

**THE ANTECEDENTS OF CUSTOMER RELATIONSHIP
MANAGEMENT AND ITS IMPACT ON HOTELS
PERFORMANCE IN JORDAN**

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AND ITS IMPACT ON HOTELS PERFORMANCE IN JORDAN**

BY

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ABSTRACT

The last decade has seen the emergence of Customer Relationship Management (CRM) as a technique to underpin organizational performance improvement in improving customer retention, customer satisfaction, and customer value. However, evidence suggests that many CRM initiatives fail to achieve desired results. Furthermore, empirical research is still scarce. In recent years, CRM has been the favored theme for numerous studies and reports. It has also been considered as a way of capturing comparative advantages in the face of the growing competition. However, despite many studies conducted on CRM in various industries in the past 20 years, there is still significant disagreement about its definition and meaning, and the framework for the effective implementation and evaluation of CRM practice. Moreover, there is a lack of systematic empirical evidence regarding the success factors of the CRM performance, and its impact on organizational performance. To address these issues, this study examines the degree of CRM performance of hoteliers as well as the relationship between CRM performance and organizational performance. Furthermore, this research also investigated the influence of organizational and technological factors on CRM performance. In this quantitative study, a total of 98 Jordanian hotels participated by voluntarily completing the survey questionnaire, constituting an overall 49% response rate. From the analysis undertaken, it was found that the CRM performance of the respondents were at moderate degree. The research results indicated that CRM performance has a positive influence on organizational performance. Four major factors were found to have significant influence on CRM performance namely top management, customer data, customer information processing, and CRM functionality. On the other hand, factors such as customer orientation, training orientation, and data integration were not significantly related to CRM performance. Theoretical implications and managerial implications of these findings are discussed.

Keywords: Customer Relationship Management, Organizational Performance, Data Integration, Customer Orientation, Training Orientation.

ABSTRAK

Dekad lalu menyaksikan kemunculan Pengurusan Perhubungan Pelanggan (PPP) sebagai satu teknik yang mendasari penambahbaikan dalam prestasi organisasi bagi meningkatkan pengekalan pelanggan, kepuasan pelanggan, dan nilai pelanggan. Bagaimanapun, bukti menunjukkan bahawa banyak inisiatif PPP gagal mencapai sasarannya. Tambahan pula, kajian empiris masih kurang. Semenjak kebelakangan ini, PPP semakin menjadi topik yang menarik perhatian banyak kajian dan laporan. Ia juga dianggap sebagai satu cara untuk memperoleh kelebihan bersaing dalam konteks persaingan yang semakin sengit. Walaupun banyak kajian tentang PPP di pelbagai industri telah dijalankan semenjak 20 tahun lalu, masih terdapat percanggahan ketara tentang definisi, maksud dan kerangka untuk melaksanakan dan menilai PPP secara berkesan. Selain itu, bukti empiris yang sistematik tentang faktor kejayaan PPP, dan kesannya terhadap prestasi organisasi masih kurang. Bagi menangani isu ini, kajian ini mengkaji darjah prestasi PPP di kalangan pengusaha hotel, dan perkaitan di antara prestasi PPP dan prestasi organisasi. Di samping itu, kajian ini juga menyiasat pengaruh faktor organisasi dan teknologi terhadap prestasi PPP. Sebanyak 98 buah hotel di Jordan telah melibatkan diri dalam kajian kuantitatif ini dengan mengisi borang soal selidik secara suka rela, menghasilkan kadar maklumbalas sebanyak 49%. Daripada analisis yang dijalankan, didapati bahawa darjah PPP di kalangan responden adalah sederhana. Hasil kajian menunjukkan bahawa prestasi PPP mempunyai pengaruh positif terhadap prestasi organisasi. Empat faktor utama didapati mempunyai pengaruh yang signifikan terhadap prestasi PPP iaitu pengurusan atasan, data pelanggan, pemprosesan maklumat pelanggan, dan fungsi PPP. Sebaliknya, faktor seperti orientasi pelanggan, orientasi latihan dan integrasi data tidak berhubung secara signifikan dengan prestasi PPP. Implikasi teori dan pengurusan yang terhasil daripada dapatan ini turut dibincang.

Kata Kunci: Pengurusan Perhubungan Pelanggan, Prestasi Organisasi, Integrasi Data, Orientasi Pelanggan, Orientasi Pelanggan.

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LIST OF ABBREVIATIONS

CRM :	Customer Relationship Management
CS:	Customer Service
E-CRM:	E-CRM Electronic Customer Relationship Management
ERP :	Enterprise Resource Planning
FS	Field Service
MA:	Marketing Automation
M-CRM:	Mobile CRM
POS	Point-of-Sale
SCM	Supply Chain Management
SFA	Sales Force Automation

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents a summary of the background of study, statement of problem, objectives of study, research questions, and definition of the key terms. These are followed by a discussion on the contribution of this study. Finally, this chapter ends with a discussion on the organization of the remaining chapters.

1.2 Background of the Study

Jordan is a small (population of six million), landlocked, country with few natural resources. It depends on external sources for the majority of its energy requirements, unlike some of its neighbors. The country is potentially highly vulnerable to external shocks, given its size and natural resource endowment. Despite this fact Jordan ranks well on the Global Competitiveness Index; in 2008 it was ranked 46 out of the 134 countries (Fischer *et al.*, 2009).

International tourism continues to develop worldwide, with the Middle East among the fastest growing regions. Tourism is a key driver of Jordan's economy; currently it is the single largest employer. Jordan is one of the few countries in the Middle East to witness annual growth in the tourism industry. With its regional spread, tourism is an ideal industry to diffuse benefits across Jordan, and during the past few years, tourism has been responsible for generating a significant increase in foreign and domestic investment (Aldehayyat, 2011).

The sustainable development of Jordan is greatly enhanced by the role of the information and communication technology (ICT) sector. Substantial steps taken in the last few years in the legal and regulatory environment would facilitate the realization of the growth of the ICT sector in Jordan. Recent changes in the development of the hotel sector are also dynamic (Sammour, 2010). However, the lack of publicly available hotel sector information is an obstacle to measure the true value addition of this sector to the economy (Sammour, 2010).

Jordan is a Middle East country. The application of CRM in this country should be identified in a business sector with a high degree of importance in the economy. One researcher finds Tourism and Hospitality sector to be the most important one in Jordan, based on the review of some literature on Jordan GDP reports (Akroush *et al.*, 2011). Equal support is available in the report of ABC Bank of Jordan in 2010. This report shows that the income from Hotels and Restaurants constitutes 15.4% of the GDP of Jordan. It also reports the increase of total income from this sector to be JD 652.7 million in 2003 to JD 1016.4 million in 2007.

A closer look at the growth rate over last 5 years in Jordan Tourism reveals the increase in the number of tourist. It rose from 4.67 million to 6.52 million during the period 2002 to 2007. This industry tourism employed around 130,000 (11% of the work force), directly and indirectly. Among them, tourism industry itself employs 34,405 people directly. 77.5% of them are in the hotels and restaurant industry (Aldehayyat, 2011).

As described by Adam *et al.* (2010), there are several segments in the tourism sector. One of them is the hospitality industry. Most people think only about hotels

and restaurants when referring to the hospitality industry; however, the hospitality industry has a much border scope. According to the Oxford English dictionary, hospitality refers to the liberal reception and entertainment of guests, visitors, or strangers with good will. As a word, 'hospitality' is derived from hospice, the term used in the medieval time to mean rest for travelers and pilgrims (Rahimi, 2007). Thus, in addition to hotels and restaurants, hospitality industry refers to other kinds of organizations that offer shelter, food, or both to people away from their homes. Some examples of such organizations are private clubs, casinos, resorts and attractions (Kasim & Minai, 2009; Rahimi, 2008).

In the early part of the hospitality industry, hotels began to operate when families and landowners opened their homes to travelers. Over time, hotel establishments tended to take a more sophisticated shape and operations and become high rise properties today (Kasim & Minai, 2009). Present hotels contain thousands of guest's rooms that can be classified by location, room rate, and the number of rooms (Ibrahim & Ahmad, 2010). Despite the size and sophistication different hotels offer, they have salient and similar characteristics across the world. For instance, the daily activities in any hotel are more or less similar if not identical. The level of education of the workforce is generally low. Managers usually are hired from the operational side of the business and hence depend mostly on their experience to solve many problems related to costs, revenues, and guest satisfaction (Rahimi, 2007).

As part of the hospitality industry, hotels have strong value for customer relationship as customers determine their survival and profitability. Hence, handling and dealing with customers is crucial in the hotel industry especially in a competitive

environment where hotels have to maintain and improve current market share. The dynamism of the business environment has led hotel providers to undertake initiatives for identifying, developing and retaining high-value customers. These activities can be treated under the overall banner of customer relationship management (CRM) (Ibrahim & Ahmad, 2010).

Customer Relationship Management (CRM) consists of the applications of customer information for building customer relationships (Jaakkola *et al.*, 2009). Specifically, CRM deals with the challenge of managing information about past customers for effective integration with frontline guest services programs (Rahimi, 2007). This is done through continuous refinement of insights into customer needs, habits, and economics. In the hotel industry, customer relationship management (CRM) becomes a strategic imperative for attracting and increasing guests' patronage (Sigala, 2005). The hotel industry is facing an increasingly competitive market which signifies the greater need for hotels to differentiate their customers. Since hotels can collect and integrate a significant amount of their guest's information, CRM is viewed as an opportunity for hotels in Jordan to use the information about their customers to improve the relationship they have with their customers, enhance their satisfaction and loyalty, and consequently, increase the hotels' profitability.

A major driver of CRM related change is the technology (Eid, 2007). For example, automated guest histories can help hotel managers define customer mix, identify appropriate benefits for appropriate segments, ensure hotel supply and capabilities to match the desire of the guests, and increase delivery efficiency (Adam *et al.*, 2010). However, very often, the collection and utilization of customer

information are frequently intermittent, delayed, and fragmented (Minghetti, 2003; Noone *et al.*, 2003; Sigala, 2003; 2005). Indeed, as argued by Sigala (2003; 2005), CRM adoption in the hotel industry has been impeded by a number of factors: firstly, the persistent fragmentation of the industry; secondly, the disparate, proprietary and relatively immature nature of IT systems; and thirdly, the additional complexity of managing a perishable product selling through a variety of distribution channels (Sigala, 2003; 2005).

Customer-centric business philosophy and culture are required for implementing CRM. Within the hotel industry, CRM can be a life saver for most businesses as it helps management to find ways in building long term relationships with customers (Kasim & Minai, 2009). This is because CRM is associated with the management of customer knowledge and better understanding of the customers with the aim to serve them. It is like an umbrella, which can place the customers at the center of an organization. One important concept of CRM is customer service. Yet, coordinating customer relation across all business functions, points of interaction, and audiences are also the part of CRM (Luck & Lancaster, 2003; O'zgener & I'raz, 2006).

Many studies (e.g. Adam *et al.*, 2010; Chan, 2005; Chen & Popovich, 2003; Hart *et al.*, 2004; Foss *et al.*, 2002; Kennedy, 2006; King *et al.*, 2008; Xu *et al.*, 2002) have been carried out on the impact of CRM on organizations. Studies have also been conducted to identify factors for CRM success and how they impact organizational performance (Jutla *et al.*, 2001; Fjermestad & Romano, 2003a; Akroush *et al.*, 2011). However, strong theoretical or statistical support is available

from a few of them for the importance of these factors. Their exploratory nature can be one of the reasons. Rather than the reality of CRM's impact, they are concerned more about the potential impact. The underlying gaps lead many researchers to suggest for further empirical research in this area (Adam *et al.*, 2010; Eid, 2007; Kasim & Minai, 2009; Sin *et al.*, 2005a; Yam *et al.*, 2005). Thus, a quantitative approach of a full-scale research ought to be undertaken.

1.3 Problem Statement

The tourism industry is claimed to be the largest industry in the world due to its current rapid expansion. In addition to bringing a lot of revenue, this industry significantly contributes to the employment of many people. Today, the hotel industry is experiencing increased globalization, competition, and higher level of customer turnover. Despite the potential growth, the industry is facing challenges in dealing with customers. Customers of this industry are characterized by enhanced purchasing power, who are becoming more price sensitive, less brand loyal, more sophisticated, and experience seekers due to the increased online price-product transparency and new e-business models like online auction (Jain & Jain, 2006; Vassilikopoulou *et al.*, 2009). For example, while comparing among several alternative services, customer focuses are on soft factors like personal treatment, personalization, one-to-one marketing, and attention (Rahimi, 2008). This kind of scenario leads to a more difficult task for hoteliers to maintain customer loyalty.

Like any other hotels across the globe, Jordanian hotels face many challenges: rapidly increasing bed capacity, sub-standard 'value for money', and the decline of

the global economy. Satisfaction with price has marginally decreased since 2007 and is at its lowest level over the past seven years for top grade hotels (Alrawadieh, 2009). For example, in 2008, the number of room nights spent in Amman was 3.74 million. However, this figure dropped to 2.33 million in September 2009, marking an annual decrease of around 17% compared to the same period in 2008. This drop was significant in the three to five star hotels in Jordan (Milky, 2010). In light of this, hotels are now creating special offers in a bid to counteract the downturn in demand (Sammour, 2010). This reinforces the need for a national strategy to enhance the business capability of Jordanian hotels (Jordan Tourism, 2003) that requires flexibility to market changes (Ram & Prabhakar, 2010).

Given the characteristics of the industry and its customers, a hotel has to meet every single customer's needs and expectations in order to survive the intense competition and to outperform its competitors. For this purpose, it is important to understand the aspects of business performance that persuade customers to become repeat purchasers, and to exhibit behavioral loyalty (it costs five to ten times more to sell to a new customer than to an old customer) (Rahimi, 2008). In this light, Jordanian hoteliers also need to establish and maintain meaningful and durable guest relationships.

The hotel industry enjoyed easy access to necessary data for understanding customers since guests are needed to register with their names and addresses, and in many countries, even with more detailed private information during check-in. With an advantage, people are also very likely to share personal preferences with hotel staffs to make their stay more enjoyable. However, there is a lack of transparency,

quality, and analysis of these data in this industry (Adam *et al.*, 2010). To overcome this limitation, proper utilization of information technology (IT) is necessary to ensure that guests have unique experiences during their stay in comparison to other competitors, establish close customer relationship, and meet customer needs (Luck & Lancaster, 2003). With effective adoption of IT in the hospitality industry, successful CRM strategies can be implemented as hotels can focus on functions like seeking, gathering, storing, validating, and sharing the right information throughout the entire organization with the aim of enhancing profitability and customer loyalty (Sigala, 2003; 2005). Scholars (e.g. Adam *et al.*, 2010; Rahimi, 2008) also argue for the effectiveness of CRM as a good business strategy for hotels to differentiate themselves from their competitors. Thus, Jordanian hotels must also focus on CRM strategies for durable, dichotomous and profitable relationships with their guests.

The Gartner group predicted an increase in worldwide CRM spending from US\$ 23.26 billion to US\$ 76.5 billion during 2000-2005 period (Starkey *et al.*, 2002). However, despite increasing CRM initiatives many companies failed to bring profit or growth; rather they brought damage to customer relationship (Rigby *et al.*, 2002). Studies indicate that 70% of the failure in CRM projects is due to the inability of the organizations to consider CRM success factors like organizational changes and integrations (e.g. Bull, 2003; Eid, 2007). Studies also attribute the failure to the lack of definition and specific framework of CRM strategy (Payne & Frow, 2006), and the lack of performance targets on the CRM initiatives (Kim *et al.*, 2010). With the Jordanian context, lack of efficiency, experience, and infant stage of CRM system in Jordanian hotels have been cited as reasons for their inappropriate management of

customer information (e.g. Roman, 2005), which results in their lagging behind in terms of successful strategic marketing.

A number of authors have conducted in-depth studies to understand CRM success factors (e.g. Abbott *et al.*, 2001a; Alshawia *et al.*, 2011; Alt & Puschmann, 2004; Avlonitis & Panagopoulos, 2005; Chan, 2005; Chen & Popovich, 2003; Eid, 2007; Foss *et al.*, 2002; Hart *et al.*, 2004; Karakostas *et al.*, 2004; Kennedy *et al.*, 2006; Kim, 2008; King *et al.*, 2008; Lawler, 2006; Moreno & Melendez, 2011; Payne & Frow, 2004; Xu *et al.*, 2002; Zablah *et al.*, 2004). These studies stress that organizations need to understand the factors that affect the successful process and address them effectively to ensure that the promised benefits can be realized and failures can be avoided.

However, despite many studies conducted on CRM in various industries in the past 20 years, there is still significant disagreement about its definition and meaning (Abdellatif, 2011; Adam *et al.*, 2010; Buttle, 2004) and the framework for the effective implementation and evaluation of CRM practices (Adam *et al.*, 2010; Sigala, 2005). Such an absence of known related factors may be linked to why hotel managers have been developing wrong CRM strategies. Ignorance and oversight of the necessary factors is likely to continue hindering organizations' effort to realize the full benefit of CRM. Therefore, a more systematic study to identify and link the CRM success factors with CRM performance is crucial.

A few scholars (e.g. Eid, 2007; Kim, 2008; Pedron & Saccol, 2009) found CRM projects to have little impact on a firm's performance. As discussed above, this little impact may be attributed to the failure to address important success factors by

the management. Hence, it is necessary to understand the relative importance of the different CRM success factors on the ultimate financial outcome of CRM performance. However, previous studies are confined to the influence of CRM performance on customer satisfaction and loyalty (e.g. Jayachandran *et al.*, 2005; Mithas *et al.*, 2005), with considerable lack of attention on financial performance like profitability (Kim, 2008; Moreno & Melendez, 2011). Thus, it is necessary to study the link among the CRM success factors, CRM performance, and firm performance, particularly in developing countries like Jordan.

The focus of the CRM researcher has been on the larger USA and European economies (Gronroos, 2004; Harrigan *et al.*, 2009). Compared to these economies, emerging Middle East markets are characterized as the most volatile and dynamic markets of the world. The features of these economies include: a growing disposable income, shift in consumption patterns, global competition, software revolutions, and growing rates of technology adoptions. The emerging market of CRM has moved from a narrow perspective of “an information technology product” to “a series of information technology initiatives” (Desai *et al.*, 2007). CRM is also considered as “a strategic initiative” (Akroush *et al.*, 2011). According to Desai *et al.* (2007), customer-centricity has started occupying boardroom time of the organizations. However, it is said that very few empirical studies related to CRM have been conducted in the Middle East (Akroush *et al.*, 2011). The lack of CRM research is even more pronounced in both the hospitality and tourism industries (Yueh *et al.*, 2010).

Consequently, the problem that this research seeks to address is the relationship between CRM performance and organizational performance in a hotel sector. In addition, the study investigates the underlying factors that influence customer relationship management in the Jordanian hotel industry.

1.4 Research Questions

Based on the research background and problem statement, this study intends to address the following research questions:

- a) What is the degree of customer relationship management performance as perceived by hoteliers in Jordan?
- b) What are the factors that lead to customer relationship management performance in the Jordanian hotel industry?
- c) Does customer relationship management performance influence Jordanian hotel performance?

1.5 Research Objectives

The general objective of this study is to investigate the antecedents and performance of customer relationship management. The specific objectives are as follows:

- a) To determine the degree of customer relationship management performance as perceived by hoteliers in Jordan.
- b) To identify the factors that lead to customer relationship management performance in the Jordanian hotel industry.

- c) To identify the relationship between customer relationship management performance and organizational performance.

1.6 Significance of the Study

This research provides some theoretical as well as managerial contributions in the field of CRM studies particularly in the hotel industry. From the theoretical perspective, several authors (e.g. Akroush *et al.*, 2011; Becker *et al.*, 2009; Chen & Popovich, 2003; Croteau & Li, 2003; Eid, 2007; Jayachandran *et al.*, 2005; Kim, 2008; Kim *et al.*, 2009; Moreno & Melendez, 2011), emphasis by the existing empirical studies on the antecedents of CRM success is lacking and is inconsistent across different environments. Also there is still no integrated conceptual framework to guide companies. Moreover, many studies have indicated high rates of failure of CRM performance in companies (Alrawadieh, 2009). Alshawia *et al.* (2011) assert that there is obviously a need to develop a better understanding of CRM performance. This study attempts to fill this gap by addressing the underlying factors behind successful CRM that could improve business performance. To the researcher's knowledge, this study is the first of its kind to assess empirically the factors underpinning CRM performance in a hotel industry. Furthermore, since to date no theory has been advanced in the field of CRM, this study offers a significant contribution towards the theory building.

Organizational factors and technology factors have been investigated as antecedents to CRM performance (Becker *et al.*, 2009; Desai *et al.*, 2007; Jayachandran *et al.*, 2005; Kim, 2008). However, 'several studies on the similar area

that do not address this issue (Croteau & Li, 2003; Eid, 2007; Jayachandran *et al.*, 2005; Kim, 2008; Kim *et al.*, 2009; Moreno & Melendez, 2011). The unique contribution of this study in our opinion is that, we assess the relative influences of organizational factors and technology-related factors by including them simultaneously in the CRM performance framework. Simultaneous inclusion of antecedent variables provide information on their relative utility, which may be especially useful in directing efforts toward those factors that elicit higher CRM success.

Several empirical studies have shown that CRM success brings benefit in terms of improved performance (Coltman, 2007a). Such positive relationship between CRM success and performance is due to the use of CRM as a business strategy not only to acquire new customers but also to retain existing customers for competitive advantage (Becker *et al.*, 2009). The greatest challenge to the theoretical development of customer relationship management has perhaps been the lack of empirical investigations regarding the determinants of the financial impact of CRM performance (Sun *et al.*, 2008). Thus, a better understanding of the impact of CRM success on financial performance in hotel industry should give a clearer theoretical perspective.

As mentioned earlier, researchers in the field of CRM have mainly focused on the larger USA and European economies (Gronroos, 2004; Harrigan *et al.*, 2009). Few, if any, (e.g. Akroush *et al.*, 2011) has considered the emerging Middle East markets. This study attempted to fill this gap by contributing to an expanding research

stream that already includes findings from USA and European by adding the Jordan perspective.

From the methodological perspective, Sin *et al.* (2005a) developed a reliable and valid scale to measure the four dimensions of CRM: key customer focus, CRM organization, knowledge management, and technology-based CRM. However, these scales were developed in Hong Kong and tested on financial firms only. To show robustness and validity of this measurement, they suggest that the instrument should be tested with different groups and in different settings. In response to their suggestion, this study assessed the broader applicability of Sin *et al.*'s (2005a) four dimensions of CRM scale and test edit in the Jordanian context in the hotel industry.

From the practical perspective, the findings of this study are important to the development of hotel industry in the Middle East region, where little research has been carried out before (Desai *et al.*, 2007). As a part of the tourism industry, the hotel sector is entrusted with a significant and continuous role to assist the Jordanian government in realizing the economic potential of the industry (Aldehayyat *et al.*, 2011). This sector has shown a marked improvement in its performance in recent years (Fischer *et al.*, 2009). Actually, in the 2010, the tourism growth rate average in recent years has increased by 7%, with hotels and restaurants alone adding JD 179.1 million to Jordan's real GDP at market prices. The rising number of arrivals to the Jordan increased the demand for accommodation and hotel (Khammash & Alkhas, 2010). It also continues to evolve in an increasingly dynamic business environment. As the focus of CRM is on customers for the purpose of retaining them, increasing

their loyalty and subsequently, improving profitability of the organization, hence hotels should consider implementing CRM as part of their business strategy.

