure and the total of this field**

No.	Item	Spearman Correlation Coefficient	P-Value (Sig.)
1.	I will pay the bill incase the water meter reader visited me during my proposed times to CMWU.	0.632	0.000
2.	I will pay the water bills if CMWU employees’ shows respect and descent reception.	0.647	0.000
3.	I will pay the water bill incase the CMWU developed a closed relation with its customers.	0.823	0.000
4.	I will pay the water bill if the CMWU maintained continuous communication with me.	0.548	0.000
5.	I will pay the water bills if CMWU employees’ showed concerns to my bill issues.	0.796	0.000
6.	I will pay the water bill if I receive personal and special care by CMWU employees.	0.425	0.002
7.	I will feel happy if I receive the water bill with special congratulation for special events of mine.	0.697	0.000
8.	I will appreciate the CMWU incase it shows more concern of the customers and their complaints.	0.601	0.000
9.	I will pay the water bill incase the CMWU continued its rewards campaigns.	0.547	0.000
10.	I will pay the water bill incase the CMWU developed prompt responses to customers’ complaints.	0.733	0.000
11.	I feel that providing proper water and sanitation services will change my perception towards CMWU.	0.648	0.000
12.	Providing accessible and affordable information regarding the services provided by the CMWU will improve the relation with the customers.	0.634	0.000
13.	Appropriate Customer Department response with me as a customer will change my behavior with CMWU water bill.	0.772	0.000
14.	Appropriate Customer Department Staff responses and reaction to my queries will improve my manner with CMWU water bill.	0.780	0.000

\* Correlation is significant at the 0.05 level

Table (3.7) clarifies the correlation coefficient for each Paragraph of the "customer retention measure" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at  $\alpha = 0.05$ , so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

**Table 3.7: Correlation coefficient of each item of customer’s retention measure and the total of this field**

No.	Item	Spearman Correlation Coefficient	P-Value (Sig.)
1.	I advise my friends and my neighbors to be committed to the water bills.	0.698	0.000
2.	I will continue paying the water bills if the CMWU keeps developing the provided services.	0.736	0.000
3.	I will continue paying the water bill incase CMWU kept developing proper closed communication channels with the customers.	0.742	0.000
4.	I will continue paying the water bills if CMWU continuously communicates with me personally.	0.346	0.013
5.	I talk about the CMWU in a good way when it’s mentioned in various meetings.	0.476	0.001
6.	I feel comfort inside CMWU customer services office.	0.434	0.002
7.	I think that continuous communication with the customers via different tools will achieve continuous payments of CMWU water bills.	0.624	0.000
8.	I will keep on paying the water bills despite the way CMWU treats me as a customer or not.	0.655	0.000
9.	I put the water bill on the top of my monthly commitments priorities.	0.724	0.000
10.	I will continue paying the water bill if CMWU shares my special occasions.	0.766	0.000

\* Correlation is significant at the 0.05 level

Table (3.8) clarifies the correlation coefficient for each Paragraph of the customer loss measure and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at  $\alpha = 0.05$ , so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

**Table 3.8: Correlation coefficient of each item of customer’s loss measure and the total of this field**

No.	Item	Spearman Correlation Coefficient	P-Value (Sig.)
1.	I will not stop paying the water bills even if CMWU took good care of its customers and their complaints.	0.588	0.000
2.	I will not stop paying the water bills even if CMWU continued developing its provided services	0.777	0.000
3.	I don’t feel comfort when I did not pay the water bill bearing that CMWU treats my water issues considerably.	0.725	0.000
4.	I don’t feel comfort when water bills arrears accumulated, especially if CMWU established continues communication with me.	0.785	0.000
5.	I will not stop paying the water bills even if I sensed improvements of the provided services.	0.791	0.000
6.	I will not stop paying the water bills even if CMWU continued its communication with the customers and took care of their complaints.	0.697	0.000
7.	I will not stop paying the water bill incase I felt that CMWU deals with its customers in a proper and professional way	0.880	0.000
8.	I will not stop paying the water bill even if I felt that CMWU employees care of me.	0.878	0.000
9.	I will not stop paying the water bills even if CMWU agreed on my preferred payment terms of the water bills.	0.731	0.000
10.	I will not stop paying the water bill even if CMWU developed special payment ways which take into account my time and my availability.	0.740	0.000
11.	I will not stop paying the water bill even if I felt that the CMWU considers the economical situation of its customers.	0.620	0.000

\* Correlation is significant at the 0.05 level

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### 3.20 Structure Validity

The researcher assessed the fields' structure validity by calculating the correlation coefficients of each field of the questionnaire and the whole of questionnaire.

Table (3.9) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at  $\alpha = 0.05$ , so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

**Table 3.9: Correlation coefficient of each field and the whole of questionnaire**

No.	Field	Spearman Correlation Coefficient	P-Value (Sig.)
1.	Customer's satisfaction measure	0.741	0.000
2.	Customer's acquisition measure	0.870	0.000
3.	Customer's retention measure	0.800	0.000
4.	Customer's loss measure	0.712	0.000

\* Correlation is significant at the 0.05 level

### 3.21 Reliability Statistics

Table (3.10) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.859 and 0.967. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.967 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

**Table 3.10: Cronbach's Alpha for each field of the questionnaire and the entire questionnaire**

No.	Field	Cronbach's Alpha
1.	Customer's satisfaction measure	0.859
2.	Customer's acquisition measure	0.922
3.	Customer's retention measure	0.867
4.	Customer's loss measure	0.938
5.	Total paragraphs of the questionnaire	0.967

Table (3.11) clarifies the correlation coefficient for each field of the questionnaire. The correlation coefficients of all field are significant at  $\alpha = 0.05$ , so it can be said that the fields are consistent and valid to be measure what it was set for. The Thereby, it can be

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said that the researcher proved that the questionnaire was valid, reliable, and ready for distribution for the population sample.

**Table 3.11: Split Half Method**

No.	Field	Correlation Coefficient	Spearman-Brown Correlation Coefficient
1.	Customer's satisfaction measure	0.902	0.949
2.	Customer's acquisition measure	0.895	0.945
3.	Customer's retention measure	0.726	0.841
4.	Customer's loss measure	0.889	0.942
5.	Total paragraphs of the questionnaire	0.961	0.980



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**CHAPTER 4: DATA ANALYSIS,  
INTERPRETAION AND HYPOTHESES  
TESTING**

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#### 4.1 Introduction

This chapter will display the data and results from the study. First, the descriptive data analysis of the sample (personal information) will be presented and discussed; then, the data analysis relevant to each hypothesis will be presented in addition to, the connection of the results with the previous studies. Moreover, the researcher will use his experience and knowledge of the study area to comments on the results.

#### 4.2 Descriptive Analysis of the Sample, Personal information

Table 4.1 shows that the majority of the customers are within the age of 40 to above 50 years old (70.50%), which indicates that respondents are mature enough to contribute in the study's results and it shall be beneficial due to their background during several service providers' periods.

**Table 4.1: Customers' Age Frequency Outcomes.**

Age	Frequency	Percent (%)
20- less than 30	56	14.1
30- less than 40	61	15.4
40- less than 50	135	34.0
50 and above	145	36.5
Total	397	100.0

Table 4.2 shows that the customers included in the sample are distributed equally among the educational attainment levels presented in the questioners (51.10% with higher school or less and 48.40% with educational attainment higher than high school). This indicates that the respondent have acceptable educational level which will help them understand the purpose of the study, give reasonable answers and realize the importance of paying the water bills to a private institutes.

**Table 4.2: Educational attainments**

Educational attainments	Frequency	Percent (%)
Less than high school	107	27.9
High school	89	23.2
Diploma	84	21.9
B.Sc.	87	22.7
Graduate studies	16	4.2
Total	383	100.0

\* Missing answers 10.

Table 4.3 shows that almost half of the customers have income less than 1000 NIS (46%), this might guide the research in building payment/income relationship into the bills paying behaviors, yet the results above can be attributed to the economical situation of both the household and the current situation nationally (for example employment opportunities), particularly in Rafah city. Most of the results represent the UCC category, and this sets the monthly income less than 1000 NIS to be considered as an excuse for not paying the water bill.

There were a 49 missing for this question, this might be refer to customer rejection to clarify the information regarding their monthly income.

**Table 4.3: Monthly income / NIS**

Monthly income / NIS	Frequency	Percent (%)
Less than 1000	160	46.0
1001-2000	88	25.3
2001-3000	80	23.0
More than 3000	20	5.7
Total	348	100.0

\*missing answers 49.

Table 4.4 illustrates the bill paying behavior for the customers included in the research sample. This question aims to investigate the creditability of the participants; hence these results can be easily elicited from the CMWU billing system. Moreover, the researcher has intentionally chose not to set (not paying the water bill) as an option in the questionnaire and replaced it with (More than 6 months) in order to overcome any potential embarrassment that may result from this question especially for the UCC category. The results of this question shows high degree of creditability, hence it matches the CMWU billing records.

**Table 4.4: how often you pay the water bill.**

Frequent Payment of the water bill	Frequency	Percent (%)
Monthly	131	33.3
2-3 Months	53	13.5
3-6 Months	31	7.9
More than 6	178	45.3
Total	393	100.0

Table 4.5 shows that 86.60% of the customers pay their bills through CMWU customers' services office. This result matched the CMWU billing records, hence till now CMWU did not develop other ways for collecting the bills, and the current approach of paying the bills is through the water meter readers who collect the bills from the customers at door steps in which it is a newly approach carried out by the customers' services department.

**Table 4.5: paying the bill occurs through**

Paying the bill occurs through	Frequency	Percent (%)
Customer services office	303	86.6
Water meter reader	47	13.4
Total	350	100.0

\* missing answers 47.

Table 4.6 shows that 334 of the of the respondents had visited the CMWU customer services office and this reflects the accessibility and availability of the office. This result is slightly different than table 4-5 (No of customers paying the bills through customer services office are 303), the reasons for the difference could be due to:

- Customers stopped paying the water bill through the customers' service office and start paying the water bill through the water meter reader.
- Customers visited the office for other issues than paying the bills, i.e. complains, maintenance issues, and water distribution schedule.
- Uncommitted customers visited the office, in which they visit the office for other reasons rather than paying and this was counted in.

**Table 4.6: Visiting CMWU customer services office**

Visiting CMWU customer services office	Frequency	Percent (%)
Yes	334	84.80
No	60	15.20
Total	394	100.0

Table 4.7 shows that only 10.40% of the customers had visited the CMWU web page. This results is expected hence CMWU did not develop its web page until recently, and there are no services provided for the customers through the web (for example; account checking , entering water meter reading, consumption or payment data , paying the water bill ... etc) to be a reason for check the website.

**Table 4.7: Visiting CMWU customer services website.**

Visiting CMWU official website	Frequency	Percent (%)
Yes	41	10.4
No	352	89.6
Total	393	100.0

### 4.3 Hypothesis Testing

The research hypothesis were tested according to figure (3.1), where the customers divided into 3 groups and the results being analyzed for each group separately to find out the response of the customers according to their classification. The effect of CRM concept adoption on customer satisfaction was tested for the CC, PCC and UCC, in the other hand, the effect of CRM concept adoption on customer acquisition was tested for PCC & UCC only. Finally, the effect of CRM concept adoption on customer's retention and customer's loss was tested for the CC & PCC. The question about how often the customers pay the water bills was used to classify the customers to CC, PCC or UCC according to their responses. Table (4.8) illustrates the methodology used in the hypothesis testing.

**Table 4.8: Analysis methodology for research hypothesis according to customer's classification.**

Customer Classification	How often you pay the water bill	1 <sup>st</sup> hypothesis CRM & Satisfaction	2 <sup>nd</sup> hypothesis CRM & Acquisition	3 <sup>rd</sup> hypothesis CRM & Retention	4 <sup>th</sup> hypothesis CRM & Customer Loss	5 <sup>th</sup> hypothesis Age, educational attainment, monthly income effect
CC	Monthly	X		X	X	X
PCC	2-3 Months	X	X	X	X	X
	3-6 Months					
UCC	More than 6 months	X	X			X

Sign test is used to determine if the mean of a paragraph is significantly different from a hypothesized value 3 (Neutral). If the P-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$ , then the mean a paragraph is significantly different from a hypothesized value 3. The sign of the Test value indicates whether the mean is

significantly greater or smaller than hypothesized value 3. On the other hand, if the P-value (Sig.) is greater than the level of significance,  $\alpha = 0.05$ , The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

#### 4.3.1 Testing of Hypothesis 1

The adoption of CRM concept in CMWU will have a positive effect on **customer's satisfaction** at 5% level of significant.

##### 4.3.1.1 Hypothesis testing for Committed Customers

Table (4.9) shows the following results:

**Table 4.9 : Analysis results for customer satisfaction measure – CC.**

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I am satisfied of the services provided by the CMWU (I'm satisfied of CMWU performance of the provided services)	3.42	68.46	3.97	0.000	12
2.	I feel satisfied if CMWU called to ask for my opinion regarding the provided services	4.17	83.41	10.27	0.000	7
3.	I feel satisfied if CMWU contact me by phone, cell phone, or Email	3.94	78.75	8.30	0.000	10
4.	I feel satisfied if I received greetings flyers or cards from the CMWU in religious and public events.	4.26	85.24	9.98	0.000	5
5.	I feel satisfied if I received greetings flyers and cards from the CMWU on personal events.	4.00	80.00	7.89	0.000	8
6.	I feel satisfied when I pay the water bill on monthly basis.	4.48	89.61	10.64	0.000	1
7.	I feel satisfied when I pay the water bill on regular basis.	4.45	88.98	10.55	0.000	2
8.	I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances.	3.26	65.16	2.49	0.006	13
9.	I feel satisfied if I found answers to my questions in CMWU website	3.91	78.28	8.61	0.000	11
10.	I feel satisfied when the CMWU asks me about the suitable time to visit and record my water meter by the water meter reader.	4.20	84.06	9.97	0.000	6
11.	I feel satisfied incase the CMWU developed effective communication tools with the customers.	4.36	87.13	10.59	0.000	4
12.	I feel satisfied incase the information of the provided services was found in the CMWU website.	3.99	79.85	8.68	0.000	9
13.	I feel satisfied incase the CMWU has committed a water distribution schedule and no schedule changes to be added without prior notice.	4.41	88.15	10.77	0.000	3
	<b>Customer's satisfaction measure</b>	4.07	81.37	10.61	0.000	

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The mean of paragraph #6 “I feel satisfied when I pay the water bill on monthly basis” equals 4.48 (89.61%), Test-value = 10.64, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3, which conclude that the respondents agreed to this paragraph.

The mean of paragraph #8 “I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances” equals 3.26 (65.16%), Test-value = 2.49, and P-value = 0.006 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. It is concluded that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's satisfaction measure**” for the committed customers only, equals 4.07 (81.37%), Test-value = 10.61, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. Which mean that “**the adoption of CRM concept has a positive significant effect on customer satisfaction**” for the committed customers”.

The analysis results were expected, hence, the committed customers have good and increasing potentials of reaching satisfaction rather than the other customers through continues communication tools such as received greeting flyers in public and personnel events, asking their opinion regarding the provided services by phone or Email and visiting the customers at suitable time to record their water meters by the water meter readers.

Adding to that, the CC have moderate satisfaction with regards to the services provided by the CMWU and water distribution schema. This was due to the fact that the CMWU is now in the building stage, and the improvement of water and sanitation infrastructure is not completed yet. Furthermore, the continuous communication and information delivery, which considered a new strategy the customers aren't familiar with, will affect the customer's response toward the CMWU will contribute in reaching customers satisfaction.

### 4.3.1.2 Hypothesis testing for Partially Committed Customers

Table (4.10): Means and Test values for “Customer's satisfaction measure”- PCC.

**Table 4.10: Analysis results for customer satisfaction measure – PCC.**

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I am satisfied of the services provided by the CMWU (I'm satisfied of CMWU performance of the provided services)	3.43	68.67	3.10	0.001	12
2.	I feel satisfied if CMWU called to ask for my opinion regarding the provided services	4.07	81.46	7.26	0.000	5
3.	I feel satisfied if CMWU contact me by phone, cell phone, or Email	3.95	79.04	7.32	0.000	8
4.	I feel satisfied if I received greetings flyers or cards from the CMWU in religious and public events.	4.30	85.95	8.49	0.000	2
5.	I feel satisfied if I received greetings flyers and cards from the CMWU on personal events.	4.18	83.57	7.81	0.000	3
6.	I feel satisfied when I pay the water bill on monthly basis.	3.94	78.81	6.54	0.000	9
7.	I feel satisfied when I pay the water bill on regular basis.	3.92	78.33	6.63	0.000	10
8.	I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances.	3.28	65.54	2.95	0.002	13
9.	I feel satisfied if I found answers to my questions in CMWU website	3.87	77.38	7.26	0.000	11
10.	I feel satisfied when the CMWU asks me about the suitable time to visit and record my water meter by the water meter reader.	4.06	81.22	7.75	0.000	6
11.	I feel satisfied incase the CMWU developed effective communication tools with the customers.	4.18	83.57	7.96	0.000	3
12.	I feel satisfied incase the information of the provided services was found in the CMWU website.	3.96	79.27	7.09	0.000	7
13.	I feel satisfied incase the CMWU has committed a water distribution schedule and no schedule changes to be added without prior notice.	4.32	86.43	8.72	0.000	1
	<b>Customer's satisfaction measure</b>	3.96	79.19	8.40	0.000	

\*The mean is significantly different from 3

The mean of paragraph #13 “I feel satisfied incase the CMWU has committed a water distribution schedule and no schedule changes to be added without prior notice. ” equals 4.32 (86.43%), Test-value = 8.72, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.



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The mean of paragraph #12 “I feel satisfied incase the information of the provided services was found in the CMWU website” equals 3.96 (79.27%), Test-value = 7.09, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. It is concluded that the respondents agreed to this paragraph.

The mean of paragraph #8 “I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances” equals 3.28 (65.54%), Test-value = 2.95, and P-value = 0.002 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. It is concluded that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's satisfaction measure**” for the partially committed customers only, equals 3.96 (79.19%), Test-value = 8.40, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. Which mean **that “the adoption of CRM concept has a significant effects on customer satisfaction” for the partially committed customers**, if the CMWU established continuous communication with the customers by asking for customers opinion regarding the provided services , sending cards in religious, public and personnel events and calling the customers to ask for their opinion regarding the provided services.

These results exemplify the nature of the partially committed customers, hence, they are basically committed customers but they want continues reminding of their obligations.

In other hand the PCC sharing the CC of having moderate satisfaction regarding the provided services and the water distribution schema operated by CMWU.

### 4.3.1.3 Hypothesis testing for uncommitted customers

Table (4.11): Means and Test values for “Customer's satisfaction measure”

**Table 4.11: Analysis results for customer satisfaction measure – UCC.**

	<b>Item</b>	<b>Mean</b>	<b>Proportional mean (%)</b>	<b>Test value</b>	<b>P-value (Sig.)</b>	<b>Rank</b>
1.	I am satisfied of the services provided by the CMWU (I'm satisfied of CMWU performance of the provided services)	3.10	62.05	2.59	0.005	12
2.	I feel satisfied if CMWU called to ask for my opinion regarding the provided services	3.74	74.83	9.19	0.000	6
3.	I feel satisfied if CMWU contact me by phone, cell phone, or Email	3.55	71.07	7.57	0.000	9
4.	I feel satisfied if I received greetings flyers or cards from the CMWU in religious and public events.	4.01	80.11	10.97	0.000	2
5.	I feel satisfied if I received greetings flyers and cards from the CMWU on personal events.	3.85	76.95	9.11	0.000	5
6.	I feel satisfied when I pay the water bill on monthly basis.	3.51	70.17	5.64	0.000	11
7.	I feel satisfied when I pay the water bill on regular basis.	3.62	72.34	6.37	0.000	7
8.	I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances.	2.83	56.57	0.47	0.319	13
9.	I feel satisfied if I found answers to my questions in CMWU website	3.55	70.92	7.53	0.000	10
10.	I feel satisfied when the CMWU asks me about the suitable time to visit and record my water meter by the water meter reader.	3.86	77.19	10.20	0.000	4
11.	I feel satisfied incase the CMWU developed effective communication tools with the customers.	4.01	80.11	11.01	0.000	3
12.	I feel satisfied incase the information of the provided services was found in the CMWU website.	3.60	71.93	7.63	0.000	8
13.	I feel satisfied incase the CMWU has committed a water distribution schedule and no schedule changes to be added without prior notice.	4.27	85.34	11.63	0.000	1
	<b>Customer's satisfaction measure</b>	3.65	73.00	10.39	0.000	

\* The mean is significantly different from 3

The mean of paragraph #13 “I feel satisfied incase the CMWU has committed a water distribution schedule and no schedule changes to be added without prior notice. ” equals 4.27 (85.34%), Test-value = 11.63, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of paragraph #8 “I feel satisfied with the water distribution schemes operated by CMWU despite the current circumstances” equals 2.83 (56.57%), Test-

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value = 0.47, and P-value = 0.319 which is greater than the level of significance  $\alpha = 0.05$ . The sign of the test is negative, so the mean of this paragraph is greater than the hypothesized value 3. We conclude that the respondents disagreed with this paragraph.

In general, the mean of the filed “**Customer's satisfaction measure**” for the uncommitted customers only, equals 3.65 (73.00%), Test-value = 10.39, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. Which means **that “the adoption of CRM concept has a significant effects on customer satisfaction” for the uncommitted customers.** If the CMWU is committed to unified water distribution schedule, altered pumping schedule after prior notification, sent greeting flyers to the customer’s in their religious, personnel and public events, developed communication tools with the customers, asked the customer about the suitable time to be visited in order to read the water meter by the water meter readers, made phone calls in order to ask the customers about their opinion regarding the provided services, and provided regular information about the provided services using the CMWU website.

Also, the uncommitted customers show moderate satisfaction regarding CMWU contact with them by phone or Email, found answers to their questions on the CMWU website and the performance of CMWU regarding the provided services.

Moreover, the uncommitted customers were unsatisfied in respect to the water distribution schema operated by CMWU.

The analysis results of the uncommitted customer’s show different trends, the UCC concentrates, as expected, on finding an excuse for their ignorance of paying the water bills. Therefore, the questions which related to the quality of the services provided and the satisfaction regarding the distributing schema got the lowest mean. Moreover, the UCC show less enthusiasm comparing with PCC and CC regarding the communication tools being used by CMWU.