1.7 Scope of the Study

This research provides a theoretical framework in which factors that could lead to the CRM performance and organizational performance in a hotel industry are identified. Several studies stress that successful CRM strategies can be a good solution to achieve organizational performance as they focus on functions like seeking, gathering, storing, validating, and sharing the right information throughout the entire organization (Sigala, 2003; 2005). Scholars (e.g. Adam *et al.*, 2010; Rahimi, 2008) also claim that CRM could be a good business strategy for hotel companies to differentiate themselves from their competitors and to attract and increase guests' patronage (Sigala, 2005).

The population of this study comprises hotels in Jordan. The sample study comprises hotels of various levels located in Jordan (Jordanian Ministry of Tourism and Antiquities, 2010). The Jordanian Ministry of Tourism and Antiquities divides the hotels into five categories using a formula that takes into account factors such as facilities and average daily rate (ADR). These categories are: one star, two star, three star, four star and five star hotels (Jordan Tourism and Antiquities, 2010). The reason for choosing this sector was that CRM is extremely important in the tourism sector, particularly in the hotel sector owing to the important customer relations involved. Moreover, various authors see this sector as an ideal setting to exploit the strategic advantages that CRM offers (Moreno & Melendez, 2011; Piccoli *et al.*, 2003; Smith

& Chang, 2010). Additionally, the application of CRM in this country has a high degree of importance for the sake of the economy.

1.8 Organization of Thesis

Chapter one has discussed in general customer relationship management and the importance of CRM in a hotel industry. It is followed by a discussion on the research problem, research questions and objectives, significance of the study and scope of study.

Chapter two discusses the existing literatures. It starts by defining some important concepts of relationship marketing and customer relationship management (CRM). Next, it provides arguments on the benefits for the implementation of CRM, Future of CRM, discussion on fundamental characteristics of CRM, history of CRM, CRM in the hospitality industry, CRM failure, CRM tools, CRM performance, antecedents of CRM performance and consequences of CRM performance. Based on the literatures reviewed, this chapter offers a theoretical framework and formulates hypotheses.

Chapter three presents the research methodology, which includes issues of research design, variable measurement, population and sampling, data collection procedure, questionnaire design and results of pilot test, and statistical techniques.

Chapter four is devoted to the findings of this study, the profile of the hotels, goodness of the measurement, descriptive analysis, and result of hypotheses testing (ANOVA, multiple regression, correlations and T- test). The chapter concludes with a summary of key findings.

Chapter five recapitulates the study's findings followed by their discussion and interpretation in relation to research objectives, research context, the underlying theory as well as recent literatures. Implications and limitations of the present study are also discussed. This chapter concludes by highlighting theoretical/methodological contributions and managerial Implications. It then goes on to recommend areas for future research and it ends with some concluding remarks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents an overview of Customer Relationship Management. This is followed by a discussion on general concept of Customer Relationship Management performance and various factors that have been investigated as antecedents of Customer Relationship Management Performance. The antecedent variables chosen as the independent variables for this study are then discussed. Last but not least, this chapter reviews a wide range of previous studies on the success of Customer Relationship Management on organizational performance. Finally, the research framework and hypotheses are proposed.

2.2 Relationship Marketing

Many authors are of the consensus that, back in the 1850s, businesses could generally sell most of what was manufactured at that time. Hence, it can be said that during those times, the description of the market was such that it was a seller's market and focus was mainly given to production. As the 1900s rolled in, competition became rampant and companies realized that customers are holding the upper hand, therefore, they came up with reasons for people to get attracted to their products and consequently buy them. This was the transformation of the market to sales orientation and by the 1950s, businesses finally realized that what they manufacture should be

something that people need instead of using the art of persuasion to let customers buy their products. This realization initiated another transformation called the marketing orientation. This type of orientation deals with addressing the needs of market segments (Bose, 2002).

Along these lines, Drucker (1954) suggests that satisfying customers should be the only justifiable definition of business purpose (Levitt, 1983). Therefore, the scenario was such that while scholars were gradually getting attracted to the marketing discipline, a realization of customer importance was surfacing in the marketplace. According to Persson (2004), marketing emerged in 1960's while the concept of marketing mix and the Four Ps of marketing (price, place, promotion, and product) were introduced to the textbooks at about the same time (Bose, 2002).

In addition, according to Starkey *et al.* (2002), the concept of relationship marketing (RM) can be attributed to the 1970s, although its use was not prevalent until the 1980s. Ever since that time, relationship marketing has been considered to be a school of marketing thought, which provides an important methodology for understanding, explaining, and managing the similarities and differences (Gronroos, 1994). RM emerged as a new phenomenon and a new aspect in marketing; one that signifies the transformation from Transaction Marketing to RM (Light, 2003).

However, the accurate meaning of relationship marketing has not always been provided clearly in the existing literature and several scholars have attempted to define it leading to its many varied definitions. Among those is Gronroos (1994), who defines relationship marketing as "to establish, maintain and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties

involved are met. This is done by a mutual exchange and fulfillment of promises. From this definition, it is clear that the core of relationship marketing is to consider the customer as the most important element that an organization has to consider.

Persson (2004) defines relationship marketing by concentrating on the role of IT as a unique process which creates a database including the entire existing and potential customers for the purpose of dealing with these customers utilizing differentiated and customer-specific information about them, and to analyze the life-term value of every single customer relationship and the costs of creating and maintaining them.

According to Gummesson (1997), relationship marketing is a type of management that is marketing-oriented. It is an element of the total management of the firm does is not limited to marketing or sales department. Recently, marketing plan has been incorporated into the strategic business plans (Aykut, 2008). However, in the case of relationship management it works along the lines of emphasizing customer retention's influence on company profitability. In other words, it is more cost and time efficient to maintain relationship with existing customers as compared to creating new ones.

The similarities between customer relationship management (CRM) and relationship marketing are strong, as relationship marketing has its basis on the idea that the happier customers are with a relationship, the greater the likelihood of their retention (Light, 2003). But significant differences do exist between them which can be clarified as follows: (i) relationship marketing is more naturally strategic while customer relationship management follows a tactical approach (Ryals & Payne,

2001). Furthermore, customer relationship management is generally concerned about implementing RM using information technology (IT), while relationship marketing works beyond the traditional customer-supplier dyad including building relationships with all the various stakeholders (Abdellatif *et al.*, 2011; Das, 2009).

In sum, customer relationship management is considered to have evolved from business processes like relationship marketing, and the increased need to improve customer retention through effective customer relationship management.

2.3 Customer Relationship Management (CRM)

CRM is considered to be one of the most well-known management strategies of the past decades. The rise of the relationship marketing orientations is where CRM stemmed out from, and these orientations owe themselves to growing competition, globalization, advancements in information technology, system-selling approach and TQM (Total Quality Management) (Yim *et al.*, 2005). According to Xu *et al.* (2002), CRM covers the entire management approaches, which assist in almost all fields including integrating sales, marketing, field support, customer services and other organizational functions that concern the customer.

CRM is a broad term that stemmed out from the evolution of different systems like marketing information systems, database marketing, decision support systems, call center management as well as transaction support systems. In addition, it can encompass a variety of technological and business processes (Love *et al.*, 2008). CRM systems can be practically employed and interacted with a customer in two basic ways: (i) an IT-assisted CRM, emphasizing traditional channels, like telephone

support centers, communication by fax and/or mail as well as field personnel (Wells *et al.*, 1999; Bradshaw & Brash, 2001), and (ii) an IT-automated CRM, emphasizing customer interaction through technologies such as the web, wireless devices and automated phone systems (Bose, 2002; Bradshaw & Brash, 2001; Wells *et al.*, 1999). The CRM system makes it possible for the customers to directly interact with the company practicing CRM (Bose, 2002).

Chen and Popovich (2003) suggest that there should be an effective system that manages information as this is important for CRM; information technology makes one-to-one marketing possible and it assists in providing services on time which guarantees profitability and maximized customer retention (Winer, 2001). Winer further opines that the foundation of each CRM program is the creation of a consumer database or information. Furthermore, the previous data compiled on consumers such as the demographics of behavior can be utilized to create consumer segmentations and set up consumer profile (Winer, 2001).

To be clear, the acronym CRM actually stands for customer relationship management as opposed to customer relationship marketing which encompasses marketing management, manufacturing management, human resource management, service management, sales management, and research and development management. Thus, both organizational and business level approaches are necessary for customer-centered CRM for the purpose of doing business and not just for the implementation of a general marketing strategy (Luck & Lancaster, 2003).

There is a moot difference between the meaning of CRM and e-CRM due to the similarities of their definitions; the only difference lies in the fact that e-CRM

utilizes the internet as a tool or medium (Eid, 2007). Despite having a general definition, e-CRM has been considered by the researchers and practitioners as a business strategy that uses technology power to keep the business rolling by having all the aspects together, and to create long-term customer rapport and customer loyalty. According to Rigby *et al.* (2002), e-CRM is all about aligning business processes with the customer strategies taken up by the marketer, assisted by software and technology. In addition, Fjermestad and Romano (2003a) suggest that e-CRM is the totality of hardware, software, processes, applications, and management commitment.

Some of the authors dealing with the topic opine that the differences and similarities owe themselves to enterprise resource planning (ERP) and customer relationship management (CRM). This is clarified by the following instances. According to some researchers (e.g. Holland & Light, 1999; Mandal & Gunasekaran, 2003; Morteza & Anand, 2008), the implementation of ERP and CRM should not be regarded from the angle of software implementation but from the perspective of strategic point of view. On one hand, ERP in the organization normally focuses on the internal process and resource management like dealing with employees and finance, which is in relation to the viewpoint of manufacturing certain products. On the other hand, CRM approach comprises marketing, selling, customer service and call centre models, with an approach focused on the customer. The importance lies in the fact that they co-operate with each other in an interactive way and come up with data that is useful for managers for minimizing costs and maximizing sales.

Maklan and Knox (2009) divide CRM into three branches namely: (i) Operating CRM , which manages customer contacts in the field of service, selling and marketing; (ii) Collaborative CRM, which provides the customer with a good view of the organization, develops customers' capability to carry out certain conditions, and helps customers to keep communicating with the organization and receive information updates through various channels provided by the organization, and (iii) Analytical CRM, where a system of analysis is offered through technology acquiring data through customer interactions in order to conceive beneficial business information.

2.4 CRM Definition

CRM has been defined by various authors in various ways. But in order to comprehend the concept of CRM in its entirety, its perspectives have to be studied in-depth. The following definitions exhibit the paradoxes among its perspectives.

In the current highly dynamic business environment, CRM has different meanings to different people; therefore coming up with a unified perspective of CRM is next to impossible. Bull (2003) states that CRM systems can be considered as information systems that are used to enable organizations to focus on customers. On the other hand, Bradshaw and Brash (2001) define CRM an organizational approach that encourages organization to identify, attract and increase retention of profitable customers by managing relationships with them. Still another definition is provided by Tamosiuniene and Jasilioniene (2007), who define CRM from strategic, analytical and operational point of view. The authors state that from a strategic level, CRM can

be considered as a core business strategy and they argue that it is a business strategy coupled with technology for the purpose of effectively managing the complete customer lifecycle. The authors proceed that in an operational level, CRM is mainly concerned with automating most of the enterprise. The further add that an effective CRM program makes it possible for customers to access needed information without hassle at any time. Finally, at an analytical level, CRM concentrates on the exploitation of customer data to encourage highly focused sales and marketing campaigns. Based on the above definitions of CRM, it can be stated that CRM is a core business strategy that is a culmination of internal processes and functions and external business networks to create and deliver value the target market for profit.

Generally speaking, from the previous definitions and from other studies regarding customers (Bose, 2002; Chan, 2005; Chang, 2007; Chen & Popovich, 2003; Chia, 2008; Curry & Kkolou, 2004; O'zgener & I'raz, 2006; Pedron & Saccol, 2009; Smock & Watkins, 2002), CRM can be defined as an approach that includes people, process, and technology, allowing the organization to comprehend and retain their customers to gain profits in the long run.

According to Galbreath and Rogers (1999), CRM can be defined as a business that identifies, qualifies, acquires, develops and retains increasingly loyal and profitable customers through the delivery of the right product or service, to the right customer, through the right channel, at the right time, and at the right cost. In addition, CRM also includes sales, marketing and service, enterprise resource planning (ERP) and supply chain management (SCM) functions through business process automation, technology solutions, and information resources to maximize

each customer satisfaction. In sum, CRM facilitates the interaction among the different enterprises; their customers, business partners, suppliers as well as their employees.

In another related study, Adam *et al.* (2010) define CRM as an enterprise approach that comprehends and affects customer behavior by using effective communications in order to improve customer acquisition, customer retention, customer loyalty, and customer profitability. On the other hand, Croteau and Li (2003) describe CRM as the method of storing and analyzing large amounts of data coming from sales calls, customer-service centers and actual purchases, for the purpose of gaining insight into customer behavior. According to the authors, CRM also makes it possible for businesses to deal with different types of customers differently, for example, businesses can respond more slowly to those who are less spenders and they can charge more to those who require extra services.

It is clear from the above definitions that they individually have their own perspectives and dimensions. The first one taking a holistic view as the description of CRM includes many ideal actions while the second one can be considered as a simplified version of it, but with a lot of concentration on customer behavioral modification that can be brought about by effective communications. And finally, the last in line focuses on the utilization of data processing in order to treat different customers differently.

In sum, CRM is more than what it once thought out to be just an automation of traditional sales, marketing, supply chain, back-office or service functions using technology and process reengineering. In addition, it is more than customer service or

service quality issue. It personifies the transformation of the entire enterprise, the enterprise's comprehension of its customers, and its business transactions with them. Almotairi (2008) encapsulates the whole function of CRM and describes it as a strategy for competitive advantage.

In the current study, CRM is defined as a comprehensive strategy and process of acquiring, retaining and collaborating with customer using various technologies such as internet, mobile phone, call center, sales force and other.

2.5 Benefits of CRM

The main aim of CRM is to create a long-term customer relationship for the purpose of improving the value of both the parties taking part in the interaction (Popovich & Chen, 2003). Generally speaking, organizations make use of CRM for a variety of reasons; one of those is primarily to improve customer retention and customer satisfaction (Kim & Kim, 2009). A research revealed that by increasing customer retention by 5%, this may lead to increase in company profits by 25% to 95% (Adam *et al.*, 2010). Owing to the high cost of acquisition, customers are generally unprofitable (Kim & Kim, 2009).

The key to clarify the whole notion is to collect more customer information and the way they relate to the organization. For instance, relationship can be exploited by cross- selling of products or services that the customer has not yet bought from the organization, by extending selling of products or services that relate to those already bought, or by some other transactions offering additional revenue to the organization (Roy, 2008).

There has been a consensus among managers who use CRM software in order to support sales, marketing and service activities, that they gain several benefits like higher levels of customer satisfaction, enhanced customer retention, reduced customer acquisition costs, and higher share of customer spend (Mobarak, 2005). Moreover, Blery and Michalakopoulos (2006) state that CRM makes it possible for companies to collect and gain information about customers' buying histories, preferences, complaints, and other necessary data to better anticipate future customer needs. The main goal is to enhance customer loyalty.

Below are several other benefits of CRM:

- Faster response to customer inquiries;
- Increased efficiency through automation;
- Deeper understanding of customers;
- Increased marketing and selling opportunities;
- Identifying different customers;
- Isolating most profitable customers;
- Obtaining information that can be shared with business partners and
- Receiving customer feedback that leads to new and improved products or services

In addition to the above benefits, CRM reduces overall business costs and assists companies in providing better customer service which normally leads to long-term customer loyalty. Furthermore, CRM makes way for companies to better comprehend customer needs and find individual customer solutions, as well as

integrate departments for a complete access to the same information (Pedron & Saccol, 2009).

After a thorough analysis, authors have grouped the benefits of CRM into two broad categories namely: operational benefits and strategic benefits (Buttle, 2004; Croteau & Li, 2003; Thompson *et al.*, 2006). The former refers to the operational excellence reached by organizations through the improvement of their internal efficiency (Payne & Frow, 2005). For instance, Popovich and Chen (2003) state that CRM makes it easy for the company to redesign its processes in order to enhance operational efficiency like marketing and customer support, front-office efficiency and productivity in sales which in turn results in a decrease in customer-related costs. On the other hand, the latter encompasses tactical opportunities and competitive advantages which stem out from the effect of electronic data interchange (EDI) and extranet on a business processes and relationships (Winer, 2001). Through the strategic benefits, CRM allows the organization to cull the necessary suitable information from customers which relates to their values, behaviors, needs and preferences which in turn assists the organization to achieve competitive advantages.

In sum, CRM can be considered as a business philosophy that allows organizations to comprehend customers' needs and requirements clearly through their histories and preferences which hold the key in assisting organizations to plan for the long run. Therefore, it can be said that in this digital era, companies who practice effective and efficient CRM strategies will achieve more than those who don't.

2.6 CRM Implementation

In this age of fierce competition in the markets, an organization is required to be customer-focused in order to survive and excel since customers have been proven to be the core variable for any organization. Hence, a customer-focused organization can easily achieve financial as well as other benefits if it practices CRM strategies with the most suitable technological support generally and CRM software specifically. It is worth mentioning that CRM software revenue reached US\$ 8.9 billion in 2008, a 14.2 percent increase from the preliminary 2007 revenue estimates of US\$ 7.8 billion. In addition, the market is expected to exhibit a healthy growth through 2012 when revenue is forecast to reach US\$ 13.3 billion (Morteza & Anand, 2008). This indicates that the CRM growth spending has been gradually escalating for the past years (Keramati & Mehrabi, 2009).

With the above forecast, it is believed that CRM works like magic in achieving customer satisfaction and business profits. However, even when CRM systems are becoming the fad for implementation, success is not always guaranteed. This can be offset by effective implementation approaches that require some monumental changes in processes, technologies, and employees in case the organization is not seriously customer-focused.

Bull (2003) states that one study on 202 CRM projects found that a mere 30.7 percent of organizations claim that they have achieved improvements in their selling techniques to customers. In addition, Winer's (2001) study indicates projects have continued to fail particularly sophisticated consulting organizations as well as in some Fortune 500 companies, which led some industry experts to claim that the rate of

failure is approximately between 60% to 70%. The author proceeds to add that the failure in most companies is due to project deviations which do not fulfill business objectives. According to Keramati and Mehrabi (2009), in the hopes of avoiding failure, organizations are not turning to CRM investments keeping in mind that in an organization wide strategy CRM's success does only depend on technological investment but also in other CRM resources.

Based on the above discussion, an effective CRM investment then becomes more critical than ever for the enhancement of an organizational success. In other words, companies should be aware of which CRM resources to focus on and to spend their budget on to get the most of financial as well as non-financial returns. Along these lines, Keramati and Mehrabi's (2009) study attempts to find the answer for the above mentioned issue.

Most CRM projects normally take 3-5 years of implementation in larger companies. According to Ryals and Payne (2002), the CRM technology component is generally a large investment at the outset. But as the full term approaches for the CRM project, technology costs only account for one-third to one-fifth of overall costs. The other costs are attributable to other crucial elements of CRM strategies namely people and process. The former needs to be skilled and talented employees need to be employed and as for the latter, a consultant may be hired to carry out some of the project activities such as systems integration and data warehousing and there may be a need to reengineer the front and back-office processes. In addition, there might be a need to redesign the organization according to customers and segments. These needed activities substantiate the fact that CRM implementation is a complex

task that requires a much needed consideration from the higher echelons of the organization.

2.7 Future of CRM

There are three trends influencing CRM in the near future (Bose, 2002). However, according to Bose, these trends cannot be predicted with certainty. The following is a list of the predicted trends:

1. The extension of CRM to channel partners - There has been a notable increase in reports about companies collaborating with other parties along their value-chain that requires channel relationships. Therefore, the logical step to take is to extend CRM to business partners existing in the product value-chain which can be addressed as partner relationship management. Partner relationship management (PRM) can be defined as "a business strategy to select and manage partners to optimize their long-term value to an enterprise" (Kim, 2008). In other words, it means how to pick the right partners to work with i.e. someone who can help in the company's success in dealing with customers and ensuring that they as well as the customers are satisfied.
2. Visual Tools - The availability of tools for analyzing customer data i.e. tools that are superior to traditional OLAP (Online Analytical Process) technologies.
3. Consolidation of CRM vendors - There has been a marked common trend with vendor consolidation within the CRM industry. Therefore, to ensure a smooth integration of hardware and software, companies are noted to offer core

technologies through the acquisition of developing partnerships with CRM specific vendors (Tamosiuniene & Jasilioniene, 2007).

In addition, some other notable trends that are emerging are mentioned by Greenberg (2004), who states that verticalization is a trend that will influence the evolution of CRM. According to the author, there is no perfect way to design a CRM system because each company has its specific needs which mainly depends on what the customers aim for and in which market the competition is happening. In consequence, the CRM functionality system significantly differs from industry to industry even though they possess the same basic principles when briefly reviewed.

Nevertheless, currently, most CRM vendors make it a point not to target any particular vertical industry niches, but instead carry out modifications in the implementation phase. This results in an increasing need to use specialized solutions because of the implication of less tailoring of the system to suit a marketer's business specifications. Furthermore, it is important to engage an experienced CRM vendor who comprehends the specifications of the marketer's business. Some analysts further take the matter a step further and claim that in the near future, underlying software of e-CRM will be negligible as compared to the industry expertise of the vendor (Greenberg, 2004).

2.8 Fundamental Characteristics of CRM

A hotel may choose from any four fundamental characteristics of CRM depending on its needs and requirements. The hotel has a choice on whether to execute the

characteristics as a separate solution or integrate them together (Pedron & Saccol, 2009; Tamosiuniene & Jasilioniene, 2007). The main CRM characteristics are sales force automation (SFA), customer service (CS), marketing automation (MA), and Field Service (FS). Each characteristic is discussed in the following sections.

2.8.1 Sales Force Automation (SFA)

Sales force automation (SFA) is an electronic tracking and management of account activities carried out by individual salespeople. Generally speaking, it incorporates the data at the corporate level providing the hotel with a comprehensive view of its customers and prospects (Croteau & Li, 2003). SFA is a CRM characteristic that maximizes productivity and offers consistent information which assists in the organization's sustenance of competitive advantage in hotel industry.

According to Payne and Frow (2005), SFA is initially designed to support salespersons in managing their touch points, and providing them with event calendars regarding their customers. SFA helps motivate hospitality sales teams exceed sales goals by providing sales management solutions that save time, significantly increase efficiency, improve productivity and CRM performance, and eliminate redundancies (Pedron & Saccol, 2009).

Sales Force Automation (SFA) solutions are designed to give sales team what its missing traction. SFA programs can consolidate, automate, and streamline all hotel sales reporting requirements including account management, group bookings, catering, performance reporting, and software integration (SFA solutions interface with Outlook and provide remote backup and access to stored data). It also

automatically generates and maintains clean sales data and clean account files so the hotel sales team is no longer burdened with administrative tasks that do not produce revenue (Xu *et al.*, 2002).

Furthermore, Zeng *et al.* (2003) state that sales force automation encompasses functions of sales promotion analysis, which leads to the automated tracking of a guest's account history for repeated sales or future sales, and coordinating sales, marketing, call centers, and retail outlets to realize the sales force automation.

2.8.2 Customer Service (CS)

Customer service and support (CS) is the second CRM characteristic: an activity which deals with the customer after sales situation. This customer service differs from a web-enabled service through website or self-service. Its main aim is to support the customer with solving problems and handling guarantees (Dubrovski, 2001).

The hospitality industry is very competitive. If organizations fail to provide good customer service the competitors will surely be eager to step up and provide the expected customer service. If the organization fails to provide good service a lasting impression is made. The organization will lose the customer permanently; the customer will not be coming back on future trips due to that poor impression (Pedron & Saccol, 2009). Therefore, the function of CS in the hotels is to provide resolution to internal and external customer queries and problems in a quick and effective manner. Through the provision of fast and accurate answers to customers, a hotel can save cost and increase customer loyalty and revenue. These services include call center

management, field service management, and help desk management (Dubrovski, 2001).

CRM assists hotels in incorporating an excellent customer service into its core which normally leads to the hotel's abandonment rate by manipulating the functions of tracking, monitoring and measuring customer service responses. In addition, it makes it possible for the hotel to assign each problem to a suitable expert who can resolve customer queries once it crops up. Thus, customer problems can be typically resolved efficiently through proactive customer support (Xu *et al.*, 2002).

2.8.3 Marketing Automation (MA)

CRM's third characteristic is marketing automation or MA. It focuses on the whole market encompassing the collection of information from different types of data warehouses and integrating the data into marketing plans. In addition, it helps customers and organizations by providing information regarding products, campaigns, customer profiles etc. (Cho *et al.*, 2002). Marketing automation for the hospitality industry offers a variety of messaging tools to target each customer group selectively based on purchasing history, seasonal data, travel statistics, and past customer behavior. Whether it is a boutique hotel or a world-class resort, it is crucial that local sales forces at each property be able to access marketing information fast and effectively so that accurate marketing collateral gets to the correct target at the time that it is most desired (Tamosiuniene & Jasilioniene, 2007).

Marketing automation for the hospitality industry can make a huge impact on how local marketers conduct business and sell. Chia (2008) describes several characteristics of AM in the hotels. AM can:

- Create effective campaigns using a variety of marketing channels consisting of direct mail, email, social media and more.
- Customize and personalize marketing materials.
- Review details from closed-loop reporting and learn about how many times customer engages, inquires, purchases or returns.
- Analyze reports based on real-time tracking.
- Keep brand compliance in control at all.

2.8.4 Field Service (FS)

The final CRM characteristic is the field service or FS. Accordingly, Dyche (2002) stresses that the customer touch points occurring while performing field service should be noted down as a part of his portfolio in the CRM system. This very fact brought up the need for field service automation functionality. Through CRM use in the Hospitality, remote staff can quickly and effectively interact with customer service personnel in order to satisfy customers' individual expectations.

In the Hospitality sector, a field service offers Full Service help desk support as well as Technical Support to all of its customers so that they can be available when they need it most behind each of products stand dedicated services and support required to ensure proper function (Chia, 2008).

2.9 History of CRM

There are notable similarities between CRM and Relationship Marketing because the latter is based on the very notion that the happier the customers are with a relationship, the greater the likelihood of their staying with the organization. Strong evidence has also been shown regarding the correlation between customer retention and profitability (Thompson *et al.*, 2006). This is why CRM has stemmed out from businesses processes like relationship marketing, and the increased stress on customer retention improvement through the effective management of customer relationships.

CRM is not a new concept; but it has become the topic of most researchers as technology developed. CRM can be said as a culmination of business that demands more automation in order to facilitate the business process and to improve customer relation. According to Winer (2001), CRM evolved from the Sales Force Automation (SFA) market, which stemmed out of contact management as contact management provided salespeople a place to keep information about their prospects; things like addresses and phone numbers (Bose, 2002).

However, it was not until the 1990s when CRM came into prominence; the initial onset was focused on traditional channels supporting front-office personnel communicating mainly by telephone, but also by fax and mail, as well as field personnel (Bradshaw & Brash, 2001). Towards the middle of 1990s, the Web emerged which brought about changes in both the CRM and the customer related business needs of various companies. The current CRM system allows the existing and potential customers to interact and communicate with corporations (Eid, 2007; Sin *et al.*, 2005a; Yim *et al.*, 2005; Tamosiuniene & Jasilionienė, 2007).

Some researchers predict further changes as Xu *et al.* (2002) indicate that the client/server architecture behind existing CRM applications would disappear in the near future. Big vendors like Siebie are the most important vendors of interoperable e-business software or in other words, SAP which is an acronym for Systems, Applications and Products in Data Processing: these systems are known to be slow responders to the Internet leaving ample opportunities for start-ups. Therefore, a new market segment of e-CRM is emerging.

In reality, e-CRM represents only a part of a comprehensive CRM strategy and implementation. As Fjermestad and Romano (2003a) state, Internet-based CRM has three branches namely, presales information, e-commerce services, and post-sales support. This is further substantiated by an unpublished study collected from the Center for Customer Driven Quality highlighting the potential savings that are attached to e-CRM: for one particular retailer, the cost of an in-store customer contact was estimated to be US\$ 10, the cost of a phone contact US\$ 5, and the cost of a Web contact US\$ 0.01 (Fjermestad & Romano, 2003b). It therefore appears that majority of companies will depend on e-CRM to decrease their costs and to provide effective and efficient service to their customers.

2.10 CRM in the Hospitality Industry

The potentiality of the hotel sector in applying CRM is the highest among all industries (Piccoli *et al.*, 2003). Some unique traits of this sector such as the inseparability of service facilitates the customer relationship building (Adam *et*

al.,2010). Proper flow of information with the guests can promote greater benefits of the hotels (Drohan *et al.*, 2006; Sigala, 2005).

According to Adam *et al.* (2010), the efficiency and the effectiveness in providing appropriate services to customers have become more critical in more dynamic business world. The opportunity to learn customer needs and wants is numerous as the hotel operations are custom-made (Piccoli *et al.*, 2003). The development of enduring competitive strategies in combination with customer focused employees can facilitate the exploitation of such opportunities (Adam *et al.*, 2010). For this purpose, effective implementation of CRM strategies is necessary, which can create unique and personalized experiences for the customers by promoting the collation, conversion and dispersion of pertinent customer data (Drohan *et al.*, 2006; Sigala *et al.*, 2005).

2.10.1 The Opportunity

Many hotels consider the implementation of CRM very troublesome due to the costs of a high-quality customer database as well as the benefits being unwarranted. This type of reluctance to change may make it challenging to alter the organizational philosophy (Piccolo *et al.*, 2003).

According to Reinartz *et al.* (1990), CRM seems to be the logical step after maintaining close relationship with the customers of the hotels. This change may bring more customers become loyalty (Kamath *et al.*, 2008). The changes through the CRM implementation should be targeted for creating personalized, unique guest

experience. Instead of centralized one, the collection of data should be embedded with highly personalized service at each customer touch-point.

Hotel companies have always tried to keep a close relationship with their customers, but the focus was more on the local relationship between one hotel and client. Loyal customers stay with a hotel more often and spend more money (Ku, 2010). Hotel chains introduced frequent traveler programs when the value of loyalty becomes a topic. CRM seems the next logical step (Sanayei *et al.*, 2010).

Wide applicability of CRM in hotels is evident in Kamath *et al.*'s (2008) study where one-third of the hotels were found to have a structured data warehouse. Among the rest, 50 percent were in the planning stage.

2.10.2 The Challenge

In implementing the CRM in the hotel industry, among the two main challenges are a lack of standardization and IT –system integration within each brand or even hotel. This requires heavy focus on interfacing possibilities of the CRM software and the analysis of different processes within each local system (Sanayei *et al.*, 2010; Victorino *et al.*, 2005). Another challenge is defining the financial responsibility of the implementation, data ownership, and data availability among the stakeholders like the owner, the local management company and the brand (Piccoli *et al.*, 2003).

Correct process of data collection and entry are the part of operational challenges. While implementing the new CRM system, often, the hotels face data dilemma regarding taking over old data for the new CRM system. Starting with a

clean and credible system is important. With limiting the value of the data warehouse, data problems also limit the value of the new model of CRM (Ku, 2010).

Two major causes may result in data inefficiency. Missing or inaccurate data is one of them. For instance, creating customers' occupation profile may be difficult if only a few customers provide this information, which may be due to the customers' rushing during check-in. However, solutions in such case may to collect business cards (Sanayei *et al.*, 2010; Victorino *et al.*, 2005). Another major limitation that causes data inefficiency can be poorly entered chain. Sometimes the marketing campaigns are sent with incorrect spelling of the name or address. To solve this, a standard of detailed entry should be defined. That standard should define the formats, text case and redundant code properly (Sanayei *et al.*, 2010; Victorino *et al.*, 2005).

According to Sigala (2005), hotels are rarely able to assemble properly for the purpose of creating useful customer knowledge. Sanayei *et al.* (2010) also reveal the intermittent, delayed and fragmented nature of the collection and use of customer information in hotels. In this sector, following two are among the major reasons of inconsistencies, duplication, inaccuracies, and incompleteness of customer data: (1) lack of integrated ICT applications, and (2) legacy systems designed along functional lines creating fragmented profile of the guests (Ku, 2010; Sigala, 2003).

As a consequence of these problems, many hotels find it difficult to implement effective CRM strategies. Sometimes the CRM approach is driven by the software vendors or sometimes the technology does not match with the strategy. The problems related to CRM should be viewed from a business viewpoint rather than

from technology viewpoint. Thus, CRM requires the alignment, design, and coordination of ICT tools with the business operations and strategy. Therefore, capabilities framework of CRM enhance the perspective of effective implementation. Ultimately, the implementation of CRM necessitates the integration of resources in the form of people, processes and technology for the purpose of creating customer relationships to generate value (Adam *et al.*, 2010).

2.11 CRM Failure

CRM implementation projects are subject to failure for many reasons including technological problems and lack of delivering the intended benefits. According to Nath *et al.* (2009), there is an indication that the results produced by CRM implementation projects are not consistent with the level of expectation or anticipation.

The failure rate evident in CRM implementation projects within one year range was from 32 to 55 percent in the world according to research and advisory firm the Gartner Group (Coltman, 2007b). This result raises the doubt about the possibility of a highly successful CRM implementation. Nevertheless, the definition of CRM implementation failure is not the same among the CRM consultants (Pries & Stone, 2004). For example, in a sales automation implementation 80 percent failure rating is applied, whereas other CRM applications do not consider such a high rate. Thus, the accurate measurement of failure rate is not possible unless a predefined and mutually agreed-upon metrics are set (Elmuti *et al.*, 2009).

CRM has become a buzzword. Many consulting firms promise a guaranteed competitive advantage and make a lot of profit by selling the CRM solutions where IT is used to support organization-customer close relationship. Yet, many companies failed to obtain the expected return even after adopting this solution. Payne and Frow (2006) show that by Gartner Group study in among the large and small-sized companies in America, Europe, Asia, and across all industry sectors,

- Sales of 69% CRM projects experienced little impact on performance;
- Companies think that the success of their CRM projects are significantly less than that of their suppliers or consultants;
- Over the next 18 months of implementation 70% of CRM experience failure; 60% of CRM projects end up with failure.

Some of the key reasons of CRM failure are researched by the Gartner Group. The argued for a primary reason behind this failure: the lack of coordination and building up of suitable capabilities at enterprise level. CRM is not just the technology implementation; it means the positive reinforcement with right skills that result in the change in behavior and attitude. The success of CRM is delivered in the form of corporate benefits, which is further accompanied with many linked benefits. These benefits and corporate needs are to be monitored and managed (Roy, 2008). The Table 2.1 summarizes the most important barriers to CRM that were identified in previous studies in different environments used this study.

Table 2.1
The Most Important Barriers of CRM Identified in Previous Studies

Authors Factors	Chalmeta (2006)	O' zgener and I' raz (2006)	Payne andFrow (2006)	Elmuti <i>et</i> <i>al.</i> (2009)	Nath <i>et</i> <i>al.</i> (2009)
Inadequate supporting budgets.	X	X	X	X	
Lack of senior management commitment to CRM.		X	X	X	
Poor communication.		X			X
An absence of complementary customer management skills.	X	X	X	X	
Inefficiencies in business process.		X	X		X
Lack of end-user input at service stage.		X			
A lack of standardization.	X	X		X	
Inter-departmental conflicts.		X		X	
Lack of cultural readiness.	X	X			X
Poor quality customer data and information.	X		X	X	
Limited or no input from the customer' perspective on CRM.	X				X

2.12 CRM Tools

Customer relationship management tools are currently, widely used by various corporations to track customer and sales lead data. The primary focus of many of these tools is information about the customer, tracking the content of customer contacts, managing sales leads and potential orders. While this data is critically

important, these CRM tools could be expanded to include a suite of offerings which will enhance the customer relationship (Ku, 2010). As a key objective of customer satisfaction, all phases of the customer relationship should be monitored through this suite of offerings. Incorporating marketing initiative tracking, project management tools, interactive feedback from the customer and continual satisfaction surveys into the CRM suite of tools would make the entirety of information about on-going customer relationships easily accessible (Leppitsch, 2009; Tanner, 2005).

Another definition by Berling and Parker (2010) provides that CRM tools are designed specifically for organizations which professionally manage their continuing interactions with large groups of customers (constituents) for the purpose of positively influencing the behaviors of these constituents and their attitudes toward the organization, particularly for organizations in the education industry.

Customer relationship management tools allow companies to gather the information about customers they consider most relevant and enable strategy formulation and application. Company strategy and tools, which focus on customer satisfaction and positive customer experience, will be discussed below.

2.12.1 Mobile CRM (M-CRM)

M-CRM is customer management of any kind including interactive communication between an organization and a customer using a mobile device (Liljander *et al.*, 2009). The aim of M-CRM is to enable a two-way interactivity between the customer and the enterprise continuously anywhere whether in an office or walking down the

street. It also can be seen as a means to make CRM more powerful with utilization of advanced wireless communication tools (Nath *et al.*, 2009).

Mobile CRM are services that (1) aim at nurturing customer relationships, acquiring or maintaining customers, (2) support marketing, sales or service processes, and (3) use wireless networks as the medium of delivery to the customers (Leppitsch, 2009).

The success of a mobile CRM strategy depends on how well the application is designed, the design of the interface and services, as well as customers' evaluation of the service content in relation to any additional costs of using it. Although in the past, consumers have felt cautious about using mobile services (Leppitsch, 2009), in the future mobile applications are expected to have an important impact on customer acquisition and retention, by offering additional services and benefits to customers (Liljander *et al.*, 2009; Sinisalo *et al.*, 2007).

2.12.2 E-CRM

E-CRM is a term coined for CRM functions, which are delivered on the Internet (Kelley & Mannicom, 2003; Romano & Fjermestad, 2001; Wu, 2003). It refers to the online marketing activities, tools and techniques, which are aimed at building and improving consumer relationships (Taylor & Hunter, 2002). Fjermestad and Romano (2003a) highlight that e-CRM is purported to improve customer services, retain valuable consumers as well as aid analytical capabilities.

Electronic customer relationship management (e-CRM) has evolved recently with the emergence of information technology such as Internet and web technologies.

It integrates and simplifies all customer-related processes through the Internet, and helps leverage integrated information on customers to improve customer acquisition, customer development, and customer retention by managing deep and long-lasting relationships. Firms can understand customer behavior and anticipate customer needs much more easily than before through online activities tracking and analyzing (Kelley & Mannicom, 2003).

According to Taylor and Hunter (2002), many of the items have been extracted that can be described as e-CRM's features. These features are:

- E- CRM is vital for managing customer relationships online.
- E-CRM refers to concrete website functionality or tools.
- Without e-CRM, CRM could not be realized on the Internet.
- E-CRM is also often labeled as “value-adding services”.
- Online commerce website is an example of e-CRM features.

2.12.3 CRM Software

Customer relationship management software has attracted the expanded attention of practitioners and scholars. More and more companies are attempting to develop customer centric strategies, programs, tools, and technologies for effectively and efficiently identifying the most profitable customers and for better serving their needs using CRM software (Kros & Molis, 2004; Parvatiyar & Sheth, 2001; Thakur & Summey, 2005). Many companies are realizing the need for in-depth and integrated customer knowledge in order to not only build close cooperative and partnering relationships with their customers but also to identify which customers are more

profitable (Parvatiyar & Sheth, 2001). CRM software helps organizations implement effective CRM. CRM software works across all corporate departments to help harmonize customer-centric thinking in the entire organization. This interdepartmental cooperation also reduces cost, increases efficiency, and improves customer satisfaction (Tan *et al.*, 2002)

According to Tan *et al.* (2002), through examining the situation of CRM application vendor, a good picture on how CRM is being implemented in current business settings can be understood. To meet different businesses for the CRM implementation, large players like Siebel, SAP, Clarify, and Oracle provide more scalability and integration within their CRM applications, while there are also many small companies who provide small read-made functions to do specific tasks. Their strengths and weaknesses are displayed in Table 2.2.

Table 2.2
Strengths and Weaknesses of CRM Software Types

Vendors	Strengths	Weaknesses
Siebel	Dominant player in CRM, scale and breadth of solutions; vertical-specific offerings	High cost; not a truly open architecture; weak analytics capability
Oracle	Strong ERP capability; database and analytics technology; scale and scope of offering; wireless capability	High cost
PeopleSoft\ vantive	The merger of PeopleSoft with Vantive means the combination of best-of-breed back-office (ERP) AND front office (CRM) solutions	The difficulties to the merger, cautionary approach to wireless
Nortel /Clarify	Customer support, communications services, call centers, comprehensive suite of CRM products; specific vertical offerings	Weak analytical capabilities, online personalization, high costs

Table 2.2(continued)

Vendors	Strengths	Weaknesses
SAP	Depth of feature sets and software functionality, software flexibility and extreme configurability, workflow and business process automation.	Software complexity in both the implementation and post implementation utilization, high software cost, difficult and high risk application software implementations.

Adapted from Tan *et al.* (2002)

2.12.4 Call Centers

A call center is operated by a company to administer incoming product support or information inquiries from consumers (Abdullateef *et al.*, 2011). Outgoing calls for telemarketing, clientele, product services, and debt collection are also made which involve balancing the requirements of cost effectiveness and service. Call centre operations' primary objectives are customer care services and the achievement of a long term customer satisfaction relationships (Abdullateef *et al.*, 2011).

Call centers are, in many cases, the primary channel of interaction of a firm with its customers. Historically, call centers were mostly considered a service delivery channel from a marketing point of view. A call center has a potential of becoming an ideal sales environment. Modern (CSR) systems have dramatically improved the information available to Customer Service Representatives (CSRs) about the individual customer in real time (Abdullateef *et al.*, 2011). Specifically, in call centers, once the caller has been identified, the CRM system can inform the agent regarding this customer's transaction history, her value to the firm and specific cross-selling opportunities. As a result, cross-sales offerings can be tailored to the particular

customer, making modern call centers a perfect channel for customized sales. Many companies have identified the revenue potential of inbound call centers. Indeed, as suggested by a recent McKinsey report (Abdullateef *et al.*, 2011), call centers generate up to 25 percent of total new revenues for some credit card companies and up to 60 percent for some telecom companies.

2.12.5 Customer Service

Customer service is an activity that deals with the customer after sales and satisfies customers' needs. This service varies from a web-enabled service via a website or self-service and it supports the customer with solving problems and handling guarantees (Capacity, 2004). From the point of view of an overall sales process engineering effort, customer service plays an important role in an organization's ability to generate income and revenue (Capacity, 2004). From that perspective, customer service should be included as part of an overall approach to systematic improvement. A customer service experience can change the entire perception a customer has of the organization.

CRM helps companies incorporate an exemplary customer service into its core. It improves the organization's abandonment rate by configuring the functions of tracking, monitoring and measuring customer service responses. It also makes it possible for the company to assign each query to the appropriate expert, who can resolve the customer call once the query from the customer comes up. Customer problems can be solved efficiently through proactive customer support (Xu *et al.*, 2002). According to Capacity (2004), Customer service is a series of activities

designed to enhance the level of customer satisfaction – that is, the feeling that a product or service has met the customer expectation.

2.12.6 Sales Force

Sales force is responsible for driving and supporting sales functions as defined by marketing (e.g. outside sales, inside sales handling outgoing calls). It is a group of salespeople or sales representatives responsible for the sales of either a single product or the entire range of an organization's products (Brown & Gulyc, 2006). A company's sales force consists of its staff of salespeople. The role of the sales force depends to a large extent on whether a company is selling directly to consumers or to other business.

In consumer sales, the sales force is typically concerned simply with taking and closing orders. Salespeople do not call on customers; the days of the door-to-door salesperson are long past. Salespeople don't create demand for the product, since demand for the product has already been created by advertising and promotion. They may provide the consumer with some product information, but individuals involved in consumer sales are often not concerned with maintaining long-term customer relationships. Examples of consumer sales forces include automobile salespersons and the sales staffs found in a variety of retail stores.

According to Brown and Gulyc (2006), within the CRM, it must be recognized that different customer segments require different sales attention and sales focus, thus, the need exists for sales segmentation and the measurement of sales

resources against the various segments. This form of segmentation involves dividing customers and prospects into categories in order to use sales time more efficiently.

2.12.7 Voice Response System

A voice response system is a computer system that responds to voice commands, rather than input from a keystroke or a mouse. Uses for this kind of system range from convenience to necessity to security (Oake *et al.*, 2009). IVR is used to enable the caller to retrieve information from a database, enter information into a database, or both. IVR systems allow customer to efficiently exchange information, reducing clerical processing (Oake *et al.*, 2009).

(IVR) is an integral part of CRM. A truly two-sided conversation requires a voice user interface (VUI) that provides the customer with the correct prompts in order to elicit specific answers to queries. This also requires architecture that facilitates conversation flow, weeds out incorrect grammar, and nebulous concepts in order to provide the means for the customer to obtain a satisfactory answer to a problem or a question. IVRs are not human, so the challenge lies within how to create a human-like experience or the perception of one (Oake *et al.*, 2009).

2.12.8 Point of Sale Terminals

A point of sale (POS) terminal is an electronic device that is used for verifying and processing credit card transactions. It is typically connected via highly reliable telephone wired connections, and requires rapid dial up time, low power and reliable performance. The point of sale terminal is basically an electronic cash register,

updated from older traditional models to include electronic/online technology for more versatility for tasks including credit card processing. Merchants can buy or rent a point of sale terminal along with other services and equipment according to their budget and needs.