**The combined results for customer’s satisfaction measure and its relation to the adoption of CRM concept in CMWU are illustrated in the table (4.12).**

**Table 4.12: Customer satisfaction measure for all the customers (CC + PCC + UCC).**

	Item	Mean	(%)	Test value	P-value (Sig.)	Rank
1	I am satisfied of the services provided by the CMWU	3.29	65.75	5.67	0.000*	12
2	I feel satisfied in case CMWU, called me to ask for my opinion regarding the provided services	3.95	79.08	15.74	0.000*	7
3	I feel satisfied in case CMWU , contact me by phone , cell phone or Email	3.77	75.41	13.59	0.000*	10
4	I feel satisfied if I received congratulations letter from the CMWU in religious and public events.	4.15	83.04	17.30	0.000*	3
5	I feel satisfied if I received congratulations letter from the CMWU in my personnel events.	3.97	79.44	14.55	0.000*	5
6	I feel satisfied when I pay the water bill in a monthly basis.	3.93	78.67	13.40	0.000*	8
7	I feel satisfied when I pay the water bill on a regular basis	3.97	79.33	13.78	0.000*	6
8	I am satisfied with the water distribution mechanism followed by CMWU considering the current circumstances,	3.08	61.59	2.60	0.005*	13
9	I am feeling satisfied if I found the answers for my questions in CMWU web-site	3.74	74.87	13.71	0.000*	11
10	I am feeling satisfied when the CMWU asks me about the suitable time to visit me by the water meter reader	4.02	80.41	16.42	0.000*	4
11	I am feeling satisfied in case the CMWU developed effective communication tools with the customers	4.16	83.25	17.43	0.000*	2
12	I feel satisfied in case the information regarding the provided services can be found in the CMWU web site.	3.82	76.33	13.73	0.000*	9
13	I feel satisfied in case the CMWU committed of a unified water distribution schedule and it does not make any changes unless it informs me of these changes first.	4.33	86.60	18.30	0.000*	1
14	Customer's satisfaction measure	3.86	77.22	17.22	0.000*	

\* The mean is significantly different from 3

The mean of paragraph #13 “I feel satisfied in case the CMWU committed of a unified water distribution schedule and it does not make any changes unless it informs me of these changes first” equals 4.33 (86.60%), Test-value = 18.30, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

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The mean of paragraph #8 “I am satisfied with the water distribution mechanism followed by CMWU considering the current circumstances” equals 3.08 (61.59%), Test-value = 2.60, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the field “**Customer's satisfaction measure**” for all the customers, equals 3.86 (77.22%), Test-value = 17.22, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3, which means **that the adoption of CRM concept has a significant effect in attaining the customers' satisfaction for all the customers classification**, if the CMWU committed to a unified water distribution schedule and did not change the schedule unless it informs the customers first, developed effective communication tools with the customers, send congratulation letters to the customers in their personnel events, and calling the customers to ask about their opinion regarding the provided services.

In the other hand the customers have moderate satisfaction regarding, the water distribution mechanism followed by the CMWU, the provided water and sanitation services and founding the answers of their questions in CMWU web site.

These results agrees with the results of the study conducted by **Masroujeh (2009)** which evaluated key factors in the Palestinian Pharmaceutical Market (Availability of service, Responsiveness of service, Reliability of service, completeness of service, and professionalism of service). The factors tested by Masroujeh, considered a corner stone in any CRM strategy. The P-Value for the tested factors was smaller than the level of significant  $\alpha = 0.05$  which is acceptable and compatible with the research results.

Adding to that, these results agrees with the results of the study conducted by **Lyttle (2003)** which evaluated key drivers of satisfaction with insurance companies (Satisfaction contacts at the insurance company, Satisfaction with how quickly the insurance company responded to calls and questions, Satisfaction with how quickly

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claims settled , Satisfaction with the courtesy of people they may have dealt with at the insurance company) the measured factors by Lyttle considers the sole of CRM concepts which were tested through this research. The P-Value for the tested factors was smaller than the level of significant  $\alpha = 0.05$  which is acceptable and compatible with the research results.

Moreover, the results agree with the study conducted by **Rahimi (2007)** which seeks to investigate the effects of implementing CRM model on customer satisfaction in hotel industry. The P-Value for the tested factors was smaller than the level of significant  $\alpha = 0.05$  which is acceptable and compatible with the research results and lead to the fact that implementing the CRM model has a positive effect on customer satisfaction.

These results also agrees with the study conducted by **Sarлак & Fard (2009)** ,which investigate whether or not there is any relationship between customer relationship management and customer satisfaction in agricultural bank. The results shows the significances number is zero which is lower than the level of significance of 0.05%, meaning that implementing CRM has a positive impact on customer satisfaction.

### 4.3.2 Testing of Hypothesis 2

The adoption of CRM concept in CMWU will have positive effect on customer's acquisition at 5% level of significant from PCC & UCC perspective.

#### 4.3.2.1 Hypothesis testing for partially committed customers

**Table 4.13: Means and Test values for Customer's acquisition measure – PCC**

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I will pay the bill incase the water meter reader visited me during my proposed times to CMWU.	3.62	72.38	4.96	0.000	14
2.	I will pay the water bills if CMWU employees' shows respect and descent reception.	3.83	76.54	6.33	0.000	10
3.	I will pay the water bill incase the CMWU developed a closed relation with its customers.	3.96	79.29	6.48	0.000	7
4.	I will pay the water bill if the CMWU maintained continuous communication with me.	3.82	76.39	6.26	0.000	11
5.	I will pay the water bills if CMWU employees' showed concerns to my bill issues.	3.98	79.52	7.19	0.000	4
6.	I will pay the water bill if I receive personal and special care by CMWU employees.	3.74	74.76	5.86	0.000	12
7.	I will feel happy if I receive the water bill with special congratulation for special events of mine..	4.13	82.65	7.69	0.000	2
8.	I will appreciate the CMWU incase it shows more concern of the customers and their complaints.	4.35	86.99	8.31	0.000	1
9.	I will pay the water bill incase the CMWU continued its rewards campaigns.	3.69	73.73	5.80	0.000	13
10.	I will pay the water bill incase the CMWU developed prompt responses to customers' complaints.	3.92	78.31	6.95	0.000	9
11.	I feel that providing proper water and sanitation services will change my perception towards CMWU.	4.01	80.24	7.72	0.000	3
12.	Providing accessible and affordable information regarding the services provided by the CMWU will improve the relation with the customers.	3.98	79.52	7.66	0.000	4
13.	Appropriate Customer Department response with me as a customer will change my behavior with CMWU water bill.	3.93	78.52	7.19	0.000	8
14.	Appropriate Customer Department Staff responses and reaction to my queries will improve my manner with CMWU water bill.	3.98	79.52	7.36	0.000	4
	<b>Customer's acquisition measure</b>	3.92	78.41	8.06	0.000	

\* The mean is significantly different from 3

The mean of paragraph #8 "I will appreciate the CMWU incase it shows more concern of the customers and their complaints." equals 4.35 (86.99%), Test-value = 8.31, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

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The mean of paragraph #1 “I will pay the bill incase the water meter reader visited me during my proposed times to CMWU” equals 3.62 (72.38%), Test-value = 4.96, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly smaller than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's acquisition measure**” for the partially committed customers only, equals 3.92 (78.41%), Test-value = 8.06, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. which mean the adoption of **CRM concept has a significant effects on customer acquisition” for the partially committed customers if**, the CMWU shows more concerns of the customers and their needs, sending special congratulation for their special events on their water bills, providing proper water and sanitation services, providing accessible and affordable information regarding the provided services, the appropriate response and reactions from the department staff towards the customers and developing a close relationship with the customers.

The analysis results of partially committed customers are much like the results when testing the effect of CRM concept adoption on customer’s satisfaction for the same group. The highest mean goes for the paragraphs related to communication with the customer’s and improving the provided services. Moreover, the paragraphs which related to showing more concerns of the customers and their complaints got the highest mean, which empathize the importance of customer care in reaching customers acquisitions for the partially committed customer’s case. Adding to that, those results may reveal the reason behind why those groups of customers are partially committed not totally committed, hence the former municipality employees totally ignore the importance of taking good care of customer’s complaints and quires, which may lead to lack of desire for the PCC to continuously visit the CMWU customer services office. Changing the mentality of transferred employees in this aspect is considered vital for CMWU in this stage.



#### 4.3.2.2 Hypothesis testing for un-committed customers.

**Table 4.14: Means and Test values for “Customer’s acquisition measure” - UCC**

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I will pay the bill incase the water meter reader visited me during my proposed times to CMWU.	3.32	66.44	4.96	0.000	14
2.	I will pay the water bills if CMWU employees’ shows respect and descent reception.	3.62	72.32	7.64	0.000	10
3.	I will pay the water bill incase the CMWU developed a closed relation with its customers.	3.78	75.51	8.80	0.000	7
4.	I will pay the water bill if the CMWU maintained continuous communication with me.	3.59	71.70	7.80	0.000	11
5.	I will pay the water bills if CMWU employees’ showed concerns to my bill issues.	3.82	76.40	8.90	0.000	6
6.	I will pay the water bill if I receive personal and special care by CMWU employees.	3.45	68.99	5.49	0.000	13
7.	I will feel happy if I receive the water bill with special congratulation for special events of mine..	3.78	75.51	8.89	0.000	7
8.	I will appreciate the CMWU incase it shows more concern of the customers and their complaints.	4.22	84.38	11.50	0.000	1
9.	I will pay the water bill incase the CMWU continued its rewards campaigns.	3.51	70.11	6.48	0.000	12
10.	I will pay the water bill incase the CMWU developed prompt responses to customers’ complaints.	3.85	76.95	8.30	0.000	5
11.	I feel that providing proper water and sanitation services will change my perception towards CMWU.	3.98	79.66	10.81	0.000	3
12.	Providing accessible and affordable information regarding the services provided by the CMWU will improve the relation with the customers.	3.95	78.98	10.88	0.000	4
13.	Appropriate Customer Department response with me as a customer will change my behavior with CMWU water bill.	3.69	73.82	8.47	0.000	9
14.	Appropriate Customer Department Staff responses and reaction to my queries will improve my manner with CMWU water bill.	4.00	80.00	9.85	0.000	2
	<b>Customer’s acquisition measure</b>	3.75	75.03	9.72	0.000	

\* The mean is significantly different from 3

The mean of paragraph #8 “I will appreciate the CMWU incase it shows more concern of the customers and their complaints” equals 4.22 (84.38%), Test-value = 11.50, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of paragraph #1 “I will pay the bill incase the water meter reader visited me during my proposed times to CMWU” equals 3.32 (66.64%), Test-value = 4.96, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The

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sign of the test is positive, so the mean of this paragraph is significantly smaller than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's acquisition measure**” for the uncommitted customers only, equals 3.75 (75.03%), Test-value = 9.72, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3, which mean **that the adoption of CRM concept has significant effects on customer acquisition for those under the uncommitted customers' category** if the CMWU show more concerns for customers complaints, the appropriate responses and reaction to the customer queries, and providing proper water and sanitation services.

In the other hand, the UCC have moderate responses with regards to the visits of the water meter reader during the proposed time by the customers to collect the water bills.

Once again, the UCC customers focus on the paragraphs which related to the service improvement and dealing with customers complaints. The improvement in this field will contribute in changing the attitude of the UCC toward the CMWU, according to the presented results. The paragraphs that related to diversification of the ways the customers can pay for the water bills become less importance for this group. This also was expected hence, the mentality of not paying for the water bills is spread widely among them, and the change in this regards will not come effortlessly. Therefore, CMWU must concentrate on the aspects that might lead to change, taking into consideration that the process will take time and the results might not be encouraging.

The combined results for customer's acquisition measure and its relation to the adoption of CRM concept in CMWU are illustrated in the Table (4.16).

Table 4.15: Customer acquisition measure for PCC & UCC.

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1	I will pay the bill incase the water meter reader visited me during my proposed times to CMWU.	3.42	68.35	6.98	0.000*	14
2	I will pay the water bills if CMWU employees' shows respect and descent reception.	3.68	73.64	9.96	0.000*	10
3	I will pay the water bill incase the CMWU developed a closed relation with its customers.	3.84	76.72	11.00	0.000*	8
4	I will pay the water bill if the CMWU maintained continuous communication with me.	3.66	73.20	10.06	0.000*	11
5	I will pay the water bills if CMWU employees' showed concerns to my bill issues.	3.87	77.39	11.48	0.000*	6
6	I will pay the water bill if I receive personal and special care by CMWU employees.	3.54	70.84	7.92	0.000*	13
7	I will feel happy if I receive the water bill with special congratulation for special events of mine..	3.89	77.78	11.75	0.000*	5
8	I will appreciate the CMWU incase it shows more concern of the customers and their complaints.	4.26	85.21	14.24	0.000*	1
9	I will pay the water bill incase the CMWU continued its rewards campaigns.	3.56	71.27	8.69	0.000*	12
10	I will pay the water bill incase the CMWU developed prompt responses to customers' complaints.	3.87	77.38	10.83	0.000*	7
11	I feel that providing proper water and sanitation services will change my perception towards CMWU.	3.99	79.85	13.34	0.000*	2
12	Providing accessible and affordable information regarding the services provided by the CMWU will improve the relation with the customers.	3.96	79.15	13.36	0.000*	4
13	Appropriate Customer Department response with me as a customer will change my behavior with CMWU water bill.	3.76	75.29	11.10	0.000*	9
14	Appropriate Customer Department Staff responses and reaction to my queries will improve my manner with CMWU water bill.	3.99	79.85	12.35	0.000*	3
	<b>Customer's acquisition measure</b>	3.81	76.11	12.64	0.000*	

\* The mean is significantly different from 3

The mean of paragraph #8 "I will feel happy if I receive the water bill with special congratulation for special events of mine" equals 4.26 (85.22%), Test-value = 10.48, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the

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test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of paragraph #1 “I will pay the bill incase the water meter reader visited me during my proposed times to CMWU” equals 3.42 (68.34%), Test-value = 4.96, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of the field “**Customer's acquisition measure**” for the PCC and the UCC, equals 3.81 (76.11%), Test-value = 12.64, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3, which means that, **the adoption of CRM concept has a significant effect in attaining the customers' acquisition for the PCC and the UCC customers classification**, if the CMWU shows more concerns to the customers and their complaints and quires, provides proper water and sanitation services, provide accessible and affordable information regarding the provide services, develop prompt response to customer complaints, showing more concern to customers bill issues, develop a close relation with customers, sending a congratulation letters to the customers in their special events, appropriate response to the customers by the front line officers and showing respect and descent reception to the customers by the CMWU employees.

In the other hand the customers have moderate satisfaction regarding, the water bill collection improvement campaign, receiving personnel and special care by CMWU employees and being visited by the water meter reader during the proposed time by the customers.

The results agree with the results of the study conducted by **Bailey 2008**. which examined five case studies with UK based large companies in order to explore how companies used customer insight to drive customer acquisition. The results dragged from 25 in-depth interviews showed that building good relation with the customer's using the concept of relationship marketing and CRM module, helps these companies

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gaining insight in guiding strategy, operations, marketing, sales, product portfolio management and customer service,

And also agreed with, the study conducted by **Rahimi 2007**, which sought to investigate the effects of implementing CRM models on customer acquisition in hotel industry. The P-Value for the tested factors was smaller than the level of significant  $\alpha = 0.05$  which is acceptable and compatible with the research goals and lead to the fact that implementing the CRM model has a positive effect on customer acquisition.

### 4.3.3 Testing Hypothesis 3

The adoption of CRM concept in CMWU will have positive effect on customer's retention at 5% level of significant.

This hypothesis is tested for CC & PCC only.

#### 4.3.3.1 Hypothesis testing for committed customers

Table 4.16: Means and Test values for “Customer’s retention measure”- CC

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I advise my friends and my neighbors to be committed to the water bills.	4.32	86.31	10.68	0.000	1
2.	I will continue paying the water bills if the CMWU keeps developing the provided services.	4.28	85.54	10.55	0.000	2
3.	I will continue paying the water bill incase CMWU kept developing proper closed communication channels with the customers.	4.25	84.92	10.63	0.000	3
4.	I will continue paying the water bills if CMWU continuously communicates with me personally.	3.82	76.31	7.72	0.000	6
5.	I talk about the CMWU in a good way when it’s mentioned in various meetings.	3.79	75.78	8.00	0.000	7
6.	I feel comfort inside CMWU customer services office.	3.76	75.12	7.70	0.000	9
7.	I think that continuous communication with the customers via different tools will achieve continuous payments of CMWU water bills.	4.02	80.47	9.51	0.000	5
8.	I will keep on paying the water bills despite the way CMWU treats me as a customer or not.	3.78	75.59	6.96	0.000	8
9.	I put the water bill on the top of my monthly commitments priorities.	4.14	82.77	9.75	0.000	4
10.	I will continue paying the water bill if CMWU shares my special occasions.	3.48	69.61	4.49	0.000	10
	<b>Customer’s retention measure</b>	3.96	79.30	10.60	0.000	

\* The mean is significantly different from 3

The mean of paragraph #1 “I advise my friends and my neighbors to be committed to the water bills” equals 4.32 (86.31%), Test-value = 10.68, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is

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positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of paragraph #10 “I think that continuous communication with the customers via different tools will achieve continuous payments of CMWU water bills” equals 3.48 (69.61%), Test-value = 4.49, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the field “**Customer's retention measure**” for the committed customers only, equals 3.96 (79.30%), Test-value = 10.61, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3, which means that **“the adoption of CRM concept has a significant effects on customer retention” for the committed customers, if the CMWU keep developing the provided services, develop proper close communication channel and give the customers personnel attention.**

**The CC shows moderate answers regarding the CMWU sharing the customer their special occasions (paragraph #10).**

The committed customers group is considered small in comparison with the others. Adding to that, this group is being committed to paying the water bills during the poor service years. Therefore, it's expected that they will continue paying the water bills in case the services show slight improvement regardless of sharing the customers their special occasions. This fact was clearly identified hence the higher ranking paragraphs for the CC were those related to paying the water bills (paragraph 1, 2, 3 &9).

#### 4.3.3.2 Hypothesis testing for partially committed customers.

**Table 4.17: Means and Test values for Customer’s retention measure - PCC**

No.	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	I advise my friends and my neighbors to be committed to the water bills.	3.83	76.59	6.98	0.000	3
2.	I will continue paying the water bills if the CMWU keeps developing the provided services.	3.88	77.59	7.26	0.000	2
3.	I will continue paying the water bill incase CMWU kept developing proper closed communication channels with the customers.	3.90	78.05	6.98	0.000	1
4.	I will continue paying the water bills if CMWU continuously communicates with me personally.	3.79	75.85	6.63	0.000	5
5.	I talk about the CMWU in a good way when it’s mentioned in various meetings.	3.58	71.57	5.88	0.000	6
6.	I feel comfort inside CMWU customer services office.	3.55	70.98	5.31	0.000	8
7.	I think that continuous communication with the customers via different tools will achieve continuous payments of CMWU water bills.	3.81	76.14	7.06	0.000	4
8.	I will keep on paying the water bills despite the way CMWU treats me as a customer.	3.20	63.90	2.75	0.003	10
9.	I put the water bill on the top of my monthly commitments priorities.	3.58	71.50	5.04	0.000	7
10.	I will continue paying the water bill if CMWU shares my special occasions.	3.28	65.54	2.63	0.004	9
	<b>Customer’s retention measure</b>	3.63	72.67	7.33	0.000	

\* The mean is significantly different from 3

The mean of paragraph #3 “I will continue paying the water bill incase CMWU kept developing proper closed communication channels with the customers” equals 3.90 (78.05%), Test-value = 6.98, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.



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The mean of paragraph #8 “I will keep on paying the water bills despite the way CMWU treats me as a customer” equals 3.20 (63.90%), Test-value = 2.75, and P-value = 0.003 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's retention measure**” for the partially committed customers only, equals 3.63 (72.67%), Test-value = 7.33, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. **which mean that “the adoption of CRM concept has a significant effects on customer retention” for the partially committed customers, if the CMWU keep developing proper close , continues and personnel communication channel and developing the provided services .**

In the other hand the PCC shows moderate answers with regards to the questions related to paying the water bills despite the way CMWU treats the customer. And sharing the customers their special occasions.

In contrast to the CC, the PCC needs continuous communication in order to be able to reach the retention stage. The continuous reminding seems to be a fundamental issue in dealing with this group for the reasons illustrated before. The paragraphs which related to communication got the highest mean (paragraphs 3, 4, 7), and setting paragraphs No. 8 to be with the lowest mean “I will keep on paying the water bills despite the way CMWU treats me as a customer”, emphasize the fact that, the PCC needs special attention and treatment in order to insure their commitment and reach the retention stage.

The combined results for customer’s retention measure and its relation to the adoption of CRM concept in CMWU are illustrated in the table (4.18).

Table 4.18: Customer retention measure for CC & PCC.

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1	I advise my friends and my neighbors to be committed to the water bills.	4.13	82.55	12.80	0.000*	1
2	I will continue paying the water bills if the CMWU keeps developing the provided services.	4.12	82.44	12.87	0.000*	2
3	I will continue paying the water bill incase CMWU kept developing proper closed communication channels with the customers.	4.11	82.26	12.76	0.000*	3
4	I will continue paying the water bills if CMWU continuously communicates with me personally.	3.81	76.13	10.23	0.000*	6
5	I talk about the CMWU in a good way when it’s mentioned in various meetings.	3.71	74.12	10.00	0.000*	7
6	I feel comfort inside CMWU customer services office.	3.67	73.49	9.43	0.000*	8
7	I think that continuous communication with the customers via different tools will achieve continuous payments of CMWU water bills.	3.94	78.77	11.92	0.000*	4
8	I will keep on paying the water bills despite the way CMWU treats me as a customer or not.	3.55	71.00	7.20	0.000*	9
9	I put the water bill on the top of my monthly commitments priorities.	3.92	78.48	10.91	0.000*	5
10	I will continue paying the water bill if CMWU shares my special occasions.	3.40	68.02	5.23	0.000*	10
	<b>Customer’s retention measure</b>	3.84	76.73	12.93	0.000*	

\* The mean is significantly different from 3

The mean of paragraph #1 “I advise my friends and my neighbors to be committed to the water bills.” equals 4.13 (82.55%), Test-value = 12.80, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of paragraph #10 “I will continue paying the water bill if CMWU shares my special occasions.” equals 3.40 (68.02%), Test-value = 3.76, and P-value = 0.000

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which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the field “**Customer's retention measure**” for all the customers, equals 3.8 (76.11%), Test-value = 9.19, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3, which means that **the adoption of CRM concept has a significant effect in attaining the customers' retention for the CC and the PCC customers classification**, if the CMWU keep developing the provided services and keep developing proper closed, personnel and continues communication via different tools and channels with the customers,

In the other hand the customers have moderate response regarding, CMWU sharing the customers with their special occasions, the way the CMWU treats the customers and feeling comfort inside the CMWU offices.