A point of sale (POS) terminal is a computerized replacement for a cash register. Much more complex than the cash registers of even just a few years ago, the POS system can include the ability to record and track customer orders, process credit and debit cards, connect to other systems in a network, and manage inventory. Generally, a POS terminal has as its core a personal computer, which is provided with application-specific programs and I/O devices for the particular environment in which it will serve. A POS system for a restaurant, for example, is likely to have all menu items stored in a database that can be queried for information in a number of ways. POS terminals are used in most industries that have a point of sale such as a service desk, including restaurants, lodging, entertainment, and museums (Oake *et al.*, 2009).

Increasingly, POS terminals are also web-enabled, which makes remote training, and operation possible, as well as inventory tracking across geographically-dispersed locations.

Point of sale or POS equipment is often part of an overall “merchant credit card account” or “credit card processing service” that third parties offer to a range of businesses. Companies of all sizes like to outsource POS credit card processing options to make their operations easier to manage. In these kinds of situations, the third-party service adds rented equipment to the bill for credit card processing (Worthington, 2010).

2.12.9 The Loyalty Cards

In marketing generally, and in retailing more specifically, a loyalty card, rewards card, point's card, advantage card, or club card is a plastic or paper card, visually similar to a credit card or debit card that identifies the card holder as a member in a loyalty program. Loyalty cards are a system of the loyalty business model. Cards typically have a barcode or magstripe that can be easily scanned, and some are even chip cards. Small keying cards (Worthington, 2010) which serve as key fobs are often used for convenience in carrying and ease of access.

The card issuer requests or requires customers seeking the issuance of a loyalty card to provide a usually minimal amount of identifying or demographic data, such as name and address. Application forms usually entail agreements by the store concerning customer privacy, typically non-disclosure (by the store) of non-aggregate data about customers. The store — one might expect — uses aggregate data internally (and sometimes externally) as part of its marketing research. These cards can be used to determine, for example, a given customer's favorite brand of beer, or whether he or she is a vegetarian.

Members of a loyalty program are usually given a loyalty card — perhaps a simple piece of cardboard (for example indicating how many take-away coffees someone has purchased), but more usually a credit card-style plastic card with a magnetic strip or barcode containing a unique member identification number and perhaps the name of the customer. There is usually no payment facility associated with a loyalty card; its sole purpose is to monitor transactions in order to reward customers in proportion to their spending. Whenever a purchase is made, information

about the purchase (such as the price, product, place of purchase and date) is recorded alongside the member number. Over time, therefore the information about consumer behavior gathered through loyalty card data can be substantial (Sharp &Sharp, 1997).

Loyalty card programs collect and store different types of data about their card holders. This can include (Capacity, 2004):

- Information provided by the customer upon applying for the card (e.g. age, gender, address)
- Information about purchases made using the Loyalty card at the point of sale (e.g. type and location of retail outlet, type of product, price)
- Information about redemptions made using the rewards that the Loyalty program provides (e.g. type of product redeemed, store at which vouchers are spent)
- Responses to any surveys or other information-gathering schemes conducted by the Loyalty program.

2.12.10 Phone Contact

Telephones are a point-to-point communication system whose most basic function is to allow two people separated by large distances to talk to each other (Worthington, 2010). It is one of the most common appliances in the developed world, and has long been considered indispensable to businesses, households and governments. The word "telephone" has been adapted to many languages and is widely recognized around the world.

Telephone contact is primarily used to collect 'hard numbers' or representative data on the entire customer base (ratings on all aspects of quality service, direct comments and opinions on the service experience). It can also be used on an ongoing basis for tracking or monitoring purposes and as input to a CSI (Customer Satisfaction Index) (Brown & Gulyc, 2006).

2.13 CRM Performance

Performance measurement can be defined as the process of quantifying the efficiency and effectiveness of past actions. Kim *et al.* (2004) define CRM performance as the amount of improvement that retailers achieve in terms of customer relationship strength, sales effectiveness, and marketing efficiency achieved in the implementation of CRM technology. Information systems become strategic to the success of many companies and they have a high dependence on CRM importance. The success and failure of the company can hinge on the success of the CRM performance. It therefore becomes critical to the success of the CRM systems. If CRM and corporate management can better understand customer needs underlying CRM performance, they can better prepare the CRM strategies.

According to Al-Momani and Nor Azila (2009), it is important to measure the performance of CRM in organizations. However, only a few researches have been conducted to measure the performance of CRM in organizations. Several authors have claimed that there is lack of conceptual CRM that are crucial to the development of success measures. For instance, and Bull (2006), and Roh *et al.* (2005) claim that normally the absence of valid and reliable CRM measurement can lead to its failed

implementation. Organizations can only achieve their CRM goals through the development, application and use of CRM measurements. In addition, the clarity of the objectives to be achieved through CRM can lead to efficient performance measurement and this very notion has become a study target for both academics and practitioners alike in the last few years.

A number of research firms like META Group and Gartner and Butler Group have found and reported high CRM failure rates between 50%-85% (Malte *et al.*, 2006). Among the large and small-sized companies in America, Europe, Asia, and across all industry sectors, 85% are found dissatisfied with their CRM performance, according to a global study on the satisfaction levels of CRM performance conducted by IBM Business Consulting Services in 2004 (Nath *et al.*, 2009). The arguments and evidences in the positive impact of CRM are also available. According to the result of the global survey of IBM Business Consulting Services in 2004, around 20% to 30% of companies reported some forms of success with their CRM initiatives. The results also show around 15% of global organizations to believe that they are fully succeeding with their CRM projects (Nath *et al.*, 2009).

Although the literatures show both successful and unsuccessful cases of CRM performance, the research highlighted that many companies are unable to quantify their performance claims (Nath *et al.*, 2009). Additionally, there is little or no strong evidence that companies measure their CRM performance (Kim, 2009). The justification of these reported cases of CRM success and failure, therefore, are questionable.

Reichold, Kolbe and Brenner (2004) measure CRM by four perspectives: (a) the customer value perspective through which financial benefits gained from customers are measured, (b) the customer satisfaction perspective which measures the customer's satisfaction level regarding the products and services, (c) the customer interaction perspective which measures the operational excellence of internal processes as well as multi-channel management, and (d) the customer knowledge perspective that measures the quality of customer knowledge and data analysis.

Reinartz, Krafft and Hoyer (2004) conceptualized a construct of the CRM process by operationalizing and validating the construct. They then proceed by empirically investigating the consequences of organizational performance in the light of CRM processes implementation. The end result is a theoretically acceptable CRM process measure possessing three key stages namely, initiation, maintenance, and termination. They measure economic performance within CRM conception. Kellen (2002) developed CRM measurement frameworks, ranging from strategic to operational, to assess whole CRM systems. The building and deployment of the CRM measurement framework depends on the planning horizon, the market volatility, the company's overall strategic posture and goals, and the extent of the organization and customer base impacted by the CRM solutions considered.

In examining the practical implementation of CRM, Xu *et al.* (2002) evaluated CRM performance based on the reasons for implementing CRM. They emphasized knowledge management, which supports strategy-making and as a result improves customer satisfaction level. Capacity (2004) examined the relationship of

information technology intensity and organizational absorption capacity to CRM practices and performance.

According to Kim *et al.* (2004), a proposed relationship strength, sales effectiveness and marketing efficiency are all crucial to CRM performance evaluation metrics. Similarly, Wang *et al.* (2004)'s study evaluated CRM that relates to an integrative framework for customer value as well as CRM performance having its basis on the identification of the key dimensions of customer value. They emphasized the customer equity-based view. Their model evaluated CRM performance from two perspectives: firstly, they measured CRM performance in terms of intangible indicators (like customer satisfactions and brand loyalty) called relationship quality, and secondly, tangible indicators (like retention, repurchasing, cross selling and word of mouth which is called customer behaviors). Eid (2007) mentioned the following criteria for assessing internal success of CRM or CRM effectiveness: customer relations, customer transactions, and sales costs.

Croteau and Li (2003) chose CRM impact to describe CRM success in the organization. The CRM impact is considered to be the actual organizational benefits stemming from CRM implementation and use. Originally, this construct stemmed out from a study carried out by Iacovou *et al.* (1995). However, due to its characteristic of high pertinence to measuring CRM impact, a customer-focused evaluation framework was preferred as the ongoing performance, costs, and effectiveness of CRM initiatives. The customer metrics consists of customer retention rate, customer satisfaction, and customer profitability. CRM impact was measured from both an internal focus (i.e., organizational focus) and an external focus (i.e., customer focus).

Internal focus refers to the changes in an organization's-business strategy, structure, business processes, metrics, compensation, skills, and technology. External focus deals with customer definition and segmentation including an understanding of customer needs expectations, feedback, communications and customer-focused metrics.

The model of Roh *et al.* (2005) focuses on the causal relationships among three CRM initiatives. For measuring performance, they consider efficiency, satisfaction, and profitability. Some studies use BSC concepts for evaluating CRM (Kim & Kim, 2009). Kim, Suh and Hwang (2003) offer an application framework based on BSC for evaluating CRM performance and customized four aspects of BSC for CRM. These aspects are: customer knowledge (innovation and learning), customer interaction (internal business perspective), customer value (financial perspective), and customer satisfaction (customer perspective).

Resource based view is the other idea applied in some studies to assess CRM performance (Coltman, 2006). Based on the resource-based view of the firm, Coltman (2006) pinpoints the human and technological capabilities that are crucial for the successful execution of a CRM program. Furthermore, since CRM program must be feasible to achieve success, this study emphasizes a wider understanding of the structural and behavioral limits to performance.

Several authors (e.g. Campbell, 2003; Gebert *et al.*, 2003; Reinartz *et al.*, 2004; Sin *et al.*, 2005a; Wang & Feng, 2008; Yim *et al.*, 2005) establish four dimensions of analyzing CRM performance. These are organizing around CRM,

incorporating CRM-based technology, focusing on key customers, and managing knowledge.

Accordingly, Sin *et al.* (2005a) suggest a multidimensional construct comprising four broad behavioral components i.e. key consumer focus, CRM organization, knowledge management, and technology-based CRM. In other words, according to this idea, successful CRM is predicted by studying four key areas: strategy, people, technology, and processes. Owing to the novelty of the development, the present study hinges on the measurement used in Sin *et al.* (2005a) for CRM performance. The scale that has been proposed in the said study can be considered useful as a diagnostic tool in identifying areas which need improvements.

Another reason behind choosing these four dimensions is because they are considered the critical success factors for business performance (Sin *et al.*, 2005a; Wang & Feng, 2008; Yueh *et al.*, 2010). This model analyzes the effect of four dimensions CRM on firm performances; it is classified as cause and effects models. Some scholars (e.g. Sin *et al.*, 2005a; Yim *et al.*, 2005) find the need for more research on these four dimensions CRM. These four dimensions are tested in contexts like China. The results in China may not be applicable for a different context like Middle East where the social and business environment is completely different. The current study was undertaken in the Middle Eastern context to test these dimensions. The following part of this section contains discussions related to the CRM dimensions in the present study.

2.13.1 Key Customer Focus

The first dimension is key customer focus. Any organization striving for the successful implementation of CRM should have a customer-focused structure, culture, policy, and reward system (Ryals & Knox, 2001; Sheth *et al.*, 2000). Key customers are often identified in “lifetime value computations”. The interactions of these customers must fully reflect the company-wide focus on CRM (Jain & Singh, 2002). Achieving deep customer relationships is the ultimate goal. The seller organization becomes indispensable to its most profitable customers by achieving this level of relationship (Vandermerwe, 2004). According to Sheth *et al.* (2000) and Vandermerwe (2004), overwhelming customer-centric focus and continuous delivery of superior product/service and addition of value to these targeted key customers carried out through personalized/customized offerings are the gateway to successful CRM. According to Sin *et al.* (2005a), there are four key components of this dimension. These are: customer-centric marketing, key customer lifetime value identification, personalization, and interactive co creation marketing.

2.13.1.1 Customer-centric Marketing

The momentum of customer-centric marketing has been developing since the beginning of the new millennium. In this type of marketing the focus is the attempt to comprehend and satisfy individual consumers’ needs, wants and resources (Sheth *et al.*, 2000). CRM does not consider all customers equally desirable. This process emphasizes targeting of strategically significant key customers (Ryals & Knox, 2001) and profitable customers (Alt & Puschmann, 2004). The well known Pareto 80/20

rule illustrates this process. According to this rule, a major portion (80%) of the firm's profit stems only from a few number of customers (20%) (Ryals & Knox, 2001). After careful selection of key customers, every effort should be used by a CRM-oriented company to understand these customers' needs and wants. This understanding is crucial for the development of strong relationships with them.

2.13.1.2 Key Customer Lifetime Value Identification

Customer lifetime value is defined by Jain and Singh (2002) as the difference between the revenues obtained from that customer over the lifetime of transactions and the cost associated with the customer, taking the time value of money into account. This total cost encompasses: cost of attracting, selling, and servicing that customer. Marketers often take into account the lifetime value of each individual customer for the purpose of deciding to build a relationship with them. This process which involves targeting profitable customers through customized offerings, while minimizing the subsidization of unprofitable customers, can lead to improvement of company's profit.

2.13.1.3 Personalization

According to Hart (1995), personalization is the practice of using mass customization for the purpose of one-to-one marketing. Customers can look for suitable solutions to their particular needs when the seller uses personalization. Customer behavior is less predictable and its forecasting is less accurate due to the great diversity in the needs, wants, and resources of the customers. This environment makes the mass marketing

obsolete. Rapid adjustment to the supply for meeting the demand by relationship-based marketing is a must for a company to be successful. Tailor marketing to individual customers is necessary for this purpose.

2.13.1.4 Interactive Co-creation Marketing

Co-creation marketing involves a continuous two-way interaction between two parties. The interaction between these two parties, the marketers and customers regarding the aspects of product design and production, is considered critical for the establishment and maintenance of strong relationships (Narayandas & Rangan, 2004). The collaboration, cooperation, and communication are the key to co-creation marketing. Firms can work through this process with the individual customers for offering suitable solutions, creating customer's sustainable value, improving customer loyalty and minimizing overall cost.

2.13.2 CRM Organization

The second dimension of CRM is the CRM organization. The strong focus on key customers must be deeply embedded throughout the CRM system of the company. The organization of the entire company should be aligned to the cultivation of these valuable relationships (Yim *et al.*, 2005). According to Sin *et al.* (2005a), there are some key considerations for the successful organization of the entire firm around CRM which include organizational structure, organization-wide commitment of resources, and human resources management.

The flexibility and reconstruction of the organizational structure may be needed in order to generate customer-centric values (Homburg & Pflesser, 2000). The improvement of the coordination of customer-focused, cross-functional teams is also necessary (Yim *et al.*, 2005). In addition to interfunctional integration, strong interfunctional coordination is necessary for all these structural designs (Sheth *et al.*, 2000). The organizational challenges inherent in any CRM initiative should be of great attention from the firms (Sin *et al.*, 2005a).

Organization-wide commitment of resources is necessary for the success of CRM. According to Yim *et al.* (2005), for providing continuous stream of value-rich actions and customer outcomes, rigorous efforts in all organizational functions are needed. The success of CRM also necessitates the organization-wide commitment of resources. Successful acquisition, development, retention as well as reactivation of customers hinges upon the company's dedication of its time and resources to identifying as well as satisfying significant customer needs (Sin *et al.*, 2005a).

Although the importance of strategy, people, technology, and processes to CRM is unavoidable, the building blocks of customer relationship are individual employees (Ryals & Knox, 2001). This notion is further substantiated by Yueh *et al.* (2010) when they argue that people and not technology is the hardest part of becoming CRM-oriented. This can be carried out through Internal Marketing; an organizational function in which human resources and marketing interface. It carries out the inculcation of service-mindedness and customer orientation in the employees. Internal Marketing consists of four significant processes namely market training and education, internal communication, reward systems, and employee involvement.

2.13.3 Knowledge-Based CRM

Knowledge-based CRM is the third dimension. Like knowledge management, effective transformation of customer information to customer knowledge can lead to successful CRM. From a CRM point of view, knowledge can be referred to as knowledge gained from experience or empirical study of consumer information. According to Yueh *et al.* (2010), knowledge management has the following key elements: knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness.

2.13.3.1 Knowledge Learning and Generation

It is essential to have key customer knowledge for CRM (Stefanou *et al.*, 2003) for the purpose of developing a “learning relationship” with customers (Sigala, 2005). In turn, this relationship will enhance the firm’s competitiveness. The collection of customer information comprising their needs and preferences can be carried out either directly or indirectly through a two-way interactive system. In addition, the primary aim of knowledge generation is to have a 360-degree customer view. The incorporation of customer information into strategic business intelligence is assisted by different business intelligence tools such as data mining, data warehouses, and data marts (Sin *et al.*, 2005a).

2.13.3.2 Knowledge Dissemination and Sharing

If not shared throughout the organization, knowledge may provide limited value (Schulz, 2001). In fact, the value of knowledge escalates through dissemination and

sharing. Combined significant roles from different departments can be facilitated through the development of effective mechanisms for sharing customer knowledge in organizations.

2.13.3.3 Knowledge Responsiveness

The acts for the generation and dissemination of knowledge are important acts related to knowledge responsiveness (Sigala, 2005). More specifically, these activities consist of the selection of target samples, deliberate crafting of the marketing mix in such a way that it obtains the correct customer responses, and meticulous customization of both product and service that target the prevailing customers' needs. Better response to customer demand is now-a-days an important concern in marketing. Hence, promptness in these actions enhances service quality, as well as fosters long-term relationships with customers.

2.13.3.4 Types of Customer Information

According to Drucker (1999) and Sigala (2005), based on composition and relationship, customer information has three classes. The first one is the "of-the-customer" information. This information consists of the customer's personal and transactional information. This is the most widely collected information that can be utilized for CRM implementation. The customer's personal data collected by the firm is used to study and comprehend sales volumes, profitability, purchasing patterns, preference regarding the customers. Banks and credit card firms are the examples that keep enormous amount "of-the-customer" information. They use their database

systems to manage customer accounting billing. They can use this information from the database to identify the most or least profitable customers. The target marketing often depends on the strategic use of “of-the-customer” information, and can also be called database marketing.

The second type is called “for-the-customer” information. These are the information related to the product, service, and organization perceived useful by the customers. Customers acquire and process this type of information for making more informed decisions. Diverse communication media are used to disseminate this type of information. Some instances of some alternative media are: direct mail, automatic response system (ARS), or Internet home pages.

“By-the-customer” information is the third type. This type comprises customer complaints, propositions, claims, A/s information and the like, as the non-transactional feedbacks from the customers. Expanded customer data profile may be used for including this type of information. This information can help powerful interaction with the customers (Sigala, 2005). The development of new products and services or improvement of critical business processes can utilize this type of information because it comprises the customer’s direct complaints, their needs and suggestions (Park & Kim, 2003).

2.13.4 Technology-Based CRM

Technology is the fourth dimension of CRM. Without leveraging the latest technological invention, several CRM-oriented activities like knowledge management, cannot be effectively implemented. Undeniably, technology has great

advantages that most CRM applications can utilize. More specifically, CRM activities like collection and analysis of data on customer patterns, development of prediction models, responding in timely and effective manner with customized communications, and delivering personalized value offerings to individual customers efficiently can take great advantage of innovative technology.

Successful CRM performance requires accurate customer data (Abbott *et al.*, 2001b). Consequently, the role of technology is very important in the process of enhancing firm's intelligence (Jayachandran *et al.*, 2005) for this purpose. Indeed, the advancement in IT is tremendous, one of the benefits of this advancement is the enhanced capability of the firms to oversee and manage customer information effectively. Recent technological changes are now enabling the firms to improve their capabilities in handling customer needs which, in turn is helping them to attract and retain customers (Chang *et al.*, 2009).

Unprecedented advances in IT makes the functions such as one-to-one relationships, analysis of customer-value, and needs customization (Hart, 1995) possible to bring to reality. The utilization of modern IT helped the enterprises transform the traditional approach of CRM. Now these firms can use an integrated, web-enabled approach for these CRM functions. The new IT based approach is characterized by instruments such as customer information systems, automation of customer processes as well as call centers (Sin *et al.*, 2005a).

Several factors assist CRM to keep in line with 'information-intensive strategies' and these are: taking advantage of new technology, integrating technology deployment with business strategies, and computer technologies (Hart *et al.*, 2006).

This is further made easy by the several computer technologies as they allow better customization of better quality coupled with lower cost. Some instances of computer technologies are: computer-aided design/manufacturing, flexible manufacturing systems, just-in-time production databases, data warehouses, data mining, and CRM software systems. In addition, efficient staff service at all situations is also assisted by technologies and without them, it is almost impossible to carry out customer-centric activities (Kim *et al.*, 2003). Hence, enhanced customer satisfaction, higher customer retention, and more profitable long-term customer relationships are among the major outcomes desired by the firms from the CRM-based technology (Yim *et al.*, 2005).

2.14 Antecedents of CRM Performance

Given the worldwide application of CRM, and the top priority it has received, studies carried out investigating the potential factors which effect CRM success is crucial. According to Gartner Group prediction, the investment in CRM would reach US\$ 76.5 billion in 2005, up from US\$ 23.26 billion in 2000 (Kim *et al.*, 2010). However, significant disagreement on the definition and meaning of CRM is still left over (Adam *et al.*, 2010; Buttle, 2004).

Careful examination of existing literature reveals that some studies (e.g. Adam *et al.*, 2006; Almotairi, 2008; Croteau & Li, 2003; Eid, 2007; Kennedy *et al.*, 2006; Ou & Banerjee, 2009; Torkzadeh *et al.*, 2006) have focused generally on the operational, strategic, and tactical aspects of the CRM performance. Among them, Eid (2007), who mentioned three categories of factors: (a) The first factor comprises top management support, organizational culture, developing a clear CRM strategy, clear

project vision/scope, and benchmarking; (b) The second factor known as the tactical factors is made of employee acceptance, CRM software selection, integration with other systems, and training; and (c) the last factor known as the operational factors, comprises realistic CRM implementation schedule, enterprise performance metrics for CRM, personalization, customer orientation, and data mining. Similarly, another study, Croteau and Li (2003), suggests a research model that can assist managers to pinpoint the CRM's technological initiative success factors. The authors suggest that the constructs would comprise of perceived operational and strategic benefits, top management support, organizational readiness, and knowledge management capabilities.

Some of the previous studies (e.g. Desai *et al.*, 2007; Islam & Yang, 2009; Mendoza *et al.*, 2007; Ou & Banerjee, 2009; Reinartz *et al.*, 2004; Wang, 2009) have focused generally on the process, people and technology aspects of the CRM performance. For instance, Roh (2005) and his co-authors emphasizes that the key factors of CRM success is the quality of customer information quality and the system support. On the other hand, Ou and Banerjee (2009) mention three categories of crucial factors underpinning CRM performance. The first category is process comprising the fit between organizational strategy and CRM strategy. The second category is people which include management of users, user satisfaction, and access to the software, and the third category is technology encompassing factors such as ubiquitous access points to users, management of the technology deployment and usage, management of customer information quality captured, and knowledge generated from the information.

A few of the studies in this literature have addressed the critical success factors of CRM. For example, Wilson *et al.* (2002) stress five success factor groups: the intent, accessing the context, describing the content, constructing intervention process, and management of intervention process. The authors also pinpoint some crucial factors that affect the success of CRM. Similarly, Goodhue *et al.* (2002) state the four general success factors of CRM as being top management support, vision, willingness to change processes, and willingness to share data. On the other hand, Payne and Frow (2006) consider clear CRM project management, employee engagement, CRM change management, and CRM readiness assessment to be the success factors for CRM. Capacity (2004) and identifies champion leadership, systems integration, knowledge management, internal marketing, IT-business alignment, and culture/structure change as critical success factors for CRM. The factors behind CRM success identified by Bohling *et al.* (2006) are: management's belief regarding CRM, compatibility with stakeholders requirements, locus of CRM, CRM strategy, budget process management, and change management and process.

An in-depth review of prior research indicates that environmental factors seem to be crucial factors of CRM success (Van Bentum & Stone, 2005). In addition, cultural aspects emerge important in determining the success or failure of CRM. They represent the tight connection between customer orientation and learning and the relationship between organizational climate and the respective occupational sub-cultures. Fakhredaei (2007) investigated the environmental factors (market uncertainty, environment) that affect CRM success at the organizational level in Iran's shipping industry. He found that these factors positively affect intention to adopt

CRM. Ou *et al.* (2009) found management support, consistency with collective culture, and core competitive advantage are extra-organizational environmental factors to positively affect CRM success. In addition, there is indication that the ability to address the environmental factors residing outside the organization also impacts the successful deployment and usage of CRM.

Organization and technology related factors are also identified to influence CRM performance (e.g. Becker *et al.*, 2009; Greve & Albers, 2006; Jayachandran *et al.*, 2005). Among them, Becker *et al.* (2009) identified the following factors: technological factors (information acquisition, information storage, information accessibility, information evaluation), and organizational factors (organizational structure, employee training, employee incentives, customer orientation). In their study, they measured CRM performance in terms of customer acquisition, maintenance, and retention. They also identified employee support, management commitment as moderator in this relationship.

According to Attharangsun and Ussahawanitchakit's (2009)'s study of 524 Thai firms, knowledge management, technological capability, communication competency and top management significantly and positively affect CRM. This comes to reason that firms possessing better knowledge of knowledge management, technological capability and communication competency have a greater chance to achieve CRM effectiveness.

A research by Capacity (2004) on financial service companies in Taiwan found that IT intensity and organizational absorptive capacity are positively related to CRM performance. Greater investments in IT and absorptive capacity allow the

organization to use CRM to extend greater benefits to its customers and receive greater benefits from their relationships. Desai *et al.* (2007) conducted a study in India with 334 executives selected from 29 firms of retail, telecom, and banking sector. They found a positive association between CRM technology and CRM performance with customer focus. But organizational focus perspective did not show positive association between CRM technology and CRM performance.

Based on the above discussions, a number of authors and practitioners have conducted many studies regarding CRM performance (e.g. Bohling *et al.*, 2006; Chang, 2007; Desai *et al.*, 2007; Dong & Zhu, 2008; Kim, 2008; Kim *et al.*, 2004; Kim *et al.*, 2010; Richard *et al.*, 2007; Stein & Smith, 2009; Tan *et al.*, 2002; Wells *et al.*, 1999). Most of these authors emphasize the urgency of understanding the identification of factors that affect CRM success and how to relate them to guarantee the realization of benefits and avoidance of failures. Nevertheless, most of these studies did not employ in a holistic way for understanding the success and performance of CRM. Furthermore, in the light of empirical research, the realization of bridging these gaps of the antecedents of CRM importance is clear (e.g. Bohling *et al.*, 2006; Greve & Albers, 2006; Islam & Yang, 2009; Kim, 2008; Kim *et al.*, 2010; Reinartz *et al.*, 2004; Tan *et al.*, 2002; Wang, 2009; Wells *et al.*, 1999). As a response to these calls for research, the present study investigated technology factors and organizational factors as the antecedents of CRM performance in Jordanian hotel industry. This is in line with the suggestions by several authors (e.g. Becker *et al.*, 2009; Greve & Albers, 2006; Jayachandran *et al.*, 2005) who argue for organizational and technological factors as the main pillars of CRM success.

2.14.1 Organizational Factors

Several organizational issues are mentioned constantly in the literature as the most important for CRM performance (Becker *et al.*, 2009). For example, Reinartz *et al.* (2004) state a need for the role of organizational factors to be investigated in future research efforts aimed at understanding the performance impact of CRM. Payne and Frow (2005) emphasize organizational factor to be the priority area for further research. According to them, there is a possibility of CRM failure when there are only a few numbers of committed employees to its initiative, so employee engagement and change management have become essential issues in CRM (Wikström & Isomäki, 2008).

Nath *et al.* (2009) recommend that CRM should be regarded as a company-wide project and therefore organizational factors like the company's structure and their operational business procedures should be considered as key factors for CRM's success. This notion is substantiated by other studies as well. Several authors (e.g. Croteau & Li, 2003; Kotorov, 2003) argue that the cooperation of different departments of the company is essential for CRM as well as the employment of a series of resources. Therefore, an appropriate organizational structure facilitating the different functions of the companies' conjoined cooperation is important to achieve CRM activities, most particularly in the following areas: the level of integration within the organization, commitment of senior management towards the project, readiness of appropriate systems, and the availability of various resources, which are organizational issues that have a monumental effect on the CRM performance .

Nevertheless, despite the number of advocates of the factors of CRM's success, the level of understanding about them is still lacking (Roh *et al.*, 2005). In addition, other researchers have argued that change management initiative is an important condition for CRM's successful implementation (Kale, 2005). Chang *et al.* (2009) found that customer-centric organizational culture and customer-centric management system have a positive relationship with CRM performance. Becker *et al.* (2009) found that organizational factors, like organizational structure, employee training, employee incentives, and customer orientation are significantly related to CRM performance. Yueh *et al.* (2010), on the other hand, found CRM performance in hotel industry to be positively influenced by transformational and transactional leadership styles.

According to Dong and Zhu (2008), organizations are required to study their risk management planning because of the complexity and the ambiguous nature (one depending on the ever-changing customer needs) of the CRM initiative. Raman *et al.* (2006) propose a CRM success measure that expounds the organizational learning orientation roles, the customer-centric orientation, and task–technology fit in order to transform CRM from a technological tool to an advantage-producing resource. They also point that the barriers to the success of CRM include lack of end-user skills.

Apart from the factors discussed above, the present study focuses on other organizational factors such as top management support, customer-orientation, and training orientation as potential antecedents of CRM performance. The rationale for the focus on these variables is straightforward. Firstly, all these three factors have been found to be critically correlated to CRM initiative in previous studies implying

that these factors produce high levels of successful CRM. However, since most of these studies have been conducted in the Western countries, and since few of them explored the role of organizational factors in CRM in the context of emerging countries of Middle East (Akroush *et al.*, 2011), it is consistent and necessary to confirm prior findings in another developed country for the purpose of relevant extension of knowledge (Becker *et al.*, 2009). Secondly, these factors have been applied in various industries in past studies which represent relevant organizational factors needed to develop CRM performance, and they seem to have lack of recent research interest in a different industry environment like a hotel industry. It might be especially interesting to investigate their relationships with CRM performance in an independent environment hotel industry.

2.14.1.1 Top Management

In order to achieve CRM success, there is a dire need in changing the business processes and the introduction of new information technology. And more importantly, in order to achieve these conditions, there should be effective leadership. The make or break of the CRM success depends on the influence of the top management (Roberts *et al.*, 2005). Thus, CRM should not be initiated without a fully committed management team. According to Kale (2004), even the most existing brilliant CRM deployments and implementations initiatives are doomed to fail without the top management support and commitment. Despite its crucial importance, little attention has been paid by the previous studies on the affect of top management activities on CRM activities (Boulding *et al.*, 2005).

Croteau and Li (2003) define top management support as the degree the top management promotes the efforts of the information technology implementation. Others have included support in terms of necessary resources and authority or powers in the definition. To provide this support, lots of learning at different levels including the top management level is necessary. The top management should be willing to accept that and develop appropriate mindset for it (Bhatti, 2005; Vandermerwe, 2004).

According to Bohling *et al.* (2006), top down starting is typical for the successful CRM. After such initial action, the involvement of the top management, involvement from all key areas of the business, or even better, enterprise-wide involvement will reduce risk and help to identify enhancement opportunities of the customer value. Simultaneously, this can also help reduce costs, and create sustainable competitive advantage that, in turn, brings greater short- and long- term profitability and success for the firm. This can help make sure that the implementation is continually in alignment with the strategic objectives of the company. This approach can result in everyone's knowing and understanding individual roles in the success of the initiative along with the overall importance of the process (Chen & Popovich, 2003; Kotorov, 2003).

According to Bull (2003), the setting of the vision or strategic direction of the CRM by monitoring the external environments is done by the top management. The influence of management is further emphasized by Sigala (2005), who consider them contributing in terms of controlling the expenses, monitoring performance, and motivating the personnel. The sponsorship from the executive level is further

emphasized by Buttle (2004). Last but not least, Adam *et al.* (2010) also stress on this by mentioning that the necessary level of commitment of staff with relevant expertise to support the needs of a CRM is impossible, if not difficult without the active sponsorship of top management.

High visibility and buy-in across all ranks of users of the project can be ensured by executive sponsorship (Bull, 2003). Researchers like Wang *et al.* (2004) argue that effective means for establishing a customer oriented approach is the top management for both the inter-organizational processes and the corporate level. Buttle (2004) emphasizes the need for top management sponsors to ensure adequate measures for overcoming both short- and long-term setbacks inherent in the CRM project. Kennedy *et al.* (2006) argue that top management support is a strong key success factor for the CRM success in any organization. Wilson *et al.* (2002) describe the support from the top management and the presence of the leaders to be the most recognized important factors for attaining a successful CRM. According to Almotairi (2008), since the scope of CRM is enterprise-wide, the full support of the top level of the organizational structure is required.

Many studies in different contexts (e.g. Capacity, 2004; Croteau & Li, 2003; Greve & Albers, 2006; Kim *et al.*, 2004; Kim *et al.*, 2010; Ou & Banerjee, 2009; Sohrabi *et al.*, 2010) have found empirical evidence that top management support and/or commitment positively influence the success of CRM. Among these studies, Kim *et al.* (2004) showed that the support from top management for the successful CRM in retailer network was in the form of improving customer retention rate, and marketing effectiveness. Besides, Kim *et al.* (2010) argue that to introduce new

technologies with its traditional business activities, top management support can be a strong means and is better for assisting the improvement of the relationship and for meeting customers' needs. In their empirical study, Kim *et al.* (2010) found the support from firms' top management to be the key success factor in CRM performance (customer acquisition, retention, and expansion). They found positive influence of the top management attitude through the provision of modern integrated solutions. These modern solutions are better for assisting the improvement of the relationship and for meeting customers' needs.

Management should play a role in supporting CRM success through the creation of a corporate environment that is open to CRM being a vital element in the business strategy. This role can also be played by carrying out activities that exhibit CRM commitment. Sohrabi *et al.* (2010) explored the relationship between management commitment and CRM performance (customer satisfaction, profitability, customer loyalty, market share) in Iran's software companies. The result shows that management commitment and support were positively related with CRM performance. Another study conducted by Ou and Banerjee (2009) that focused only on Shanghai General Motors found that the top management's assistance lead to positive norms and expectations in the light of CRM system implementation, which eliminates the resistance to the new system.

In contrast to the above pieces of empirical evidences, a study by Eid (2007) on the banking industry in the UK found top management support and CRM performance to have a negligible negative relationship. Despite this result, he argues that in the integration of the existing organization systems with the CRM plan,

support of top management team is important. He further stresses the personal knowledge and pro-activeness of the top management for the purpose of managing the internal diffusion efficiently.

Greve and Albers (2006) investigated the determinants of CRM performance and the importance of top management commitment in 10 European countries. They found top management commitment to account in the last phase of the customer lifecycle i.e. retention performance. They indicate that although the focus of the top management commitment is less in the early phases, it is significant in the “retention” phase. However, Becker *et al.* (2009) in their study on top management support across four industries (financial services, products and retail, communication and information technology, utilities) in 10 European countries, found significant and positive influence on initiation performance phase. They believed that this relationship demonstrates the importance of extensive support involvement of the employees and management for successful CRM throughout the implementation process. Given the status of the literature, further research is necessary to focus on specific industries like hotel industry and in contexts outside the European countries to support the existing results for the purpose of testing their generalizability.

All the aforementioned arguments support the argument for a positive relationship between top management support of CRM initiatives and CRM performance in organizations. Hence, top management support is proposed to be a critical factor influencing the impact of CRM initiatives. The absence of continuous commitment from top management can result in the failure of the CRM initiatives as well as in the deterioration of the organizational performance.

2.14.1.2 Customer Orientation

The existing literature posits that comprehending the organizational variables joining customer orientation to CRM performance is imperative. Rigby *et al.* (2002) present one of the main four problems faced by the companies to be "Stalking, not wooing, customers". Researchers (e.g., Chang *et al.*, 2009; Day & Bulte, 2002; Jayachandran *et al.*, 2005) describe customer-centric organizational culture to represent the top priority on the customer relationship, embedded in the mind-set, values, and norms of the organization (Javalgi *et al.*, 2006).

Cai (2009) defined customer orientation as the set of activities, behaviors, and beliefs that place high priority on customers' interests and continuously create superior customer value. CRM must be built around the customer that requires continuous redesigning of core business processes starting from the customer perspective and involving customer feedback. According to Chen and Popovich (2003), under the customer-centric approach, the goal becomes developing products and services to fit customer needs. Kim (2008) considers customer identification to be an important starting point for CRM, which can enable the firm in making its customers more loyal, which eventually results in providing the customer the desired value, and leads to loyalty.

In his book "Why CRM does not Work", Newell (2003) points out that the companies are not asking customers what they need, what they want, or what bothers them, which they are supposed to ask under CRM philosophy. Answers to these questions can help to find out which processes matter to them, and what the company can change to make their lives easier. Kim (2008) stated that the lack of the customer

oriented development is the major cause of inefficient CRM. Various researchers stress on the fact that customer-oriented firms more likely provide a unified focus for individual employees' efforts in providing customer value. Those firms that follow a strict level of customer orientation were inclined to achieve high involvement in customer-information processing activities and behaviors and those who take one step more by being deeply involved in customer-information processing activities showed to achieve higher CRM performance.

A number of studies (e.g., Eid, 2007; Jayachandran *et al.*, 2005; Kim, 2008; Krasnikov *et al.*, 2009; Ou & Banerjee, 2009; Sohrabi *et al.*, 2010; Wang *et al.*, 2009; Wilson *et al.*, 2002) investigate customer orientation as the potential antecedents of CRM success. For example, Kim (2008), in a study carried out in the US restaurant industry implies that there is a positive influence of customer orientation on CRM performance. The author opines that a sole customer orientation is not enough to guarantee a superior CRM performance; restaurant firms should be prepared to train their employees in specific actions and behaviors for the promotion of customer orientation. The results of the study suggest that customer-oriented restaurant firms might have invested resources for the purpose of enhancing their business performance which resulted in their better overall performance. Therefore, it is logical to say that restaurant firms that better oversee their customer information are more probable to get satisfied customers and to perform better than those that do not. Wilson *et al.* (2002) also found similar findings.

For Taiwan, the result of Wang *et al.* (2009) indicates that the customer oriented culture has significant impact to the tangible CRM performance, customer

loyalty, and customer satisfaction. They suggested that through customer oriented culture, the customer relationship can be enhanced, and the same can happen to the customer loyalty and satisfaction. Surveying the senior marketing, sales and MIS executives in the USA, Day and Bulte (2002) found that superior customer orientation has significant relation with relative sales, profitability, relational advantage, and customer retention performance. Based on similar survey, Ramani and Kumar (2008) also found a positive relationship between customer-based relationship performance and customer-based profit performance.

Similar study by Jayachandran *et al.* (2005) examined for any relationship existing between customer orientation and CRM performance through mediating customer information processes. They found support for the mediating role of relational information processes on the association between the customer orientations and CRM performance. Designing effective relational information processes and enhancing them using CRM technology with high level of customer orientation could help a firm develop customer-relating capability. Although, they may be a straightforward connection between customer orientation and CRM performance, firms are still failing to improve CRM performance by overlooking the effective implementation of employee relations programs or the accurate processing of customer information (Jayachandran *et al.*, 2005; Kim *et al.*., 2008).

There is a consensus in both Marketing and IT literature that customer orientation is an important theoretical foundation for CRM success (Eid, 2007; McNally, 2007; Ryals & Knox, 2001; Ryals & Payne, 2001; Wilson *et al.*, 2002) and this is substantiated by a case study from both domains (Abbott *et al.*, 2001b;

Goodhue *et al.*, 2002). The said case study has been primarily carried out in the US and UK, stressing acceptance of the relationship marketing as the core strategy throughout the company and emphasizes on the importance of customer relationships in all organizational levels having customer loyalty as the utmost priority. In a similar study, Eid (2007) found that customer orientation has significant positive and direct impact on CRM success (customer retention) in UK banks. The author suggests that customer orientation plays a crucial role in CRM success. Furthermore, top management support for CRM implies that management will place customer orientation at the top of its agenda. And since customer orientation is dealt with the lower level of management, thus, its experience can be directly felt by the customer and the effect on customer retention is strong and significant.

Based on the case study carried out through four industries in ten European countries, Becker *et al.* (2009) found customer orientation having a significant as well as a positive influence on CRM performance on initiation implementation performance. They suggested that firms not underestimate the influence of customer orientation support on CRM performance and that without an appropriate Customer orientation cultural foundation, CRM will not succeed.

McNally and Regina (2007) empirically suggest that customer orientation as an individual level construct is a key to a contact center's ability in becoming market oriented. They went further to argue that customer orientation is believed to be fostering a set of positive marketing outcomes. Also found in their research is the fact that customer orientation is related to employee performance and customer satisfaction positively in the contact center industry (McNally & Regina, 2007).

Several other authors have proved that customer orientation is one of the three dimensions of Market orientation that helps companies set up a customer driven environment, generating excellent performances of customer loyalty and retention (Wilson *et al.*, 2002; Kohli & Jaworski, 1990).

Both the researchers and authors of marketing and IT literatures agreed that customer orientation is an essential theoretical foundation for CRM performance. The previous studies on marketing and IT perspectives highlighted the need to develop customer focused business strategies before attempting to implement CRM. Thus, failing to design a CRM initiative that meets customer's needs will lead to destroying the project in its initial stages. The company should involve the users as well as the customers once they deploy the CRM initiative. Therefore customer orientation is considered as critical factors that lead to CRM performance.

2.14.1.3 Training Orientation

Employee training is considered to be one of the key factors of an employee-oriented culture due to its illustration of the firm's emphasis on the building up of human capital with effective skills and knowledge. Employee training is identified as a systematic process of developing employee knowledge, skills, and attitudes (Kim, 2008). Shum *et al.* (2008) state that only slight information about the influence of the change on the employees and their counteractions influence on CRM projects' success. According to Boulding *et al.* (2005), only a slight attention has been concentrated on the role of employees training in the light of effective CRM activities' implementation.

Moreover, Anvari and Mohmad-Amin (2010) opine that both training and development can contribute to the enhancement of knowledge management by facilitating organizational members to acquire, distribute and use information for the purpose of dealing with customer problems and inquiries. Managers are forced to concentrate their efforts on employee training due to the increasing pressure for firm performance improvement. Because employees who deal one-on-one with customers should be considered as the core element of customer relationships (Chen & Popovich, 2003; Shang & Chen, 2007). Employee training also facilitates certain facets of the value creation sub-process like the achievement of service excellence, the taking care of personalized communication between the firm and its customers (Kim, 2008). In addition, employee training is known to minimize operational errors normally made by employees and it enhances their job performance, as well as job satisfaction, resulting in increased customer satisfaction (Chang & Ku, 2009).

Employee training is the benchmark for employee attitude and behavior as well as all the organizational members in delivery of high-quality products and services, crucial for the development of customer relationships (Kim, 2008). The hospitality industry is in particular need of employee training due to its labor intensive characteristic and due to the costs related with turnover and customer dissatisfaction (Segal, 2005). Payne and Frow (2006) stresses the importance of employee engagement in supporting various CRM initiatives. According to them, it is impossible for an organization to develop and operate suitable customer-focused systems and processes if they lack trained employees. In other words, employees are the key the implementation process encompassing customer service, improving efficiencies and

nurturing consumer confidence and repeat purchase (Rigby *et al.*, 2002). And as mentioned before, according to Shang and Chen (2007), employees dealing one-on-one with customers are the key elements of customer relationships.

Many scholars have viewed employee training as a key driver for successful CRM projects (Almotairi, 2008; Kennedy *et al.*, 2006; Yim *et al.*, 2005; Zablah *et al.*, 2004). The researchers also provided positive evidence for employee training to the CRM initiatives. However, only slight attention is concentrated to the CRM contexts (Jayachandran *et al.*, 2005; Kim, 2008).

Plakoyiannaki *et al.* (2008) states that an employee-oriented firm is given a high probability to succeed in CRM practices owing to the fact that its employees are the most critical component of the process. The authors opine that majority failure stemming from CRM practice is due to the lack of full attention that organizations pay to the important role of employees. CRM initiative requires the multi-task and front-line employees' training and development, those who create a personalized interaction with customers and how accommodate their multiple needs. Basing their study on an in-depth case regarding a firm in the UK automotive services sector, Plakoyiannaki *et al.* (2008) found that behaviors of training and development that are employee-oriented have the ability to affect the information and value creation sub-processes of CRM and CRM performance positively. In particular, employee training and development is facilitating the creation of customer knowledge and the provision of unique services to the customers. It is opined that future research should, in addition to discussing organizational culture elements, also try to pinpoint possible associations between the elements.

In their study in Taiwan, Chang and Ku (2009) found employee training to improve relationship quality and CRM performance. Successful of CRM should be preceded by staff training and accompanied by organizational learning involving the overseeing of business processes, modification in the organization policy on staff training and reward. Similar positive influence of employee training on relationship quality was found by Chang (2007). In their study in ten European countries across four industries, Becker *et al.* (2009) measured CRM performance in the light of initiation, maintenance, and retention of customer relationships. They found a positive effect on the initiation stage performance and suggested employee training and incentives to affect performance at the later stages as well. Based on the surveys and in-depth interviews, Capacity (2004) found the employee training to generate both tangible and intangible benefits for CRM. They suggested employee training to start from the very beginning of the adoption phase.

In the exploratory research by Shum *et al.* (2008), 13 thorough interviews with managers and staff of three banks were conducted. Results of their study indicated possible relationship between employees' commitment to the CRM initiative and the positive outcomes of a bank's performance. However, limitation of the generalizability of the study stems out from the fact that employees from only three banks comprised the sample. Nevertheless, the authors believe that most of the problems that were not addressed exhibit commonality with all sectors in other countries. For instance, issues like the lack of comprehensive training are still being suffered from by many CRM projects (Rigby *et al.*, 2002).