It is concluded from the preceding results in Table 4.16,4.17 and 4.18, that the adoption of CRM concept has a significant impact on attaining customers' retention. As expected, the committed customers (CC) (Proportional mean equal 79.30%) have good potentials for retention than the PCC (Proportional mean equal 72.67%). Consequently, CMWU must focus on keeping a committed customers base and set a proper plan in order to prevent any transfer of the committed customers to partially or even to uncommitted customers. Using the CRM strategy along with a proper built relationship with the committed customer's base will ensure the fulfillment of this objective. In parallel, the CMWU must consider an approach to establish a proper contact channels with the PCC in order to maintain their commitment as they have a good potential for retention.

Parallel, these results agrees with the results of the research conducted by **Ghavami & Olyaei 2006**. They investigated the impact of CRM on customer retention by reviewing the literatures and case studies that evaluated the adoption of CRM in different companies all over the world. Ghavami & Olyaei concluded that CRM can assist sales and marketing in these companies to identify advantageous customers faster

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and more reliable than other resources, which will lead to effective customer retention strategy.

Moreover, the results agree with the study conducted by **Rahimi 2007**, as he sought to investigate the effects of implementing CRM models on customer retention in hotel industry. The P-Value for the tested factors was smaller than the level of significant  $\alpha = 0.05$  which is acceptable and compatible with the research results and lead to the fact that implementing the CRM model has a positive effect on customer retention.

Furthermore, the results agrees with the study conducted by **Zineldin 2006**, who designed a 5Qs model (quality of object, quality of process, quality of infrastructure, quality of interaction , quality of atmosphere) to measure customer satisfaction, loyalty, and retention. The implementation of the model presented by Zineldine was based on the condition of the existences of customer database and CRM strategy. Zineldin found that the periodic testing of the 5Qs by managers and researchers can document which changes must be done in CRM strategy in order to improve the customer satisfaction, loyalty and retention to reach the ultimate outcomes. These results pinpointed the importance of CRM as a tool to help reaching customer retention.

Adding to that, the results agree with the results of the study conducted by **Lyttle 2003**, where he evaluated the effect of CRM on customer retention in insurance companies. The results showed positive effects of CRM on customer retention hence the P value was 0.000, and this is smaller than the level of significant  $\alpha = 0.05$  which is acceptable and well-matched to the current research results.

#### 4.3.4 Testing of Hypothesis 4

The adoption of CRM concept in CMWU will have negative effect on customer's loss at 5% level of significant.

##### 4.3.4.1 Hypothesis testing for committed customers

**Table 4.19: Means and Test values for “Customer’s loss measure” - CC**

	<b>Item</b>	<b>Mean</b>	<b>Proportional mean (%)</b>	<b>Test value</b>	<b>P-value (Sig.)</b>	<b>Rank</b>
1.	I will not stop paying the water bills even if CMWU took good care of its customers and their complaints.	4.34	86.72	10.87	0.000	1
2.	I will not stop paying the water bills if CMWU continued developing its provided services	4.34	86.72	11.05	0.000	1
3.	I don't feel comfort when I did not pay the water bill bearing that CMWU treats my water issues considerably.	4.04	80.78	9.01	0.000	11
4.	I don't feel comfort when water bills arrears accumulated, especially if CMWU established continues communication with me.	4.16	83.17	9.75	0.000	8
5.	I will not stop paying the water bills even if I sensed improvements of the provided services.	4.33	86.62	10.78	0.000	3
6.	I will not stop paying the water bills even if CMWU continued its communication with the customers and took care of their complaints.	4.22	84.50	10.41	0.000	6
7.	I will not stop paying the water bill incase I felt that CMWU deals with its customers in a proper and professional way	4.28	85.65	10.65	0.000	5
8.	I will not stop paying the water bill even if I felt that CMWU employees care of me.	4.22	84.34	10.00	0.000	7
9.	I will not stop paying the water bills even if CMWU agreed on my preferred payment terms of the water bills.	4.14	82.79	10.08	0.000	9
10.	I will not stop paying the water bill even if CMWU developed special payment ways which take into account my time and my availability.	4.14	82.75	9.98	0.000	10
11.	I will not stop paying the water bill even if I felt that the CMWU considers the economical situation of its customers.	4.29	85.74	10.64	0.000	4
	<b>Customer's loss measure</b>	4.23	84.56	10.92	0.000	

\* The mean is significantly different from 3

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The mean of paragraph #1 “I will not stop paying the water bills even if CMWU took good care of its customers and their complaints” & paragraph#2 “I will not stop paying the water bills if CMWU continued developing its provided services “ equals 4.34 (86.72%), Test-value = 10.87, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$  . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to these paragraphs.

The mean of paragraph #3 “I don’t feel comfort when I did not pay the water bill bearing that CMWU treats my water issues considerably” equals 4.04 (80.78%), Test-value = 9.01 and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$  . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's Loss measure**” for the committed customers only, equals 4.23 (84.56%), Test-value = 10.92, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$  . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. Which mean that **“the adoption of CRM concept has a significant effects on reducing customer loss” for the committed customers, if** the CMWU took good care of its customers and their complaints, continue developing and improving the provided services, considers the economical situation of its customers, deals with customers in proper and professional way, continue its communication with the customers and took care of their complaints, agreed on customers proffered payment terms, developing special payment way which considers customers time and availability and treats customer water issues considerably.

The committed customers and as stated before, are the group who pay the water bills regardless the services improvement level. The results gave a highlight of the supporting actions that should be followed in order to insure their commitment. The paragraphs related to developing the provided services and taking good care of customers complaints have the highest ranks (1, 2, 5). Moreover, considering the customers economical situation from the CMWU is regarded as a good sign and the

committed customers will respect this attitude. Therefore, focusing on these fields will help CMWU to achieve its goals and insure the success of CRM strategy with the CC group.

#### 4.3.4.2 Hypothesis testing for Partially-committed-customers.

**Table 4.20: Means and Test values for “Customer’s loss measure” - PCC**

	<b>Item</b>	<b>Mean</b>	<b>Proportional mean (%)</b>	<b>Test value</b>	<b>P-value (Sig.)</b>	<b>Rank</b>
1.	I will not stop paying the water bills even if CMWU took good care of its customers and their complaints.	4.01	80.24	7.70	0.000	2
2.	I will not stop paying the water bills if CMWU continued developing its provided services	3.96	79.28	7.09	0.000	4
3.	I don't feel comfort when I did not pay the water bill bearing that CMWU treats my water issues considerably.	3.86	77.28	6.55	0.000	9
4.	I don't feel comfort when water bills arrears accumulated, especially if CMWU established continues communication with me.	3.92	78.33	6.08	0.000	7
5.	I will not stop paying the water bills even if I sensed improvements of the provided services.	3.96	79.28	7.05	0.000	4
6.	I will not stop paying the water bills even if CMWU continued its communication with the customers and took care of their complaints.	3.85	76.90	6.43	0.000	10
7.	I will not stop paying the water bill incase I felt that CMWU deals with its customers in a proper and professional way	3.90	78.00	6.63	0.000	8
8.	I will not stop paying the water bill even if I felt that CMWU employees care of me.	3.93	78.57	7.33	0.000	6
9.	I will not stop paying the water bills even if CMWU agreed on my preferred payment terms of the water bills.	3.82	76.39	6.77	0.000	11
10.	I will not stop paying the water bill even if CMWU developed special payment ways which take into account my time and my availability.	3.98	79.52	7.46	0.000	3
11.	I will not stop paying the water bill even if I felt that the CMWU considers the economical situation of its customers.	4.06	81.19	7.39	0.000	1
	<b>Customer’s loss measure</b>	3.93	78.62	8.00	0.000	

\* The mean is significantly different from 3

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The mean of paragraph #11 “I will not stop paying the water bill even if I felt that the CMWU considers the economical situation of its customers“ equals 4.06 (81.19%), Test-value = 7.39, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$  . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to these paragraphs.

The mean of paragraph #9 “I will not stop paying the water bills even if CMWU agreed on my preferred payment terms of the water bills” equals 3.82 (76.39%), Test-value = 6.77 and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$  . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the filed “**Customer's Loss measure**” for the partially committed customers only, equals 3.93 (78.62%), Test-value = 8.00, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$  . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. **Which mean that “the adoption of CRM concept has a significant effects on reducing customer loss” for the partially committed customers**” if the CMWU considers the economical situation of the customers, took good care of the customers and their complaints, developing special ways to pay the water bills taking into consideration the customers time and availability, continue developing the provided services, the CMWU employees took good care of the customers, establish continues communication with the customers, treating the customers water issues considerably, communicating with the customers’ and taking good care of their complaints and agreed on the proffered payment terms suggested by them.

The paragraph no.11 which got the highest Mean “I will not stop paying the water bill even if I felt that the CMWU considers the economical situation of its customers “, reveals one of the features of the PCC group. This group as mentioned before, needs continues reminding of their obligations; therefore, they sometimes refer their partial commitment to the economical instability. That's the reason why taking into account the economical situation by the CMWU is considered very important issue.



Adding to that, the services development and taking good care of the customers comes with almost the same importance; hence, these requests consider vital needs for any customer.