Kim (2008) looked into the connection between training orientation and CRM performance in the US restaurant industry. The findings indicate the restaurants employing higher training orientation improve their CRM performance. He suggest that training is the key to the employees provision of superior products and services to their customers and to assist in the achievement of CRM performance goals such as high customer satisfaction and profitability. The author also suggests that training programs enhance specialized skills consisting of interpersonal skills and sensitivity to customer needs: requirements of CRM implementation. Training assists employees in comprehending their role in the customer oriented service strategy.

For the banking industry in the UK, Eid (2007) states that employee training has a significant positive impact on CRM success in the light of customer retention. In the author's study, customer service employees are the key to CRM programmers' success within banks.

A number of other studies (e.g., Dong & Zhu, 2008; Keramati & Maharani, 2009; Reinartz *et al.*, 2004; Sohrabi *et al.*, 2010) also investigated employee training as a potential antecedent of CRM performance and found significant influence from it.

Based on the prediction from the theoretical literature and empirical evidences in different industry and country contexts discussed above, employee training is found to be a key behavior-related components of an employee-oriented firm because it emphasizes on building up human capital with customer oriented skills and knowledge (Ruekert, 1992), on customer oriented problem solving (Bowen *et al.*, 2004), and on prepared and motivated service-oriented manner (George, 1990).

Hence, an employee-oriented is likely to provide a unifying focus on satisfying the needs of employees, who, in turn, meet customers' needs and expectations. It can offer a framework for managing employees towards establishing profitable customer–hotel relationships and meeting key objectives of CRM practice. Such objectives may include the achievement of enhanced customer satisfaction and retention, quality in service delivery and customer–hotel interactions, portability and shareholder value of the hotel (Anderson *et al.*, 2004). Hence; viewed in this light, an employee-oriented is likely to enhance aspects of CRM performance of the hotel.

2.14.2 Technology Factors

Many researchers (e.g., Keramati *et al.*, 2010; Rigby *et al.*, 2002) discuss that a sole CRM technology will not guarantee a successful CRM initiative. But some researchers emphasize with technology choice as an important aspect of satisfying the business needs for CRM (Kotorov, 20003). Reinartz *et al.* (2004) reiterates technology's important role in CRM implementation success.

In the same lines, Liu (2007) discusses that after the establishment of customer strategy and the alignment of the organization to the strategy, there is a necessity to provide the suitable technology and tools to the organization. Moreover, some managers are so blinded by the latest technology they fail to choose the most suitable package to fit their customer strategy. Kim *et al.* (2003) argued that the success of the CRM depends on how well the information technology (IT) is implemented.

Wells *et al.* (1999) noted, “both (marketing and IT) need to work together with a high level of coordination to produce a seamless process of interaction”. They further added that there are four key components that are required for the re-engineering of the IT system which are, firstly, to identify the purpose of collecting customer information. Secondly, to identify the purpose behind the collection. Thirdly, and to re-design the data and fourthly, to achieve IT enabled interaction as well as data transmission. Winer (2001) states that basic CRM elements are: information of customer activity, an analysis of the database that supports specific customer choice criteria, instruments for targeting particular customers, processes for relation building with customers, processes for guaranteeing customer privacy and metrics for measuring CRM programs’ success (Chang & Ku, 2009).

There is a debate on the effect of CRM technology on CRM performance (Wahab *et al.*, 2009). On one hand, there are studies (e.g., Day & Bulte, 2002; Desai *et al.*, 2007; Kim *et al.*, 2010; Reinartz *et al.*, 2004) that support non-significant effects of technology factors on CRM performance. On the other hand, there are studies (Capacity, 2004; Jaychandran *et al.*, 2005; Wahab *et al.*, 2009) that assert positive effects of technology factors in affecting CRM performance. One example supporting technology-CRM performance link is the investigation done by Greve and Albers (2006) in their study, they revealed that CRM technology assists the three stages of CRM performance namely, initiation performance, maintenance performance, and retention performance lifecycle.

Apparently, number of studies considering the relationship between technology factors and CRM performance is very few. Moreover, such studies

produced inconsistent results. This implies the requirement for more research to work on the establishment of the relationship between roles of technology factors underpinning CRM performance. This research need is essentially pronounced by the scholars (e.g., Desai *et al.*, 2007; Greve & Albers, 2006).

Further suggests that, such research is limited in the Middle East context (Akroush *et al.*, 2011). Therefore, this study considers technology factors such as customer data, customer information processing and integration of CRM as potential antecedents of CRM performance. Justifications for the selection of these factors are discussed in detail in sub-sections below.

2.14.2.1 Customer Data

Empirical research by Stone *et al.* (2003) exhibits that some companies reach a better standard of the acquisition and use of customer data, and therefore take the risk that their data will be unable to support CRM strategies. According to Stone *et al.* (2003), besides the fact that companies are collecting customer-related data, the process is normally used for administration and not customer management. More recently, many large companies normally collect customer data for the purpose of database marketing (to recruit new customers, sell more to existing customers, support customer service operations and retain customers); the returns are limited due to the departments' need of them. According to Abbott *et al.* (2001b), there are not ample technological support for data acquisition, analysis and deployment. Clean customer data leads to effective and efficient CRM strategies but not all companies is investing in improving data quality. Researchers consider customer data as the

lifeblood of CRM (e.g., Radcliffe, Collins & Kirkby, 2001). Businesses are increasingly realizing that the key for enterprise-wide CRM success is a “360-degree view” of the customer. This view involves all customer-related data in a single cross-functional and integrated database. As CRM depends on the customer's profile and transaction history, collection of customer data is necessary for the company (Park & Kim, 2003). The existence of previous data that is used to look for the main market segments and to set up effective customer profile, facilitate the success of CRM procedures. The ability to deliver real time information was the part of the early attraction of CRM systems.

Real time information is useful for dealing with the high levels of complexity in the customer relationship cycle, and for making the priorities clear (Park & Kim, 2003). CRM is often normally considered as a technology-focused database management approach, which gathers and analyzes information with the goal of more satisfaction for the customers (John *et al.*, 2005). Right information at the right time can provide customer insight and can allow effective interaction across operational and analytical systems for success of CRM (Radcliffe *et al.*, 2001). Thus, CRM is the combination of three: possession of information to understand the client, communication with them, and recording of the correspondence (John *et al.*, 2005).

Creation of a database, as suggested by Winer (2001), is the logical starting point for a CRM program. In order to store, collect, and leverage information on individual consumers, it is databases that serve as a repository (Stringfellow *et al.*, 2004). A customer data repository and software can support the front-office or

customer interaction solutions, which in turn, will help integrating and analyzing the data (Jaychandran *et al.*, 2005).

Simply collecting data for future retrieval is not enough for better customer relationship (Park & Kim, 2003). The requirement of a lot of work to enhance data quality and the basic data infrastructure for successful CRM initiatives are further argued by Goodhue *et al.* (2002) and Swift (2002). The role of data quality in supporting specific CRM goals is emphasized by Roberts *et al.* (2005), among others. Improvement of data quality may include following: operational costs, customer satisfaction, communications, effective decision-making, and knowledge about customers. Data quality is helpful for increasing the ability of the firm to target customer for long term with more probability of getting interested about the firm's offerings. Data quality also offer means to communicate varied messages to different consumers, and insights into product distribution channel. Moreover, better quality of data can improve the confidence of the employees in CRM. According to Bose and Chong (2003), more effective and efficient CRM strategies need good quality data, despite the lack of investment in improving the quality of their data by many.

Ryals and Payne (2001) suggested lack of data quality and quantity to be a barrier to successful CRM initiatives. According to Giga Information Group Research, as Peikin (2003) points out, data quality occasionally becomes weak to support the CRM success. Bose and Chong (2003) mention the unfortunate problem of “bad data” to hinder the growth of CRM. Myron & Kolbe (2003) indicates the danger of dirty, inaccurate, old data for the companies. Erroneous numbers, mistakes in spelling, and old contact information has a high probability of infecting the system.

He also adds two consequences of dirty data. These are: they represent as millions of cost spent to direct marketing dollars, and also a crucial barrier to CRM adjustment level. Also as argued in Nelson and Kirkby (2001), a top cause of failure of CRM initiatives is the poor-quality customer data and information. This may result in poor data analysis followed by poor decision making.

Many researchers (e.g., Abbott *et al.*, 2001a; Desai *et al.*, 2007; Jayachandran *et al.*, 2005; Goodhue *et al.*, 2002; Ryals & Payne, 2001; Swift, 2002; Winer, 2001) provided evidence for data analysis and quality to be important to CRM initiatives. For example, 17 organizations were studied by Abbott *et al.* (2001a) in their implementation of CRM strategies in the UK industry. They found that clean customer data helped more effective and more efficient CRM performance. More specifically, it helps the delivery of high-quality and appropriate service that can exceed customer expectations and promote customer loyalty. Despite these benefits, as mentioned before, all the companies are still not investing to enhance data quality.

The collection, storing and manipulation of data for CRM are studied by Abbott *et al.* (2001b). They relate these aspects with respect to the development and implementation of more effective CRM strategies. They found 80% of the respondents' usefulness of the amount of data supplied to the marketers. Around 50% of the respondents believe that keeping the right customers, improving customer share, and increasing customer loyalty were facilitated by the available data. Furthermore, around 62% of the respondents confirmed that the data assisted in the improvement of their marketing, garnering the suitable audiences through better segmentation, targeting and enhancing trend analysis along with better offers. The

balance is tipped by responses possessing only 'some' degree of confidence in the data yet reporting that they influence CRM success clear. None of them possess a current, clean and stable set of customer data or a wholly implemented CRM strategy.

For 10 European countries, Greve and Albers (2006) conducted an investigation of the determinants of CRM performance. They found three stages (initiation, maintenance and retention) of CRM performance that are to be supported by the CRM technology. CRM technology is defined as the usage of information technology in the CRM process in their study. They showed that, in the retention phase, the "updating of customer data" becomes more important, whereas in the first two phases, the access to information via different departments is crucial. He emphasized the lack of research in this respect.

Becker *et al.* (2009) investigates the relationship between the storage and accessibility of customer data and the CRM performance. This study was carried out throughout four industries in ten European countries. For relationship with accessibility of customer data, the results indicate significant positive relationship for initiation and maintenance performance, and positive relationship for retention performance. Future research is needed for confirming these results in different environments and countries.

According to Peltier (2005), involving in-depth interviews with 17 managers in 5 firms. They found support stating that collection and sharing of customer data is related in positive way to the ability of the firm, did it impact the overall success of customer relationships. However, the more the firm experiences conflict between its functional departments, the less likely the firm will be able to collect relational data

about its customers along the process of customer relationship. Moreover, Minamia and Dawson (2008) also found a significant relationship between using customer data and customer relationship management performance in Japan in the retail and service industries. On the other hand, Stone *et al.* (2003) showed that only a few companies reach good standards in this area, and so they run the risk of their data not being able to support their CRM strategies and policies or even privacy or data protection requirements.

A fundamental factor for successful CRM is the efficient linking of customer data to fulfill customer needs well. The proactive use of customer data for improving customer relationships is crucial which is opposed to simply collecting data for future retrieval (Goodhue *et al.*, 2001). Today most businesses are overwhelmed with information and CRM ultimately focuses on effectively turning information into intelligent business knowledge to manage customer relationships more efficiently. Swift (2002) argues that successful CRM initiatives will require great effort to improve data quality and underlying data infrastructure to the level needed for successful CRM initiatives. Swift (2002) also suggests that there is a propensity of firm's failure in CRM initiatives because they avoided the data issues required by their CRM initiatives and unfortunately the problem of "bad data" has hindered the growth of CRM. Thus, data quality is included as a potential antecedent of CRM performance in this study.

2.14.2.2 Customer-Information Processing

Information is one of the gateways to building and maintaining customer relationships. Customer-information processing is defined as relational information processing, which encompasses the particular routines used by the firm for the customer information management in order to set up customer long-term relations (Jayachandran *et al.*, 2005). Customer information analytics is considered to more than mere information culled from facts, but an element that creates a clear picture of customer and market behaviors, leading to businesses pushing through with suitable actions that are required in the constantly changing market environments (Roh *et al.*, 2005). Jayachandran *et al.* (2005) also emphasized on the importance of designing suitable processes that may help in tackling significant productivity losses. These particular processes manages the collection and use of customer information making the firm's effort to build relationships effective even in the face of poor communication, information loss, information overload, or inappropriate information use.

Customer information can be used for direct marketing strategies and managerial decisions, for solving operational problems, for customizing offerings, for understanding general market trends, and for enhancing relationships with the customers (Sohrabi *et al.*, 2010; Xu *et al.*, 2002). According to Jayachandran *et al.*(2005), for sustaining customer relationships, it is imperative for firms to get their hands on customer information which is consistent with the relationship management strategy. Stein and Smith (2009) and Winer (2001) stated that information collected from CRM technology play a key role in the relationship process owing to its

allowing firms to pinpoint the most important customer relationships, plan acquisition and retention strategies, and focus on customer profitability. Moreover, Dyché (2001) stresses on the role of customer information in providing a forecasting function to study potential options of strategy.

Effective customer-information processing is particularly essential in hospitality industry because hospitality organizations have to deal with the constantly changing environment owing to technological developments as well as the increasingly knowledgeable customers.

Due to the internet and data base technologies' potential to assist in collecting comprehensive information on customers' needs, preferences, and behaviors, the effective customer information processing has become an emerging challenge for the firms (Kim, 2008). Kim (2008) also suggests the construct of customer-information processing is comprised of one activity after another like acquisition/generation, analysis, interpretation, and storage of customer information. The authors add that firms are able to collect customer information from both external (e.g., market research and consultants) and internal (owners' and/or management teams' knowledge) sources (Sohrabi *et al.*, 2010). Creating customer relationships need comprehensive and current information consisting of customer interactions with the organization.

Roh *et al.* (2005) stresses that the customer relationship management is need of aligning three building blocks namely insight into customer decision-making, customers' information, and information-processing capability. Also, the information technology plays an important role to record the CRM activities, and thus to improve

the management performance of an enterprise (Chang *et al.*, 2009). The third building block, the information-processing capability is further emphasized by Stringfellow *et al.* (2004). There is a need for CRM systems to unite information from various sources through different functions.

The effective processing of relevant data in a timely manner improves the quality of customer information (Kim, 2008). Thus the link between customer information quality and performance can provide good insight on the potential influence of customer information processing on CRM performance. The survey study of Roh *et al.* (2005) on life insurance and casualty insurance firms in Korea implementing and operating CRM system found that customer information quality negatively influence profitability and customer satisfaction. However this quality improves efficiency. In fact, they found that customer information quality is one of the key factors to realize value from any CRM implementation and CRM performance.

In their investigation, Jayachandran *et al.* (2005) provided a conceptualized notion and a measurement of relational information processes. The authors state that the five facets being comprised by the relational information processes (information use, information capture, information integration, information access, information reciprocity) coupled with customer relationship performance indicate significant positive effects on CRM performance. The results of their study substantiate the claim that relational information processes outline guidelines to assist firms in how to handle customer information and how to communicate with customers in ways that are aligned with the CRM requirements. In addition, the results also indicate that

relational information processes play a key role in improving an organization's customer relationship performance.

Through the utilization of data culled from a mail survey of North American firms, Stein and Smith (2009) find substantiation for the notion that higher levels of strategic utilization of CRM technology lead to excellent performance. Moreover, the authors define strategic utilization as the degree to which information created by CRM technology plays a significant part in planning relationship marketing strategies

The investigation in ten European countries across four industries by Becker *et al.* (2009) found significant positive link between the activities related to collection, storage, and access to customer information and CRM performance during initiation and maintenance of CRM. Further research is required to concentrate on particular industries, like the hotel industry. Such empirical research outside the domain of European countries can help the previous results to be tested for their generalizability (Becker *et al.*, 2009).

In a study on the retailing industry in Korea, Kim *et al.* (2004) found that active retailers managing customer information and using them in their marketing efforts had strong impact on their CRM performance improvement. They also found perception from the retailers to support the importance of customer information to significantly impact the intensity of CRM implementation. The impact of customer information is also evident to improve the manufacturer-retailer relationship quality.

Kim (2008) investigated the relationship between customer-information processing and CRM performance in Restaurants of USA. He found a significant

positive relationship. Restaurant firms can be assisted in identifying their most significant customers to increase their business value through the enrichment of customer information coupled with a suitably designed database. The results of the study also indicated that restaurant firms should employ process for the purpose of maintaining, analyzing and integrating customer information. These activities will assist restaurants oversee current and ever changing customer needs toward high CRM performance.

Another study by Day and Bulte (2003) found superior customer information to have significant positive relationship with relative sales, profitability, customer retention performance, and relational advantage. The superiority is enhanced if the supportive superior customer information is combined with top management support and organization-wide commitment.

Furthermore, customer information can be utilized to drive marketing strategies in making managerial decisions in order to solve operational problems, to suitably fit offerings to customer's needs, to comprehend general market trends, and to improve customer relationships (Moorman, 1995). For sustainable customer relationships, it is necessary for firms to disseminate the crucial customer information compatible to the philosophy of relationship management (Jayachandran *et al.*, 2005). Although there is a marked increase in the studies regarding customer information, (Zahay, 2005), the way customer-information processing generally results in excellent CRM performance has not been studied thoroughly. Effective customer-information processing is crucial to the hospitality industry as this type of industry

generally has to contend with the ever changing environment owing to technological developments the necessity to deal with well informed customers.

Based on the theoretical underpinning and these empirical evidences, it can be concluded that customer information processing is a necessary condition for CRM success. Information processes relevant to CRM have not received adequate attention. The empirical evidences from different other contexts also lead us to expect a positive influence of customer information processing on the CRM performance.

2.14.2.3 Integration of CRM

Cross-functional integration emerge as key aspects for CRM success (Reinartz *et al.*, 2004; Roberts *et al.*, 2005), especially the integration with Marketing and IT (Ryals & Knox, 2001). Many scholars (e.g., Capacity, 2004; Sigala, 2003; 2005) pronounce the importance of aligning ICT and business strategies. Wells *et al.* (1999) stress that success of CRM depends mainly on the unity and redevelopment of customer data throughout the organization. By permitting the organization to concentrate on the customer, it is a well accepted opinion that the IS professionals should unite customer data throughout the entire organization.

According to Stein and Smith (2009), CRM technology allows integrating a company's marketing activities (i.e., sales, service, communication, order management, market research, and analytics) for the purpose of creating knowledge on individual customers leading the firm to concentrate on customer acquisition, retention, and profitability. In reality, CRM is not just a useful technological tool to unite boundary spanning customer milieu (field sales force, web sites, service

centers), but it is also considered as a management model that helps in the relationship marketing activities (Payne & Frow, 2004).

In both operational and customer-facing systems, various types of integrations are important: functional integration, data integration, system compatibility, multi channel integration (Capacity, 2004; Kotorov, 2003; Payne & Frow, 2004). Two factors of systems integration are crucial to CRM technology integration: first, the connection into legacy systems and organizational applications; and second, throughout other functional customer information (Buttle, 2004; Payne & Frow, 2006).

CRM technology essentially entails IT designed for managing customer relationships. CRM technology components comprise of front-office application one that assists sales, marketing, and service, a data depository, and back-office applications that assists in integrating and analyzing data (Greenberg, 2004). Sales support normally allows management of sales to lead and provide competitor and customer information to the sales force and oversee sales by using multiple ways; tracking product availability and delivery (Jaychandran *et al.*, 2005). Marketing support is comprised of market planning, execution of campaigns, and measurement of campaign performance (Greenberg, 2004) while service support assists customers in self-service through the provision of easy access to knowledge-base of solutions (Desai *et al.*, 2007). The front-office or customer interaction solutions will get its assistance from a customer data repository and software that will help unite and analyze available data (Jaychandran *et al.*, 2005).

Richard *et al.* (2007) steers that the level of CRM integration within the firm makes it much lighter to deal with customers effectively and efficiently. Although some studies describe the CRM functional components in place at the time of the study (e.g., Abbott *et al.*, 2001b; Almotairi, 2008; Goodhue *et al.*, 2002), a number of researchers (Bull, 2003; Goodhue *et al.*, 2002; Meyer & Kolbe, 2005; Plakoyiannaki & Tzokas, 2002) have indicated the importance of system integration as a key success factor of successful CRM system.

According to Dong and Zhu (2008), to leverage operational and analytical CRM functions, firms use system integration for the CRM systems to form a unified interaction with customers and business partners alike. With the help of system integration, CRM systems are connected to back-office enterprise, Internet-based communication protocols, and in addition, it connects these systems with suppliers and customers on the basis of common data standards (Kennedy *et al.*, 2006). In this way, firms can create an integrated platform for the synchronization of the entire customer information flow, enhance coordination, facilitate transactions, and improve customer relationships (Stein & Smith, 2009), all of which are essential dimensions of value creation.

According to Richard *et al.* (2007), CRM practitioners and researchers need to have better understanding of the direct and indirect impact of CRM technology integration on customers. Marketing, and IT practitioners ought to benefit from a better understanding of the relationship between CRM technology integration and customer relationship performance. CRM technology, as a sales and marketing support tool, can provide better customer knowledge management, and superior

processing of customer data, better information analysis and timely knowledge retrieval.

However, there are only a few published empirical researches investigating the CRM technology level within a firm as well as the extent of relationship strength as well as performance with customers (Reinartz *et al.*, 2004; Richard *et al.*, 2007; Stefanou *et al.*, 2003). According scholars (Raman *et al.*, 2004; Reinartz *et al.*, 2004; Stefanou *et al.*, 2003; Thompson *et al.*, 2006), the impact of CRM system integration on relationship strength and performance, has not been adequately investigated or detailed.

According to Capacity (2004), system integration of CRM involves five dimensions: functional integration (marketing, sales, and customer service), data integration, system compatibility, comparable experience to offline CRM, and integration with other CRM channels. Their study found that system integration is the most frequently mentioned success factor. The integration helps to forecast the future trend of CRM. The importance of the system integration is relatively more during the adaptation phase. CRM integration gives way to organizations to improve their customer relationships through the provision of a comprehensive view of customer behavior (Thompson *et al.*, 2006).

Roh *et al.* (2005) found that the Integration of CRM system with legacy MIS system positively influences customer satisfaction and efficiency, although negatively influences profitability. They suggested the Integration of CRM system with legacy MIS system provides the first insight for achieving CRM success. For the banking firms using CRM system, Eid (2007) found a substantial significant positive effect of

the integration on CRM success in customer retention. Dong and Zhu (2008) found the system integration to have a significant and positive influence on both operational benefits and strategic benefits in the banks in USA.

For South African organizations, Hart (2006) found significant correlation between customer data integration and CRM success. However, from the customer viewpoint, the sample of South African organizations did not have well integrated systems. They suggested that the improvements in integration should enhance customer service.