**The combined results for customer's loss measure and its relation to the adoption of CRM concept in CMWU are illustrated in table (4.21).**

**Table 4.21: Customer loss measure for CC & PCC.**

No	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1	I will not stop paying the water bills even if CMWU took good care of its customers and their complaints.	4.21	84.21	13.39	0.000*	1
2	I will not stop paying the water bills if CMWU continued developing its provided services	4.19	83.83	13.17	0.000*	3
3	I don't feel comfort when I did not pay the water bill bearing that CMWU treats my water issues considerably.	3.97	79.43	11.21	0.000*	11
4	I don't feel comfort when water bills arrears accumulated, especially if CMWU established continues communication with me.	4.06	81.24	11.47	0.000*	9
5	I will not stop paying the water bills even if I sensed improvements of the provided services.	4.19	83.76	12.93	0.000*	4
6	I will not stop paying the water bills even if CMWU continued its communication with the customers and took care of their complaints.	4.08	81.50	12.26	0.000*	7
7	I will not stop paying the water bill incase I felt that CMWU deals with its customers in a proper and professional way	4.14	82.75	12.59	0.000*	5
8	I will not stop paying the water bill even if I felt that CMWU employees care of me.	4.10	82.07	12.47	0.000*	6
9	I will not stop paying the water bills even if CMWU agreed on my preferred payment terms of the water bills.	4.01	80.28	12.20	0.000*	10
10	I will not stop paying the water bill even if CMWU developed special payment ways which take into account my time and my availability.	4.07	81.50	12.54	0.000*	8
11	I will not stop paying the water bill even if I felt that the CMWU considers the economical situation of its customers.	4.20	83.94	13.01	0.000*	2
	<b>Customer's loss measure</b>	4.11	82.24	13.59	0.000*	

\* The mean is significantly different from 3

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The mean of paragraph #1 “I will not stop paying the water bills even if CMWU took good care of its customers and their complaints..” equals 4.21 (84.21%), Test-value = 13.39, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

The mean of paragraph #3 “I don’t feel comfort when I did not pay the water bill bearing that CMWU treats my water issues considerably.” equals 3.97 (79.43%), Test-value = 11.21, and P-value = 0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

In general, the mean of the field “**Customer's Loss measure**” for the CC and PCC customers, equals 4.11 (82.24%), Test-value = 13.59, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3, which means that **the adoption of CRM concept has a significant effect in reducing the customers’ loss for the CC and the PCC customers classification**, if the CMWU took good care of the customers and their complaints, considers the economical situation of the customers, continued developing and improving the provided services, deals with the customers in proper and professional way, taking good care of the customers, establish continues communication with them, developing special payment ways which considers the customers time and availability, agreed on customers preferred ways of payment, and treating the customers water bills issues considerably.

The review of the previous studies in order to explore the relation between CRM and customer satisfaction, acquisition and retention showed significant positive effects. Hence, CRM will eventually lead to satisfaction, acquisition and retention consequently; it will lead to decreasing customer loss. Therefore, the studies of **Lyttle (2003), Rahimi (2008), Ghavami & Olyaei (2006), Bailey-(2008), and Sarlak & Fard (2009)** can be used as supporting tools to the current research results regarding the effect of CRM on decreasing customer loss.

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### 4.3.5 Testing of Hypothesis 5

There is a significant difference in customer's response to CRM concept adoption in CMWU according to (age, educational level and standard of living).

This hypothesis can be divided into the following sub-hypotheses:

#### 4.3.5.1 There is a significant difference in customer's response to CRM concept adoption in CMWU according to age

Table (4.22) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there is insignificant difference in customer's response to CRM concept adoption in CMWU according to age. We conclude that the personal trait age has no effect on these fields.

Referring to table 4.1, which illustrate the customers' age frequency outcome, the table shows that most of the customers are above 30years old. This result might be referred to the sharing mentality of Rafah resident and the unified culture of the city in which the age factor has no effect in this case.

Notably, these results agree with a study conducted by (Morely 2004), about customer based satisfaction and dissatisfaction in b2b services, where he also had insignificant effect of age on the results. Moreover, Rahimi in 2006 had the same results in his study about application and implementation of CRM in Hotel industry.

**Table 4.22: Kruskal-Wallis Test of the fields and their p-values for age**

No	Field	Test Value	df	Sig.
1.	Customer's satisfaction measure	7.303	3	0.063
2.	Customer's acquisition measure	4.205	3	0.240
3.	Customer's retention measure	7.295	3	0.063
4.	Customer's loss measure	7.246	3	0.064
	The population sample for all the field			

**Table 4.23: Means for each field of age**

No	Fields	Mean			
		20-29	30-39	40-49	More than 50
1.	Customer's satisfaction measure	236.18	194.49	187.92	196.86
2.	Customer's acquisition measure	197.13	200.55	184.52	212.55
3.	Customer's retention measure	228.21	200.02	180.53	201.79
4.	Customer's loss measure	224.42	192.51	180.36	206.65

**4.3.5.2 There is a significant difference in customer's response to CRM concept adoption in CMWU according to educational attainment.**

Table (4.24) shows that the p-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$  for the fields "Customer's satisfaction measure, Customer's retention measure, and Customer's loss measure", then there is significant difference in customer's response to CRM concept adoption in CMWU according to educational attainment. We conclude that the personal trait educational attainment has an effect on these fields.

Table (4.25) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for the field "Customer's acquisition measure", then there is insignificant difference in customer's response to CRM concept adoption in CMWU according to educational attainment. We conclude that the personal trait educational attainment has no effect on this field.

After Reviewing the results illustrated in Table (4.24) and Table (4.25), it's clearly shows that the higher the educational attainment level, the higher the mean value will be. This empathize the fact that the educated citizens (householders) have good potentials to interact efficiently with the CMWU incase it uses the concept of CRM in its management approach. The level of interaction will be according to the level of educational attainment. This also explains why the personnel trait educational attainment has a significant effect on the field of customer satisfaction, retention and customer loss. It is not clear why the educational attainment level has no significance on customer acquisition measure. This might be due to the fact that, most of the citizens

(householders) questioned for this field were of the uncommitted customers category and this can be linked to their educational level that has no effect in their behavior regarding the water bills. Therefore, we can conclude that the personnel trait educational attainment has insignificant effect for the field customer acquisition measure.

**Table 4.24: Kruskal-Wallis Test of the fields and their p-values for educational attainment**

No	Field	Test Value	df	Sig.
1.	Customer's satisfaction measure	10.096	4	0.039*
2.	Customer's acquisition measure	1.884	4	0.757
3.	Customer's retention measure	15.341	4	0.004*
4.	Customer's loss measure	21.350	4	0.000*

\* The mean difference is significant a 0.05 level

**Table 4.25: Means for each field of educational level**

No	Fields	Mean				
		Less than high school	High school	Diploma	BCs.	Graduate studies
1.	Customer's satisfaction measure	172.57	187.74	193.65	207.33	253.63
2.	Customer's acquisition measure	185.78	187.69	189.20	203.48	209.91
3.	Customer's retention measure	165.07	187.68	187.40	223.93	224.56
4.	Customer's loss measure	156.35	202.35	183.05	224.90	218.41

#### **4.3.5.3 There is a significant difference in customer's response to CRM concept adoption in CMWU according to standard of living.**

Table (4.26) shows that the p-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$  for the fields "Customer's satisfaction measure", and "Customers loss measure", in addition it shows that it's too close to the level of significance  $\alpha = 0.05$  for the "Customer retention measure, 0.057". Therefore, we can conclude that there is a significant difference in customer's response to CRM concept adoption in CMWU according to standard of living, which lead to the fact that, the personal trait standard of living has an effect on these fields (satisfaction, retention, and customers' loss). Table (4.27) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for "Customer's acquisition" and then there is insignificant difference in customer's response to CRM concept adoption in CMWU according to standard of living. Accordingly, we conclude that the personal trait standard of living has no effect on this field.

These results match the analysis results when testing the effect of the personnel trait educational attainment on customer satisfaction, acquisition, retention, and decreasing customer's loss. But the category with monthly income between 2001 and 3000 shows lower mean than the other categories. On the other hand, and as expected, the category with monthly income more than 3000 shows the highest mean among all the other categories. Hence, the higher the customer standard of living was, the higher his potential to interact with CMWU approach in adopting the CRM concept in its operations.

**Table 4.26: Kruskal-Wallis Test of the fields and their p-values for standard of living**

No.	Field	Test Value	df	Sig.
1.	Customer's satisfaction measure	10.600	3	0.014*
2.	Customer's acquisition measure	4.292	3	0.232
3.	Customer's retention measure	7.520	3	0.057
4.	Customer's loss measure	10.999	3	0.012*

\* The mean difference is significant a 0.05 level

**Table 4.27: Means for each field of standard of living**

No	Fields	Mean			
		Less than 1000	1001-2000	2001-3000	More than 3000
1.	Customer's satisfaction measure	167.34	187.31	160.16	232.78
2.	Customer's acquisition measure	165.11	182.22	176.18	208.98
3.	Customer's retention measure	166.72	179.36	168.64	229.70
4.	Customer's loss measure	160.88	183.32	174.53	235.15

After testing the fifth hypothesis which states that there is a significant difference in customer's response to CRM concept adoption in CMWU according to age, educational attainment, and standard of living, we can conclude that the Age factor has no effect on the research results; therefore the CMWU has no need to classify the customer according to their ages. In the contrary, the other factors (educational attainment and standard of living) do have a significant impact on the research results, especially for the satisfaction, retention, and decreasing customer's loss. Therefore, the CMWU needs to consider this significance and to categorize the customers accordingly, dealing with each group separately while designing a special interaction programs in order to ensure their commitment.

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## **CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS**

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## 5.1 Introduction

Chapter no. four provided an analysis of the data collected in this study while in this chapter, conclusion will be drawn from the empirical data and the results of testing the study hypothesis in order to answer the research questions stated in chapter one. The recommendations will be illustrated in the final section of this chapter and it will be based on the importance and necessity of CRM concept adoption for the development of the CMWU operations.

## 5.2 Conclusions

The present research seeks to investigate the effects of adopting CRM concept in CMWU in goal of reaching customers' satisfaction, acquisition, retention, and decreasing customers' loss. The researcher concluded that adopting CRM concept in CMWU was significantly positively correlated with reaching customers' satisfaction, acquisition, retention, and decreasing customer loss as it was statistically observed.

- 1) The CRM has effect on decreasing customers' loss more than any other tested factors. The proportional mean for the customer loss measure was 82.24%. The mean for the customer satisfaction measure, customer acquisition measure and customer's retention measure were 77.22%, 76.11% and 76.71 respectively. Therefore, empathizing on adopting the CRM concept would lead firstly to decrease customers' loss and next to improve customer satisfaction, acquisition, and retention.
- 2) The CRM concept has a positive significant effect on customer satisfaction" for the committed customers". With a proportional mean = 81.37 the committed customers agrees that they will feel satisfied if the CMWU used continues communication tools with them such as received greeting flyers in public and personnel events, asking their opinion regarding the provided services by phone or Email and visiting the customers at suitable time to record their water meters by the water meter readers. Adding to that, the CC customers have moderate satisfaction with regards to the services provided by the CMWU and water distribution schema, this was due to the fact that the CMWU is now in the building stage, and the improvement of water and sanitation infrastructure is not completed yet. Adding to that, the continuous communication and information delivery, which considered a new



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strategy the customers aren't familiar with, will affect the customer's response toward the CMWU and contribute in reaching customers satisfaction.

- 3) The CRM concept has a positive significant effect on customer satisfaction “for the partially committed customers, With a proportional mean =79.19% the partially committed customers agrees that they will feel satisfied if the CMWU established continuous communication with the customers by asking for customers opinion regarding the provided services , sending cards in religious, public and personnel events and calling the customers to ask for their opinion regarding the provided services. In the other hand the PCC sharing the CC regarding that they have moderate satisfaction regarding the provided services and the water distribution schema operated by CMWU.
- 4) The CRM concept has a positive significant effect on customer satisfaction “for the uncommitted customers, With a proportional mean =73.00% the uncommitted customers agrees that they will feel satisfied If the CMWU committed to unified water distribution schedule and no schedule changes to be added without prior notice, sending greeting flyers to the customer's religious, personnel and public events, develop communication tools with the customers, ask the customer about the suitable time to be visited in order to read the water meter by the water meter readers, calling the customers in order to ask about their opinion regarding the provided services, and providing regular information about the services provided using the CMWU webpage. In other hand the uncommitted customers shows moderate satisfaction regarding CMWU contact with them by phone or Email, found answers to their questions on the CMWU website and the performance of CMWU regarding the provided services. Moreover, the uncommitted customers were unsatisfied in respect to the water distribution schema operated by CMWU.
- 5) The CRM concept has a positive significant effect on customer satisfaction for all the customers, With a proportional mean =77.22% the customers (CC, PCC & UCC) agrees that they will feel satisfied If the CMWU committed to a unified water distribution schedule and did not change the schedule unless it informs the customers first, developed effective communication tools with the customers, send congratulation letters to the customers in their personnel events, and calling the

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customers to ask about their opinion regarding the provided services. In the other hand the customers have moderate satisfaction regarding, the water distribution mechanism followed by the CMWU, the provided water and sanitation services and founding the answers of their questions in CMWU web site.