The study of Jayachandran *et al.* (2005) cover senior marketing managers, sales managers, and customer service managers in 1105 SBUs of top firms in the United States and found no significant difference in the influence of functional integration (marketing, sales, and customer service), data integration (aspects like CRM technology integration) on the customer relationship performance of goods and services firms. The results suggest that business-to-business and services SBUs do not enjoy any advantage over their business-to-consumer and goods counterparts, respectively, in terms of the influence of functional integration (marketing, sales, and customer service), data integration on customer relationship performance. Thus, further research is required to examine this. In another study of Indian banking, telecom, and retail industry, Desai *et al.* (2007) found positive impact of integration function and data integration on CRM performance with customer focus (achieving customer satisfaction, keeping current customers). On the other hand, organizational focus perspective did not show positive association between CRM technology and CRM performance like securing desired market share and securing

desired financial performance (Desai *et al.*, 2007). These findings give an important insight into the on-going debate of the impact of IT on CRM. The studies indicate the necessity of further research for the integration function. Malte *et al.* (2006) states, that there is lack of research on integration of CRM in Middle East context.

Using data from Korean companies, Chang *et al.* (2009) focused upon four elements of CRM technologies namely sales support, service support, analysis support, and data integration and access support. They found positive relationships between these activities and customer relationships effectiveness.

All the aforementioned discussions support the argument that there exists a positive link between CRM functionality and data integration of CRM initiatives and CRM performance in organizations. Researchers have identified and mentioned the importance of CRM functionality and data integration as a critical factor of CRM performance at the organizational level. In the literatures CRM integration has gained little attention from the researcher. Few CRM studies specifically investigate the impact of CRM functionality adopted or level of CRM system integration within the firm. Without the fundamental shift in the approach of CRM integration on CRM initiatives and CRM performance in organizations, we will see continuous high failure rates.

2.15 Consequences of CRM performance

In addition to the literature on the antecedents to CRM performance, the consequence of CRM performance is another study that attracts major interest. The

main concentration of research is on the influence of CRM performance in the point of view of the organization. It is clear that from the present existing literature, CRM performance influences the organization as well as customers (Abdullateef *et al.*, 2010; Sin *et al.*, 2005a; Yim *et al.*, 2005; Wahab *et al.*, 2009). Notwithstanding the growing extent of CRM performance on organization and customers, there is still only a few empirical work carried out in the light of CRM performance (Abdullateef *et al.*, 2010).

From the customers' point of view, there is agreement on the requirement to examine the influence of CRM performance on satisfaction, retention and loyalty. Therefore, this addresses the requirement for additional research leading to the empirical validation of a CRM model delineating its affect on consumer satisfaction, retention and loyalty.

From the perspective of the customers' satisfaction, Mack *et al.*(2005) argue the importance of customer satisfaction to the concept of successful CRM performance. Several studies have identified a number of positive CRM performance on customer satisfaction (Attharangsun & Ussahawanitchakit, 2009; Constantinos *et al.*, 2005; Hallowell, 1996; Mithas *et al.*, 2005; Roh *et al.*, 2005; Sin *et al.*, 2005a). For example, based on a mail survey addressed to the largest 1,000 Greek organizations, Constantinos *et al.* (2005) has found that managers hold positive attitudes towards CRM and the extent to which customer satisfaction research is performed by the organizations are also appreciated by them. In 2009, Attharangsun and Ussahawanitchakit did a study among 524 managers of various firms in Thailand. The results of the study indicate that CRM effectiveness has a significant positive

influence on customer satisfaction. In their cross sectional study among U.S. firms Mithas *et al.*, (2005) found that the use of CRM is positively associated with improved customer satisfaction.

With a total of 215 sample information covering 17.6 percent response rate Yim *et al.* (2005) found that four of the CRM dimensions have significant effects on customer satisfaction. However, despite the apparently straightforward nature of each of these four pillars, these dimensions must be connected with each other and work in harmony to achieve customer satisfaction.

From the perspective of the customers' loyalty, loyalty can be defined as the involvement of building and sustaining customer relationship leading to the repetitive patronization of buyers which takes place through the buying of the seller's products or services over a given period of time (Lawson & Limayem, 2004; Ndubisi *et al.*, 2007). Lawson and Limayem (2004) express that relatively little research have been done on attitudinal loyalty and CRM.

A number of studies have identified that CRM performance positively influences customer loyalty (Bradshaw & Brash, 2001; Lawson & Limayem, 2004; Massey *et al.*, 2001; Ndubisi *et al.*, 2007; Reimann *et al.*, 2010; Shiu & Wei Yu, 2010). Lawson and Limayem (2004) looked into customer relationship management (CRM) and customer loyalty by collecting data from 170 Canadian IT organizations and the results show that web site characteristics (which include the levels of the organizations internet presence and interactivity) have a major influence on the relationship between CRM (in terms of partnerships, empowerment, relations with customers, and personalization) and customer loyalty. Attharangsun and

Ussahawanitchakit (2009) found that in health care firms in Thailand, the CRM effectiveness has a relationship with brand loyalty which comes through customer satisfaction. The key participants in this study were managers. Shiu and Wei Yu (2010) find the significant impact of CRM on customer loyalty in the context of insurance in Northern Taiwan. They find that customization is instrumental in enhancing customer loyalty. As a result, insurance companies reinforce customized function to retain their customers (Shiu & Wei Yu, 2010) and therefore this should be of interest to academics, practitioners, and company management. Ndubisi *et al.* (2007)'s study of a total of 220 customers of Kota Kinabalu, Malaysia shows that relationship marketing strategies are associated with customer loyalty. They also added that more research in this regard will generate more knowledge in the customer relationship management domain.

Yim *et al.* (2005) mention that one main aims of CRM is customer retention. The continuous advancement of information technology enables the marketers to direct their CRM activities more effectively and efficiently to retain the customers for long (Vandermerew, 2004). Furthermore, implementing accountability, keeping up to date information of the constantly changing customer needs in different segments and collecting early warnings of customers leaving can be guaranteed via the firm's CRM activities among customer groups. Appropriate remedial actions can be used to address issues regarding discontented customers' expectations of the CRM knowledge network maximizes the retention rate. Therefore, retention can be termed as a commitment from the customer to carry on the business interaction with a specific company on a continuing basis.

From the perspective of the customer retention, Programs undertaken by the marketer towards the management of customer relationships have substantial impact on increasing retention rates (Alt & Puschmann, 2004). Yim *et al.* (2005) made a survey on 215 respondents and found that four CRM dimensions have direct significant effect on customer retention. Effective programs catering to commitment and loyalty that offers economic encouragement to customers are identified as critical factors by Peter and Verhoef (2003) that have positively impact on customer retention and this study was conducted only with the insurance customers. In cases where managers exert efforts to influence customer retention, focus should be given to the creation of loyal customers. Furthermore, due to the loyalty program's economic incentives leading to effective customer retention, there is a necessity to extend the study throughout various markets.

Gustafsson *et al.* (2005) studied the influence of customer satisfaction on retention by concentrating on two types of customer commitment namely effective commitment and calculative commitment. The latter deals with customer's calculation of switching cost concentrating on the situational and relational trigger conditions to balance out the satisfaction–retention relationship in a study of telecommunication services. The result of the study exhibited the influence of customer satisfaction and customer commitment upon the retention of services. Moreover, they also indicated that churn is the mediator between customer satisfactionretention relationship (Gustafsson *et al.*, 2005). Hong *et al.* (2009) found a positive and direct relationship between customer loyalty and customer behavior (customer retention) in banking service of Taiwan.

However, the variables discussed above are not included in this study even though reviews about them have shown the relevance of CRM performance on customer satisfaction, loyalty and retention. The present study will focus on the influence of CRM performance on financial performance due to the use of CRM as a business strategy not only to acquire new customers but also to retain existing customers for competitive advantage (e.g. piccolo *et al.*, 2003; Sin *et al.*, 2005a). The success of CRM can enhance organizational performance through improving reducing customer acquisition costs and increasing profitability. Managers of firms that provide CRM technology and related services are concerned; reports that CRM efforts are not effective are particularly alarming. As such, exploration of the impact of CRM on different organizational performance measures is required to reassess its potential to create firm value and to justify the investments firms have made in this area and its influence on financial performance (Boulding *et al.*, 2005).

The impact successful of CRM on organizational performance has not received sufficient attention from academics (Boulding *et al.*, 2005; Krasnikov *et al.*, 2009; Thompson *et al.*, 2006), thus limiting researchers from making assessments about the causal relationship between CRM and financial performance (Coltman, 2007b). Therefore, this study will focus on the influence of CRM performance on financial performance in Jordanian hotels industry.

From the perspective of the organization, organization performance is considered as a construct with multi dimensions. Based on the organization theory, organizational performance can be divided into both effectiveness and efficiency (Chang *et al.*, 2009). The impacts or net benefits of information systems on

organizational performance are not yet addressed adequately by research (DeLone & McLean, 2003; Jayachandran *et al.*, 2005).

Various empirical studies reveal that CRM success brings about advantages in the form of improved performance (Coltman, 2007a). The presence of this positive relationship between CRM and performance owes itself to the use of CRM as a business strategy to attract and keep new customers and to retain existing ones for the purpose of competitive advantage. The lack of empirical investigations catering to the description and exploration of how to determine the financial affect of CRM performance it perhaps the greatest challenge posed to the theoretical development of CRM (Sun *et al.*, 2008).

Since CRM success depends on continuous process development of market intelligence and maintenance of profit maximizing portfolio of customer relationship, a firm's performance is enhanced (Zablah *et al.*, 2004). A firm's customer-centric characteristic rather than product-centric should improve the interaction with customers, makes products and services valuable and encourage customers' loyalty and the firm's profitability. Even though not all CRM success leads to desired benefits (Richards & Jones, 2008), effective management of customer relationships through the use of CRM success is expected to exhibit a positive relationship with performance.

Similarly, according to Kasim & Minai (2009), a successful CRM should improve the hotels' performance by increasing customer satisfaction and loyalty, lowering customer acquisition costs and increasing profitability by customers who do not mind paying for a premium for better services. Majority of authors have discussed

that customer outcomes have a positive influence on the financial performance via reduced costs of the acquisition of new customers, decreased operating costs and increased customer price tolerance (Kim, 2008). Investigation of the relationship between CRM performance and financial performance, in the restaurant was carried out by Kim (2008). The results show that the CRM performance had a significant positive effect on financial performance.

CRM performance can lead to increased handling, close the gap between relationships and establish enduring relationships with vendors. Additionally, it can create non market targets and competitors with various market relationships (Gummesson, 2002). Similarly, Chang *et al.* (2005) results show that CRM success in service context may lead to an increase of internal process efficiency and an improvement of the channel managements and innovations (Wahab *et al.*, 2009). This is also evident in a study by Jaakkola *et al.* (2009) which found a positive relationship between CRM performance and organizational performance in Finnish's firms performance. Similar, study by Sin *et al.* (2005a) showed a positive correlation between four dimensions of CRM and marketing performance, as well as financial performance in Hong Kong financial industry. In the light of business performance, CRM is a critical success factor and firms desiring to enhance their customer relationships have to constantly oversee their behavior and internal processes. Looking at it from a more specific point of view, the positive impact of CRM on marketing performance is stronger as compared to that on financial performance. Therefore, managers can significantly improve their marketing performance by the effective CRM implementation. As a matter of fact, when marketing performance

such as trust and customer satisfaction is enhanced, financial performance has a high possibility of improving accordingly. In other words, through CRM, customer relationships can be managed and overseen in an effective manner akin to important assets for the improvement of customer retention, and in turn, profitability (Reimann *et al.*, 2010).

Recent reports indicated that well-disseminated failures of CRM performance have made managers pessimistic about its ability to create firm value (Zablah *et al.*, 2004). For example, 69% of CRM projects have little impact on sales performance (Pedron & Saccol, 2009). Several authors have argued in the business press referring to the inability of CRM success to generate firm value (Rigby *et al.*, 2002). From the view of managers in firms that have implemented CRM, or plan to do so, these reports are disturbing. As far as managers of firms that provide CRM technology and related services are concerned, reports that CRM efforts are not effective are particularly alarming (Krasnikov *et al.*, 2009).

Yim *et al.* (2005), found a positive effect of CRM performance dimensions on sales growth business in Directory of Hong Kong. Even with the clear cut nature of each CRM performance dimensions, each of the four are linked together and they must co-operate in order to lead to superior customer relationships and profitability, thus limiting researchers from making assessments about the causal relationship between CRM and firm profitability. The study of empirical investigation of 253 respondents belonging to 14 companies by Roh *et al.* (2005) found that a positive between CRM Performance on profitability.

Prior research (Thompson *et al.*, 2006) finds that there is no clear relationship between CRM performance and organizational efficiency; a measure of how well a firm uses its resources in producing outputs. This is particularly surprising because industry analysts predict that 70% of CRM spending in the future will be explained by its potential to increase efficiency (Krasnikov *et al.*, 2009).

CRM performance improves a firm's efficiency in addition to enhancing customer value. Indeed, considering the issue of dual value creation expected from CRM success, enhancement of firm efficiency could be an additional aspect of value creation for firms (Boulding *et al.*, 2005). Krasnikov *et al.* (2009) examine the impact of CRM performance on two metrics of firm performance-operational (cost) efficiency and the ability of firms to generate profits (profit efficiency)-using a large sample of U.S. commercial banks. They find that CRM success is associated with a decline in cost efficiency but an increase in profit efficiency. They further add that CRM commitment decreases the CRM performance's negative effect upon cost efficiency. The impact of CRM performance on firm profitability has received only slight attention from researchers (Krasnikov *et al.*, 2009). The results of the study are parallel with the dual value creation argument made by Srinivasan and Moorman (2005). Based on the present study's results, the improvement of firm's performance through CRM is not exactly due to efficiency gains. In addition, the firm's improved efficiency that displays successful CRM, even with the decrease of cost efficiency, indicates that the firms receive increased revenues through their improvement of customer value.

Other researchers have stated that CRM's popularity is increasing and its implementation is increasing owing to the benefits in the form of greater customer satisfaction and loyalty, leading to enhanced financial and competitive performance (Kasim & Minai, 2009). Kasim and Minai (2009) investigate the relationship between customer performance (customer satisfaction and customer retention) and organizational performance in the hotel industry in Malaysia. The result significantly and positively affects financial performance. He adds that there is little academic research that deals with the relationship between CRM performance and organizational performance. Evidenced from one of the investigative study in the sector of service firms in the Japan by Minami & Minami (2008); the study showed that customer performance's (customer satisfaction and customer retention) effect on financial performance was supported and it had a direct relationship with management and marketing performance.

It is evident from the aforementioned discussion that there is a positive relationship between CRM initiatives and financial performance of the organizations. Also empirical studies support CRM to be the critical success factor for business performance in a variety of environments. Empirical studies have shown that CRM initiatives bring benefit in terms of improved performance. In spite of this, there is lack of empirical investigations are perhaps the main causes whose aim should be describing and exploring how to determine the financial impact of CRM performance. Thus, this study will focus on the impact on CRM Organizational performance.

2.16 Theoretical Framework

The framework for the present research is developed based on the extended theoretical review of literatures related to the resource-based view (RBV) and competitive advantage which examine the relationship between organizational and technology resources, capabilities and performance. The main constructs to be investigated are organizational factors and technology factors as antecedents of CRM performance, leading to firm performance in the hotel industry. Meanwhile, the sources of organizational factors and technology factors as antecedents of CRM performance collected from the workers of various authors are shown in Table 2.3.

Table2.3

Past Studies on the Relationships between CRM Performance and Organizational Performance

Factor	Sources
Organizational Factors	
Top Management	Becker <i>et al.</i> , 2009; Chen & Chen, 2004; Croteau & Li, 2003; Greve & Albers, 2006; Kim <i>et al.</i> , 2004; Kim <i>et al.</i> , 2010.
Customer Orientation	Day & Bult, 2002; Eid, 2007; Krasnikov <i>et al.</i> , 2009; Sohrabi <i>et al.</i> , 2010; Xiaojuan & Banerjee, 2009.
Training Orientation	Almotairi, 2008; Becker <i>et al.</i> , 2009; Jayachandran <i>et al.</i> , 2005; Kim, 2008; Peng <i>et al.</i> , 2009; Yim <i>et al.</i> , 2005.
Technology Factors	
Customer Data	Desai <i>et al.</i> , 2007; Jayachandran <i>et al.</i> , 2005; Nelson, 2002b; Roberts <i>et al.</i> , 2005 ; Stone <i>et al.</i> ,2003.
Customer – Information Processing	Abbott <i>et al.</i> , 2001; Almotairi, 2008; Becker <i>et al.</i> , 2009; Bull, 2003; Jayachandran <i>et al.</i> , 2005; Kim, 2008.
Integration of CRM	Abbott <i>et al.</i> , 2001; Almotairi, 2008; Bull, 2003; Desai <i>et al.</i> , 2007; Jayachandran <i>et al.</i> , 2005.
CRM Performance	

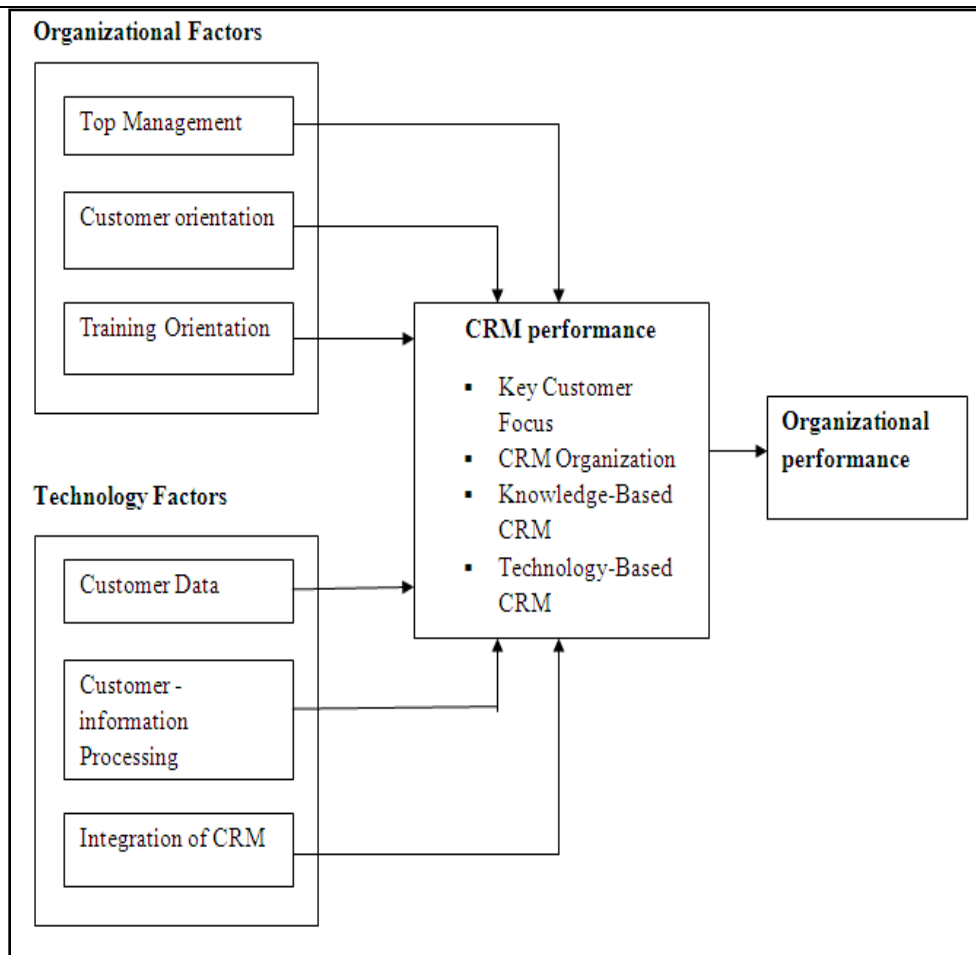


Figure 2.1
Theoretical Framework

The resource-based view of the firm, hereafter referred to as RBV theory, is an economic approach developed by Barney (1991). The resource based view has emerged as a promising framework for analysing the sources and sustainability (Coltman, 2007a). The basic reason why the theory is developed is to explain the differences that exist among firms performance relative to their competitors. By applying the theory, it is found that firms that built their strategies on path dependent (some resources and capabilities can only be developed over long periods of time), causal ambiguity (because it is not always clear how to develop these capabilities in

the short to medium term), social complexity (because some resources and capabilities cannot be bought and sold), and intangible assets outperform firms that build their strategies only on tangible assets (Keramati *et al.*, 2010).

In the last two decades, the resource based approach to company's competitive advantage as emerged as a strategic choice through which management of companies can identify, develop and distribute key resources to maximize returns on investment (Meso & Smith, 2000). The Resource Based View emphasized that the individual firms are like a bundles of resources which possesses certain specific characteristics that have the potential of providing competitive advantage over competitors (Grant, 1996). This resource based theory empirically states that to develop competitive advantage over competitors, there is need to develop and structure available resources in a way that it will best serve both the company's internal and external challenges (Meso & Smith, 2000; Grant, 1996). For any organization to achieve efficient allocation of resource there is need to possess the right knowledge, processes, and necessary tradeoffs that will assist in creating wealth and increases customer value (Barney, 1991).

CRM initiatives have been argued as nested within the organization's system of interrelated and interdependent resources that companies use in generating competitive advantage (Coltman, 2007a). According to Keramati *et al.* (2010), the application of the along with the RBV, in the context of CRM is relevant because: CRM success is highly dependent on a process management orientation; by focusing on CRM processes, managers can ensure the effective deployment of organizational resources toward the creation of desired outcomes. A strategic approach suggests that,

with a long-term view of resources, such as capabilities in the process of customer relationship development, an organization can enhance its performance (Kale, 2004).

Most researchers have made a categorization of resources to improve comprehensiveness of the resource identified. Drawing on the RBV, Melville *et al.* (2004) provided a model of IT business value by integrating the various strands of research into a single framework. Their integrative model comprises three different domains: (1) focal firm (company level); (2) competitive environment (industry level); and (3) macro environment (territory or country level). In their conceptual model, they emphasize that a company should align not only IT resources such as technical IT resources (TIR) and human IT resources (HIR) but also complementary organizational resources including non-IT human resources, culture, policies, and rules to create value generating processes. Wade andHulland (2004) used the categories: (1) tangible resources, (2) knowledge resources, skills, and experience, (3) system and procedural resources, (4) cultural resources and values, (5) network resources and (6) resources with potential dynamic capability. Another categorization is suggested by Fahy (2000) who stated that resources are of three types namely tangible, intangible and capabilities. According to the author, the first type includes financial, organizational, physical and technological resources while the second type represents the human, innovative and reputational resources. The final type of resources is the firm's capability to provide resources that have been accumulated for a certain purpose. This type of resources is commonly created in specific functional areas such as management, manufacturing, marketing, and research and development (Drohan *et al.*, 2010). As for the antecedents of CRM, marketing scholars have made

use of the RBV to identify three of such antecedents. They are: (i) orientation comprising of the firm's values, behaviors and mindset, (ii) information stating the availability, quality, and depth of information about customer relationships and CRM technology usage and (iii) configuration as the supporting structures, incentives and controls (Day & Bulte, 2002). Additionally, Kim *et al.* (2010) stressed on the tripartite resource's capabilities' (technology, process and people) importance in the CRM strategy's successful implementation.