- 6) The commitment of the CMWU with a unified water distribution schedule will raise the satisfaction of all types of customers. This is due to the fact that, the current situation shows different distribution schema without giving the customers a prior notice. This fact is tested through asking the customers about their satisfaction level regarding the current distribution schedule which shows the lowest proportional mean = 61.59%. Accordingly, CMWU needs to set more care regarding this issue in order to augment customers' satisfaction.
- 7) In general, customer's satisfaction from the current services provided by CMWU in Rafah city shows lower reaction results (proportional mean = 65.75%), which brings the CMWU management attention to the necessity of having a clear plan toward elevating the customer satisfaction. Using the CRM concept along with improving the service to meet customer expectation should be the main tools which will help reaching customer's satisfaction.
- 8) There is an opportunity to reach customer acquisition through using the concept of CRM with the partially committed customers. With a proportional mean =78.41%, the PCC agrees that the adoption of CRM concept has a significant effects on customer acquisition" if the CMWU shows more concerns of the customers and their needs, receiving their water bills with special congratulation for their special events, providing proper water and sanitation services, providing accessible and affordable information regarding the provided services, the appropriate response and reactions from the department staff towards the customers and developing a close relationship with the customers.
- 9) There is an opportunity to reach customer acquisition through using the concept of CRM with the uncommitted customers. With a proportional mean = 75.03% the UCC agrees that the adoption of CRM concept has significant effects on customer acquisition for those under the uncommitted customers' category if the CMWU show more concerns for customers complaints, the appropriate responses and

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reaction to the customer queries, and providing proper water and sanitation services. In the other hand, the UCC have moderate responses with regards to the visits of the water meter reader during the proposed time by the customers to collect the water bills.

- 10) There is an opportunity to reach customer acquisition through using the concept of CRM with the UCC & PCC. With a proportional mean = 76.11% the UCC & PCC agrees that the adoption of CRM concept has significant effects on customer acquisition if the CMWU shows more concerns to the customers and their complaints and quires, provides proper water and sanitation services, provide accessible and affordable information regarding the provide services, develop prompt response to customer complaints, showing more concern to customers bill issues, develop a close relation with customers, sending a congratulation letters to the customers in their special events, appropriate response to the customers by the front line officers and showing respect and descent reception to the customers by the CMWU employees. In the other hand the PCC & UCC have moderate satisfaction regarding, the water bill collection improvement campaign, receiving personnel and special care by CMWU employees and being visited by the water meter reader during the proposed time by the customers.
- 11) There is an opportunity for reaching customer's retention through using the concept of CRM for the committed customers, with a proportional mean = 79.30%, the CC agrees that using CRM concept will contribute in reaching customer retention if the CMWU keep developing the provided services, develop proper close communication channel and give the customers personnel attention. In the other hand the CC shows moderate answers regarding the CMWU sharing the customer their special occasions.
- 12) There is an opportunity for reaching customer's retention through using the concept of CRM for the PCC, with a proportional mean = 72.63%, the PCC agrees that using CRM concept will contribute in reaching customers retention if the CMWU keep developing the provided services, develop proper close communication channel and give the customers personnel attention. In the other hand the PCC shows moderate answers with regards to the questions related to paying the water bills despite the way CMWU treats the customer and sharing the customers their special occasions.

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- 13) There is an opportunity for reaching customer's retention through using the concept of CRM for the CC & PCC, with a proportional mean = 76.11%, the CC & PCC agrees that using CRM concept will contribute in reaching customers retention if the CMWU keep developing the provided services and keep developing proper closed, personnel and continues communication via different tools and channels with the customers, In the other hand the customers have moderate enthusiasm regarding the effect of CMWU sharing the customers with their special occasions, the way the CMWU treats the customers and feeling comfort inside the CMWU offices.
- 14) Regarding the way the CMWU dealing with its customers, the results show different approaches between the CC and the PCC. The CC with proportional mean = 75.59% agreed that the way CMWU dealing with customers will not affect their bill paying behavior and they will continue pay their due amounts. Contrasting the PCC with a proportional mean = 63.90% it can be sensed that the way the CMWU deals with the customers has its effect on the customer's willingness to pay which lead to reaching customers retention for the PCC.
- 15) There is an opportunity of decreasing customer's loss through using the concept of CRM with the CC. with a proportional mean = 84.56%, the CC agrees that CRM concept will contribute in decreasing customer loss if the CMWU took good care of its customers and their complaints, continue developing and improving the provided services, considers the economical situation of its customers, deals with customers in proper and professional way, continue its communication with the customers and took care of their complaints, agreed on customers proffered payment terms, developing special payment way which considers customers time and availability and treats customers water issues considerably.
- 16) There is an opportunity of decreasing customer's loss through using the concept of CRM with the PCC. with a proportional mean = 78.62%, the PCC agrees that CRM concept will contribute in decreasing customer loss if the CMWU considers the economical situation of the customers, took good care of the customers and their complaints, developing special ways to pay the water bills taking into consideration the customers time and availability, continue developing the provided services, the CMWU employees took good care of the customers, establish continues communication with the customers, treating the customers water issues

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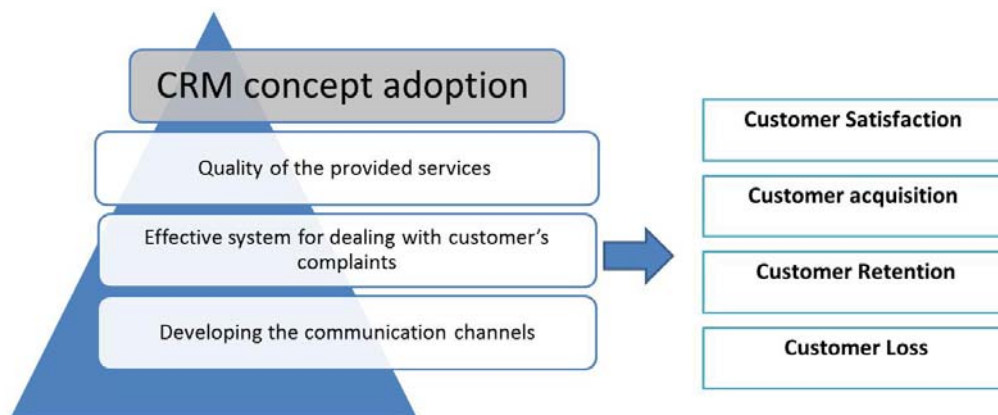
considerably, communicating with the customers' and taking good care of their complaints and agreed on the proffered payment terms suggested by them.

- 17) Results showed that taking good care of customer's complaints turns to be an important factor of decreasing customer loss. With a proportional mean equal 86.72%, the population agrees that good handling of customer's complaints will avert the customers from not paying their water bills and it will support both the acquisition and retention plan.
- 18) Moreover, considering the economical situation of the customers in Rafah city can be an important factor which led to decreasing customer loss. With proportional mean =83.96% the PCC & CC agrees that proper concerns of customer's economical situation will avert the customers from not paying their water bills and it will support both the acquisition and retention plan.
- 19) Developing several methods for paying water bills considers to be an important element for both PCC & CC. With a proportional mean = 81.49%, the PCC & CC agrees that in case CMWU develops special payment ways for customers to pay their water bills taking into consideration the time, availability, and comfort factors, will enhance the customers commitment and it will decrease customers loss.
- 20) Results showed that there is insignificant difference between the respondents toward the tested factors and the adopting of the CRM concept in CMWU due to age.
- 21) There is a significant difference between the respondents toward the tested factors and the adoption of the CRM concept in CMWU due to educational attainment. The results showed that, the respondents' educational attainment has an effect on the adopting of CRM concept and achieving customer satisfaction, retention, and decreasing customer loss. While the personnel trait educational attainment has insignificant effect on the adoption of CRM concept and achieving customer acquisition.
- 22) There is significant difference between the respondents toward the tested factors and the adoption of the CRM concept in CMWU due to standard of living. It can be concluded that the respondents' standard of living has an effect on the adoption of CRM concept and achieving customer satisfaction, retention and decreasing customer loss. In the other hand, the personnel trait standard of living has

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insignificant effect for the adoption of CRM concept and achieving customer acquisition.

This study is characterized as the first endeavor to draw the attention on the topic of adopting CRM concept in order to reach customer satisfaction, acquisition, retention, and decreasing customer loss in a semi public organization provided public services in the Palestinian territories. However, this study has provided a tentative model that can be used by CMWU in order to implement a comprehensive customer relation management program fig(5.1). For that, improvement of customer relationship management can make a large contribution to services improvement. But, and after reviewing the CRM literatures, the CRM module needs to be part of an overall institutional development program that address various aspects such as organizational structure, financial and management autonomy, management development, and HRD system and the availability of financial resources. Therefore, several ideas for future research could be emerged as a result of this study. The first idea could be the ability of CMWU for developing a full CRM program and investigating the understanding of CMWU employees, particularly the CMWU top management in order to become a customer centric enterprise.



**Figure 5.1: CMWU – CRM model, conceptualized by the researcher.**

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### **5.3 Recommendations**

The results analysis and discussion showed the following key milestones that need to be developed in order to reach the ultimate benefits from adoption of CRM concept in CMWU daily operation. These milestones are,

- Quality of the provided services.
- Effective system for dealing with customer's complaints and quires.
- Developing the communication channels with the customers.

#### **First: The quality of the provided services.**

- 1) The CMWU must set continues and stable water distribution schedule that needs not to be changed unless it's absolutely necessary. In the mean while, the CMWU must provide the customers with prior notice before any changes in the schedule.
- 2) The water distribution schedule must meet the principles of equity among all the customers in Rafah city with no distinguishing approach or conversion system that ought to be deserted.
- 3) The CMWU must develop and improve the quantity and quality of the water resource and if allowed raise the per capita consumption.
- 4) The CMWU must deal with services network breakdown in a fast, efficient and effective way, especially those breakdowns which might lead to services deterioration.
- 5) The CMWU must empower the performance of the technical team especially those in direct contact with the customers (maintenance and water distribution operational team) by involving them into training programs in order to nurture and improve their capabilities in dealing with emergencies situation.

#### **Second: Effective system for dealing with customer's complaints and quires.**

- 1) It is recommended that the CMWU must develop a Customer Complaints Structure CCS in order to deal and response to customer's complaints, and ensure that the customer requests are being taking care of in an efficient manner and proper response timing.

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- 2) The developed CCS must be tied with a time frame for fulfilling each query, review, evaluate and assess the performance of the involved employees in that regard.
  - 3) The CCS must start from receiving the complaint and ending it with getting customer feedback about the CMWU reaction and the employees' performance in resolving the complaint.
  - 4) Developing the CMWU call center and adopting the principles of calls registration will ensure higher level of quality assurance and enforce the commitment of the CMWU employees with higher standard in responding and dealing with customers.
  - 5) The CMWU have to be committed to any promise been given by its employees to the customers during the customer complaints resolution.
  - 6) The frontline officers should be acquainted with the tools which empower them to efficiently serve the customers and synchronizes customer's interaction, information, and complaints across all related channels. This can be efficiently done when the CMWU insists on granting its employee the right skills as the customer's centric focus should be the principle behind that.

**Third: Developing the Communication channels with the customers.**

- 1) In order to enhance customer satisfaction, acquisition, retention, and decreasing customer loss, the CMWU should focus on adopting and implementing CRM strategies that aim to seek, gather, and store the right information, validated and share it through the entire organization levels; in order to create unique experience and deliver high services quality.
- 2) The updated information should include customer address, number of beneficiaries from each subscription, their names, phone numbers, cell phone numbers, Emails and if possible dates of their special occasions. Such information will help the CMWU in establishing the proper contact with the customers at the proper time



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- 3) The CMWU should encourage its employees to embrace the concept of the private sector practices, especially in dealing with the customers, and evaluate the performance of the frontline officers accordingly.
  - 4) The CMWU should develop its organizational structure, in a way that ensure the full support from the CMWU technical and administrative departments to the customer service department so as to ensure that the customers complaints , quires, and suggestion will be circulated to the concerned department in the right time and no delay will take place during processing the complaints.
  - 5) Developing the customer tracking and communication unit for continuous study and analysis of the customer's bill paying behavior, and to establish the proper communications (by phone, Email, SMS , or Private visits) in case it notices a change in that behavior to which it might affect the customer revenue stream and acts upon it.
  - 6) Develop the CMWU web site by adding new customer interacting services such as electronic services, customer account check, payment schedule, consumption behavior, water distribution schedule, payment options ...etc.
  - 7) Develop and intensify the bill paying encouragement campaigns, in order to maintain continues commitment of the CC and PCC and try to acquire as much new customers as possible. In parallel the campaigns must be accompanied laterally by remarkable improvements in the provided service areas, in order to ensure high levels of response.
  - 8) The CMWU should develop new and improved ways of communication with the customers, especially in the process of paying the water bills. Plans such as paying through the local banks (either by accepting cash payments from customers or by making auto discount) or through the private companies could be a good approach in facilitating the bill paying operations.
  - 9) Develop a new accounting process which ensures the flexibility of water bill payments for the customers with large arrears. This will encourage the customers to pay their water bills and help the CMWU acquire more UCC.

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In addition to the 3 cornerstones recommendation that were specifically addressed above, the following general recommendation could support the approach provided in this research

### **General Recommendations**

- 1) Senior management levels must assure creating customer oriented culture in the CMWU in order to become more positive responsive to customers' needs and expectations.
- 2) CMWU should examine carefully the existing private companies and its experience dealing with customers and promoting for establishing the proper cooperation strategy. The combination between the public sector characteristics and the private sector approaches could be of high benefit for CMWU in its start-up stage.
- 3) After the adoption of CRM concept, criteria of success measurements should be clearly illustrated in order to evaluate the performance, drive and monitor the success and set the proper plans for future development.

### **5.4 Recommendation for further studies:**

In light of this study and the results that have been achieved the researcher recommend the following studies.

1. The Effect of human Resource Development operation on the success of CRM implementation.
2. The Effect of Top management support on achieving successful CRM system implementation.
3. Organizational Structure development toward a customer centric organization.
4. The critical success factors of CRM implementation in the Palestinian Market.
5. Feasibility study of application and implementation of customer relationship management CRM in the Coastal Municipalities Water Utility.

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## APPENDICES

### Appendix 1: list of Referees

After the questionnaire was designed and revised several times, it was refereed and refined by university professors, doctors, and statisticians. Finally the final copy was ready to be distributed on the study population

### Referees

Dr. Majed El Farra	Prof. Faculty of commerce IUG
Dr. Sami Abo Roos	Ass. Prof. Faculty of commerce IUG
Dr. Yousef Bahar	Ass. Prof. Faculty of commerce IUG
Dr. Sameer Safi	Associated Prof. Faculty of commerce IUG
Eng. Maher EL Najjar	CMWU deputy Director General.
Eng. Majed Ghanam	CMWU Quality Assurance Dep. Manager



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## Appendix 2: Questionnaire (English Version)



## Questionnaire

Dear Customer,

Kindly be informed that CMWU customer services department is conducting a field research to investigate new approaches in order to develop the services and its relationship with water and wastewater customers in the city of Rafah. This comes as part of CMWU approach to introduce the modern management concepts in building the relationship with the customers and investigate their aspirations and desires in order to design the proper cooperation and communication plans.

Therefore, we urge you dear customer to cooperate with us in filing this questionnaire, taking into consideration that you are free to participate or to abstain, and the information you provides will be dealt with in confidentiality and will be used only for the purpose of the research which will leads to developing the provided service.

Best Regards

1. Personnel information:

	Age	20-29		30-39	
		40-49		More than 50	
	Educational level	Less than high school		High school	
		Diploma		BCs.	
		MCS		PHd	
	Monthly income / NIS	Less than 1000		1001-2000	
		2001-3000		3001-5000	
		5001-7000		More than 7000	

2. How often you pay the water bill?

Monthly		3-6 Months	
2-3 Months		More than that	

3. Paying the bill occurs through?

Customer services office		Water meter reader	
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4. Did you visit CMWU customer services office?

Yes		No	
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5. Did you visit CMWU web site?

Yes		No	
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No	Item	Strangely agree	Agree	Don't know	Disagree	Strongly disagree
<b>CRM concept adoption and its effects on customers satisfaction</b>						
1	I am satisfied of the services provided by the CMWU					
2	I feel satisfied in case CMWU, called me to ask for my opinion regarding the provided services					
3	I feel satisfied in case CMWU , contact me by phone , cell phone or Email					
4	I feel satisfied if I received congratulations letter from the CMWU in religious and public events.					
5	I feel satisfied if I received congratulations letter from the CMWU in my personnel events.					
6	I feel satisfied when I pay the water bill in a monthly basis.					
7	I feel satisfied when I pay the water bill on a regular basis					
8	I am satisfied with the water distribution mechanism followed by CMWU considering the current circumstances,					
9	I am feeling satisfied if I found the answers for my questions in CMWU web-site					
10	I am feeling satisfied when the CMWU asks me about the suitable time to visit me by the water meter reader					
11	I am feeling satisfied in case the CMWU developed effective communication tools with the customers					
12	I feel satisfied in case the information regarding the provided services can be found in the CMWU web site.					
13	I feel satisfied in case the CMWU committed of a unified water distribution schedule and it does not make any changes unless it informs me of these changes first.					
<b>CRM concept adoption and its effects on customer's acquisition. (start paying the water bills )</b>						
1	I will pay the bill in case the water meter reader visited me within my suggested times					
2	I will pay the water bills in case the employees in the CMWU treated me in a respect and descent way.					
3	I will pay the water bill in case the CMWU develop its relation with its customers and become closer to them.					
4	I will pay the water bill in case the CMWU communicate with me continuously					
5	I will pay the water bills in case I felt that the employees in the CMWU taking good care of me					

No	Item	Strangely agree	Agree	Don't know	Disagree	Strongly disagree
6	I will pay the water bill in case I receive personal and private care from CMWU employees.					
7	I will feel happy if I receive the water bill with special congratulation for special events for me.					
8	I will appreciate and respect the CMWU in case it shows more interest of the customers and their complaints					
9	I will pay the water bill in case the CMWU continue its rewards campaigns					
10	I will pay the water bill in case the CMWU develop the proper's tools of quick response to customers complaints					
11	I feel that providing good water and sanitation services will lead to changing the way the customers dealing with CMWU.					
12	Providing the information regarding the services provided by the CMWU in easy and comfortable way to the customers will lead to develop the relation with them.					
13	Staff response to me as a customer leads to changing the way I deal with CMWU water bill.					
14	Employee quick and decent response to my calls leads to great response from me to the water bill.					
<b>CRM concept adoption and its effects on customer's retention. (customers continuously pay the water bills )</b>						
1	I advise my friends and my neighbors to continuously pay the water bills.					
2	I will continue paying the water bills if the CMWU develop the provided services.					
3	I will continue paying the CMWU water bill in case it develop proper communication channel with the customers and stays close to them.					
4	I will continue paying the water bills in case the CMWU communicate with me continuously and personally					
5	I mention the CMWU in a good way when its being mentioned					
6	I feel comfort in the CMWU customer services office.					
7	I think that the continuous communication with the customers using different communication tools will lead to continuity of paying the water bills.					
8	I will continue paying the water bills disregarding the way the CMWU treating me as a customer					
9	I put the water bill as a first priority in my					

No	Item	Strangely agree	Agree	Don't know	Disagree	Strongly disagree
	plan to deal with the monthly commitments					
10	I will continue paying the water bill in case the CMWU contact me in my special events					
<b>CRM concept adoption and its effects on decreasing customer's loss.</b>						
1	I will not stop paying the water bills in case the CMWU takes care of the customers and their complaints					
2	I will not stop paying the water bills in case the CMWU continue developing the provided services					
3	I don't feel good when I did not pay the water bill especially if the CMWU treated me well.					
4	I don't feel good when the water bills arrears accumulated , especially if the CMWU establish continues communication with me					
5	I will not stop paying the water bills in case I felt of the development of the provided services.					
6	I will not stop paying the water bills in case the CMWU continue its communication with the customers and taking care of their complaints					
7	I will not stop paying the water bill in case I felt that the CMWU dealing with the customers in good and appropriate way					
8	I will not stop paying the water bill in case I felt the employees of the CMWU takes care of me.					
9	I will not stop paying the water bills in case the CMWU responded to my preferable way of paying the water bill.					
10	I will not stop paying the water bill in case the CMWU develop special ways to pay the water bill which takes into account my time and my complaints					
11	I will not stop paying the water bill in case I felt that the CMWU considering the economical situation for the customers.					

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**Appendix 3: Questionnaire (Arabic Version)**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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<input type="checkbox"/>	50	<input type="checkbox"/>	49-40	

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<input type="checkbox"/>		<input type="checkbox"/>		2
<input type="checkbox"/>		<input type="checkbox"/>		
<input type="checkbox"/>		<input type="checkbox"/>		

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<input type="checkbox"/>	2000-1001	<input type="checkbox"/>	1000	3
<input type="checkbox"/>	5000-3001	<input type="checkbox"/>	3000-2001	
<input type="checkbox"/>	7000	<input type="checkbox"/>	7000-5001	

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\_\_\_\_\_ : \_\_\_\_\_ -2

<input type="checkbox"/>	6-3	<input type="checkbox"/>		1
<input type="checkbox"/>		<input type="checkbox"/>		2

\_\_\_\_\_ -3

<input type="checkbox"/>		<input type="checkbox"/>		1
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<input type="checkbox"/>		<input type="checkbox"/>		1
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<input type="checkbox"/>		<input type="checkbox"/>		1
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