In business environment that is characterized by flexibility, speed, and rapid shifts in the number of power of competitors, it is suggested for firms to establish resource competencies rather than their traditional focus on product market (Kim *et al.*, 2010). From discussion in chapter 1, it is found that the hotel business is operating in this environment. Hence, this study uses the resource-based view (tangible, intangible resources and capability) to govern the theoretical framework of the study. As next will discuss in detail.

Resource -Based View is an appropriate theoretical framework for addressing shortcomings in CRM strategy, which has not addressed the issue of how resources and capabilities can contribute to competitive advantage when multiple competitors adopt the CRM strategy (Desai *et al.*, 2007; Kim *et al.*, 2010). This study places competitive CRM performance in the context of the resource-based view of the firm by studying how hotels develop resources in pursuit of better performance and competitive advantage (Day & Bulte, 2003). This study suggests three types of resources: intangible,tangible resources and capabilities (Figure 2.1). intangible resources include organizational factors such as top management, customer

orientation, orientation training (e.g., Eid, 2007; Kim, 2008; Moreno & Melendez, 2011), while the tangible resources include customer data, customer information possessing, and integration of CRM (e.g., Becker *et al.*, 2009; Chan, 2005; Chen & Popovich, 2003; Eid, 2007; Foss *et al.*, 2002; Kim, 2008; King *et al.*, 2008; Moreno & Melendez, 2011). These resources would influence the strategic capability and eventually the hotel performance. The strategic capability proposed by this research is CRM strategic (e.g. Akroush *et al.*, 2011; King *et al.*, 2008; Sin *et al.*, 2005; Yam *et al.*, 2005).

The resource based view may explain the difference in the ability of a hotel to be competitive in their CRM performance in relation to competitors. In other words, this study suggests that the hotel performance would depend on the internal resources/capabilities of the firms such as organizational factors (such as top management, customer orientation, orientation training) and technology factors (including customer data, customer information possessing, integration of CRM). However, the effectiveness of utilizing these resources would be enhanced by the strategic capability, which later on affects the hotel performance. In relation to this, the present study seeks to find the resources in hotels which will lead them to be competitive in terms of CRM performance which will improve their overall performance. In relation to that, this study seeks to find the practices in hotels which will lead them to be CRM performance and improve their performance.

Although Ou and Banerjee's (2009) model incorporates antecedent factors of CRM performance from each main category (Becker *et al.*, 2009; Chang *et al.*, 2005; Desai *et al.*, 2007; Jayachandran *et al.*, 2005), it is obvious that not all potential

factors can be included in the present study. Those that are relevant with CRM performance and with the hotel industry are chosen. Environmental factors for example, are not investigated in the present study. Environmental variables such as competitive Intensity, environmental dynamism and environmental pressure (Chang *et al.*, 2005; Jayachandran *et al.*, 2005) are some examples that may influence CRM performance. However, these variables are identified by many CRM performance researchers as processes that are outside of the control of the organization (Ou & Banerjee, 2009). While these environment variables can be monitored, organizations are often forced to react to the impact of these variables rather than to proactively design strategies to deal with them.

2.17 Hypotheses

CRM performance and organizational performance

The firms' managers' pessimism regarding CRM's probability to create firm value can be attributed to high publicity of failures of CRM performance (Zablah *et al.*, 2004). Examples of such publicity are, 69% of CRM projects have little or no affect on sales performance (Abdellatif *et al.*, 2011; Pedron & Saccol, 2009), and the arguments of several authors in the business press referring to the inability of CRM success to generate firm value (Rigby *et al.*, 2002). However, empirical studies are often not in line with this argument.

Various empirical studies indicate that CRM success brings advantages in the form of improved performance (Coltman, 2007b). According to Kasim and Minai (2009), a successful CRM should improve the hotels' performance by enhancing

customer satisfaction and loyalty, decreasing overall customer costs, increasing profitability through customers who are willing to pay premium prices. Better CRM performance can lead the firm to minimize the distance with vendors and other market participants. It can also help creating non market targets to face the competition. Several authors have argued the fact in a similar way that customer outcomes generally conveys a positive influence on the financial performance of the firm due to reduced costs of acquiring new customers, decreased operating costs, and increased willingness of the customers to pay premium prices (Kim, 2008). The findings of Sin *et al.* (2005a) also support CRM to be the critical success factor for business performance. Based on these empirical findings, the first hypothesis to be tested is:

H1: CRM performance is positively related to organizational performance

Top management and CRM performance

The make or break of the CRM success depends on the influence of the top management (Roberts *et al.*, 2005). Thus CRM should not be initiated without a fully committed management team. According to Kale (2004), even the most brilliant CRM deployments and implementation initiatives are doomed to fail without the top management supports and commitments.

According to Boulding (2005), only slight attention is given to top management when dealing with CRM performance. In their study which spanned four industries and ten European countries, Becker *et al.* (2009) found that investments in CRM have a significant positive effect on performance. However, this effect can be

little unless top management actively supports them. One role of the top management is to assist CRM performance through the creation of a corporate environment that accepts CRM as an important factor of business strategy (Becker *et al.*, 2009) and by taking part in activities that exhibits their commitment to CRM performance (Kim *et al.*, 2010). Adam *et al.* (2010) stressed that the necessary level of commitment and participation from the staff with relevant expertise to support the needs of a CRM is impossible, if not difficult, without the active sponsorship of top Management.

If top management effectively relates the fact that CRM is not just a fad but a part of the company's strategic orientation, this will leverage the effectiveness of their support and commitment. Thus, we hypothesize that:

H2a: Top management support and commitment is positively related to CRM performance.

Customer orientation and CRM performance

The main goal of Customer Orientation implementation is the maximization of revenues and profitability through increased results of customer satisfaction, customer retention and customer loyalty, market share and premium prices. Firms that care about their customers create tailored and customized offerings as well as encourage a unified target of individual employee efforts in delivering value to customers (Kennedy, Lassk,& Goolsby, 2002; Kohli & Jaworski, 1990; Narver & Slater, 1990; Stock & Hoyer, 2005). Therefore, customer-oriented firms have a higher possibility to increase their customer satisfaction, to retain customers and to increase their market share (Homburg & Pflesser, 2000). Due to customer orientation's

characteristic to encourage firms to come up with one-of-a-kind products and services, customer loyalty can be increased as well as the firm's choice to ask for premium prices (Kim, 2008; Eid, 2007).

Therefore, we hypothesize that:

H2b: Customer orientation is positively related to CRM performance.

Training orientation and CRM performance

Employee training acts as an employee guide on how to deliver high-quality products and services that are crucial for the development of good customer relationships (Kennedy *et al.*, 2006; Plakoyiannaki *et al.*, 2008). In other words, employee training can assist hotel firms to set up good relationships with customers in order to improve their CRM performance. It is considered as a systematic process which aims to develop employee knowledge, skills, and attitudes (Kim, 2008).

However, Shum *et al.* (2008) argued that only a few aspects are known about how this process influences employees and how the employees' actions in turn can affect the CRM projects' success. Boulding *et al.* (2005) also mention that the attention given to the role of employees training in the implementation of effective CRM activities is little. Among these few studies, some (e.g., Dong & Zhu, 2008; Keramati & Maharani, 2009; Reinartz *et al.*, 2004; Sohrabi *et al.*, 2010) investigated employee training as a potential antecedent of CRM performance and found significant support for it. Based on the prediction from the theoretical literature and empirical evidences in different industry and country contexts, it is expected that employee training would facilitate CRM performance in various direct and indirect

means. Therefore, it can be expected that employee training would positively influence the CRM performance.

H2c: Training orientation is positively related to CRM performance

Customer data and CRM performance

Improving customers' long-term relationships calls for the utilization of quality customer data but the problem lies in the fact that "bad data" has hindered the growth of CRM (Bose & Chong, 2003). Customer data can be captured at many points, mostly where a contact is made with the customer such as at the point-of-sale, customer service interaction, and inquiries (Bose & Chong, 2003). CRM initiatives are in need of data analysis as well as quality as opined by various researchers (e.g., Abbott *et al.*, 2001b; Chang, 2007; Goodhue *et al.*, 2002; Swift, 2002; Winer, 2001; Ryals & Payne, 2001). Winer (2001) states the distinction of traditional analysis of customer data which has its basis on customer segmentation decisions, from what is needed for the customer strategies. These analyses support the CRM strategies partially and rely more on "1-to-1 marketing" and "lifetime customer value".

Nelson and Kirkby (2001), insisted that erroneous and weak customer data and information is one of the main causes of the failure of CRM initiatives because it leads to poor data analysis as well as poor decision making. This notion was further reiterated by Ryals and Payne (2001) when they considered lack of data quality and quantity as a hindrance to successful CRM initiatives. Goodhue *et al.* (2002) insisted that successful CRM initiatives generally needs great effort invested on improving data quality as well as the basic data infrastructure modified to the level needed for

successful CRM initiatives. This view was further substantiated by Swift (2002) who indicated that firms are inclined to fail the CRM initiatives due their avoidance of the data issues needed by their CRM initiatives.

Abbott *et al.* (2001a) carried out a study including seventeen organizations that were in the process of implementing CRM strategies and the results of the study indicated that quality customer data is crucial to successful CRM performance. Empirical research by Stone *et al.* (2003) shows that despite the fact that the companies comprising the sample have been culling customer information for years, the purpose of it was normally for administration rather than customer management, and thus a few companies reach at a good standard in the acquisition and use of customer data. Therefore, they take the risk of barriers cropping up due to their data's unsupportive characteristics that are not compatible with CRM strategies. Thus, we hypothesize that:

H3a: Customer data is positively related to CRM performance.

Customer-information processing CRM performance

Information is the gateway to building and maintaining customer relationships. Customer information assists the firms to take suitable actions and to carry out the necessary behaviors for the firms to effectively and efficiently create, disseminate, and manage customer information (Kim, 2008). In case of hotels, enhanced ability to manage customer information leads to enhanced CRM performance because customer information is crucial in assisting hotels carry out marketing programs for specialized product offerings, communications, pricing and distribution. Hotels have the

possibility of overlooking sales opportunities and losing valued customers due to poor quality of customer data (Asikhia, 2010).

The type and quality of customer information can be enhanced through important, timely, and effective processing of customer data. These information processes manages systematically the capture and use of customer information to allow the firm to set up relationships and prevent barriers that crop up due to poor communication, information loss and overload, and inappropriate information use (Jayachandran *et al.*, 2005).

Based on the resource-based view of a firm (Barney, 1991), the resources of a firm consists of firm-specific assets that are impossible for competitors to imitate. Customer information is crucial for the firm's performance Stein and Smith (2009). Additionally, customer information is used to pinpoint significant customer. In sum, the ability to manage customer information can be considered as an important resource that improves CRM performance

Although information processes crucial to CRM are only receiving slight empirical attention, the study of Jayachandran *et al.* (2005) shows that relational information processes is crucial in improving a firm's CRM performance. Based on this and the argument above, the following hypothesis is formulated:

H3b: Customer-information processing is positively related to CRM performance.

Integration of CRM and CRM Performance

A number of researchers have indicated the importance of CRM integration as a critical success factor of CRM performance (Bull, 2003; Goodhue *et al.*, 2002; Meyer

& Kolbe, 2005; Plakoyiannaki & Tzokas, 2002). Stein and Smith (2009) state that CRM technology connects a firm's marketing activities together (i.e., sales, service, communication, order management, market research, and analytics) through the process of collecting information about the customers, and allowing the firm to concentrate on the customer's acquisition, retention, and profitability. This shows that CRM is not merely a useful tool for the integration of boundary spanning customer information (field sales force, web sites, service centers), but it is also considered as a management model that oversees the working of relationship marketing (Payne & Frow, 2006).

Two items of systems integration are significant to CRM technology adoption: First, integration of data customer, and second, integration throughout other functional customer information (Buttle, 2004; Payne & Frow, 2006). The success of CRM depends mainly on the integration and redesign of customer data across the organization (Becker *et al.*, 2009; Wells *et al.*, 1999). Meyer (2005) emphasizes the detailed business process for the purpose of integrating marketing, sales, and service activities with CRM.

Despite the importance of integration, only a limited number of scientific papers actually focus on the integration of CRM and its influence on project management and CRM performance (Thompson *et al.*, 2006). CRM integration has not been sufficiently studied for its link to theories of the firm, or for its the relation and implication with respect to the performance at project or company level (Hart, 2006). Chang *et al.* (2009) focused on four activities of CRM technology: sales support, service support, analysis support, and data integration and access support.

They found positive relationships between these activities and CRM performance. Jayachandran *et al.* (2005) found no significant difference between products and services offering firms with respect to the influence on the CRM performance. Therefore, we hypothesize that:

H3c: Integration of CRM is positively related to CRM performance.

2.18 Chapter Summary

Based on the result of literature review on antecedents of CRM performance and its consequences, the following can be made. Firstly, the majority of research on CRM performance has focus on value creation towards customers. In addition, the advanced information technology influences the organization to implement CRM to maintain their customer relationship strategies. Therefore, two factors propose in this study are organizational factors and technology factors. Under organizational factors, three elements have been choosing to represent this factor, top management, customer orientation and training orientation. For technology factors three elements have been chosen: customer data, customer information processing and integration of CRM. This research investigates the influence of these factors on CRM performance. The findings of these studies indicated that the antecedents of CRM performance may not be consistent across different industry environments and further empirical research is needed.

Secondly, similar to antecedents of CRM performance, the impact of CRM performance is dependent on the business environment, the choice of measures of performance used and the degree of analysis. This research investigates

organizational performance as major consequence of CRM performance in hotel Jordan industry. Resource based view (RBV) was chosen as a basis for this research. The reason for choosing it is that the theory has been successfully used in several previous researches related to hotel industry and CRM performance.

The reviewed literature works as a good basis for developing a model to measure the factors that influence CRM performance and its impact on organizational performance. Based on the past studies, theoretical framework for this study is developed. It then followed by construction of the hypotheses to be tested.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the methodology of the study. Amongst others, this chapter elaborates the research design of the study, operationalization of variables, population and sample of the study, as well as data collection procedure. This chapter ends with a discussion on the statistical techniques used to analyze the data.

3.2 Research Design

The survey research design was used for this study. Stacks (2010) states that, “a survey is a method of gathering relatively in-depth information about respondent attitudes and beliefs” (p.200). Primary data were collected for the present study. The collection of primary data was accomplished through use of a personal survey approach. This study was cross-sectional in nature where data were collected once to answer the study’s research questions (Sekaran, 2010). Data were collected through personal survey using questionnaire to obtain a good grasp of the CRM performance among managers in the hotel industry and its impact on the performance of Jordanian hotels.

For this study, a Likert scale was used to measure the responses since this scale is widely used in market research and has been extensively tested in both marketing and social sciences (Garland, 1991). In relation to the number of scale points, there is no clear rule indicating the suitable number that should be used,

whether it should be a five-point Likert scale or a seven-point Likert scale. However, researchers indicate that a five-point scale is just as good as any other (Sekaran, 2010) to reduce confusion among respondents. Hence, to ensure consistency among variables and to avoid confusion among the respondents, all items were measured on a five-point Likert scale (Ackfeldt & Coole, 2003).

3.3 Operational Definition of Variables

Organizational performance has been broadly viewed from two financial performance perspectives (objective and subjective measures) in previous literatures. First, there is the subjective concept, which is primarily concerned with the performance of firms relative to that of their competitors (Sin *et al.*, 2005b). The second view is the objective concept, which is based on absolute measures of performance (Jaakkola *et al.*, 2009). For this study, a subjective rather than an objective approach is used for the following two reasons. Firstly, company information is usually regarded highly confidential in Middle East societies such as Jordan where respondents may be reluctant to provide hard financial data. Secondly, past studies have reported a strong association between objective measures and subjective responses (Dawes, 1999; Jaakkola *et al.*, 2009). Each respondent in this study was evaluated according to his/her company's current (objective) financial performance relative to its major competitors with respect to the following four items: sales growth, return on investment (ROI), market share, and return on sales (ROS) (Sin *et al.*, 2005a). Responses were made on a five-point scale, ranging from '1' "far below expectation",

‘2’ “below expectation”, ‘3’ “as expected”, ‘4’ “above expectation”, and ‘5’ “far above expectation” from major competitors (Jaakkola *et al.*, 2009).

CRM performance is conceptualized as a four-dimensional construct: key customer focus, CRM organization, knowledge management, and technology-based CRM. Key customer focus refers to the ability of a hotel to provide important customer focus involving an overwhelming customer-centric focus and continuously delivering superior and added value to selected key customers through personalized/customized offerings (Sin *et al.*, 2005a). Key facets of this dimension include customer-centric marketing, key customer lifetime value identification, personalization, and interactive co-creation marketing (Sin *et al.*, 2005a; Vandermerwe, 2004; Yim *et al.*, 2005; Yueh *et al.*, 2010). CRM organization refers to the alignment of viable business strategies, customer information and technology on the existing organizational structures and cultures with the primary aim of achieving long-term customer satisfaction and organizational profits (Coltman, 2007a; Eid, 2007; Sin *et al.*, 2005a; Yim *et al.*, 2005). Sin *et al.* (2005a, 2005b) empirically argue that a successful CRM organization depends mostly on three factors which are organizational structure, organization wide commitment of resources, and human resources management. Knowledge management refers to the strategy through which companies capture, organize, manipulate, and share implicit and explicit data with both internal and external users (Eid, 2007; Sin *et al.*, 2005a, 2005b). The key facets of knowledge management include knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness (Sin *et al.*, 2005a; Yim *et al.*, 2005). Technology-based CRM can be described as any

technology or system that assists organizations in collecting, storing, analyzing, and sharing both current and potential customers' information in such a way that greatly enhances employees' ability in responding to the needs and request of the individual customers and thereby leading to better ways of attracting and retaining customers (Sin *et al.*, 2005a).

Antecedent factors of CRM performances in this study are categorized into two major components, namely, organizational and technology factors. The first component reflects the organizational environment in which hotels operate in. This consists of three factors: top management, customer-orientation, and training orientation. Top management was operational zed by using two dimensions, namely, top management support and top management commitment. Top management support refers to the extent top management promotes the efforts of the CRM implementation (Croteau & Li, 2003). Top management commitment refers to the development and implementation of the CRM success and to continual improvement of its effectiveness by motivating employees to live the CRM vision, intensively communicating the CRM vision internally and externally in the hotel, informing the employees regularly about high customer orientation, conducting management reviews, and managing a large degree of the availability of resources in CRM implementation (Becker *et al.*, 2009). Customer orientation is conceptualized as the set of activities, behaviors, and beliefs that place high priority on customers' interests and continuously create superior customer value (Kim, 2008). This conceptualization captures an organization's relative emphasis on understanding and managing customers. Employee training is identified as a systematic process of developing

employee knowledge, skills, and attitudes (Kim, 2008). The current study uses training orientation operationalized by using three dimensions of the degree to which hotels are described by employee training activities: behaviors, and/or philosophy that may aid in hotels operations, improved product and service delivery quality, emphasis on customer relations to help employees deal with customer problems.

The second component is the technology factors which consist of three factors, namely customer data quality, customer-information processing, and integration of CRM. Customer data quality is operationalized as the degree to how helpful it is for increasing the ability of the hotel to target customer for long term with more probability of getting interested about the hotel's offerings, communicate varied messages to different customers, and to offer insights into product distribution channel (Bose & Chong, 2003). Customer-information processing is operationalized by four dimensions of acquisition/generation, analysis, interpretation, and storage of customer information. Integration of CRM is operationalized by two dimensions, namely, integration functions (sales, marketing, and service and analysis support) and integration data components which include front-office applications that support sales, marketing, and service and analysis support, and back-office applications that help integrate and analyze the data (Greenberg, 2001). Sales support will permit management of sales lead and provide competitor and customer information to the sales force and manage sales through multiple channels by tracking product availability (Jaychandran *et al.*, 2005). Marketing support includes market planning, execution of campaigns, and measurement of campaign performance (Desai *et al.*, 2007). Service support helps customers serve themselves by providing ready access to

a knowledge-base of solutions (Desai *et al.*, 2007). These front-office or customer interaction solutions will be supported by a customer data repository and software that will help integrate and analyze the data (Jaychandran *et al.*, 2005).

Table 3.1 below summarizes the variables, their dimensions and the total number of items.

Table 3.1
Summary of Variables, Dimensions and Total Number of Items

Variable	Dimensions	Total number of items
CRM performance	<ul style="list-style-type: none"> • Key customer focus • Organizing around CRM • Knowledge management • Technology-based CRM 	19
Top management	<ul style="list-style-type: none"> • Top management support • Top management commitment 	8
Customer-information processing	<ul style="list-style-type: none"> • Information acquisition • Information storage • Information analysis • Information interpretation 	8
Customer data	<ul style="list-style-type: none"> • Quality data and reporting 	8
Training orientation	<ul style="list-style-type: none"> • Describes employee training activities, behaviors, and/or philosophy 	10
Integration of CRM	<ul style="list-style-type: none"> • Integration of functions • Integration of data 	20
Customer orientation	<ul style="list-style-type: none"> • Understanding customers' needs, preferences, emphasizing customer retention and past/current behaviors 	9
Organizational performance	<ul style="list-style-type: none"> • Sales growth • Return on investment (ROI) • Market share • Return on sales (ROS) 	4

3.4 Questionnaire Design (Measurement)

With the exception of the demographic variables, all other variables included in this research were measured using multiple items drawn from previous research. However, phrasing of the items was modified to suit the sample and local setting. To ensure consistency among variables and avoid confusion among respondents, all items were measured using a five-point Likert scale, which is appropriate for marketing research as it allows the respondents to be exposed to attitudinal questions in varying degrees, describing the dimensions being studied (Aaker & Kuma, 2000).

3.4.1 Organizational Performance

Organizational performance is considered a construct with multiple dimensions. Based on organization theory, organizational performance can be divided into both effectiveness and efficiency (Chang *et al.*, 2009). The impacts or net benefits of information systems on organizational performance have not yet been addressed adequately by research (DeLone & McLean, 2003; Jayachandran *et al.*, 2005).

To measure financial performance, each manager (respondent) was asked to assess his/her organization's current performance in the Jordanian market (hotels Jordan) relative to its major/close competitors with respect to four items: sales growth, return on investment (ROI), market share, and return on sales (ROS) (Sin *et al.*, 2005a, b). Responses were made on a five-point Likert scale, ranging from '1' "far below expectation," '2' "below expectation," '3' "as expected," '4' "above expectation," and '5' "far above expectation" (Jaakkola *et al.*, 2009). The reported

alpha values in the previous study for financial performance is 0.93 (Kim, 2004).

Table 3.2 below shows the items used to measure financial performance.

Table 3.2
Organizational Performance Measures

Items
1. Our sales growth compared to hotel's competitors.
2. Our return on investment (ROI) compared to hotel's competitors
3. Our market share compared to hotel's competitors
4. Our return on sales (ROS) compared to hotel's competitors

Source: Adopted from Sin *et al.* (2005a, 2005b).

3.4.2 CRM Performance

The identification of CRM's four dimensions originated from the synthesis of relevant marketing, management and IT literature. The required managerial and organization infrastructural elements supporting CRM effort has been highlighted by the management literature through specific design choices. According to the findings of the CRM literature, CRM performance general encompasses four particular continuous dimensions: (1) key customer focus, (2) CRM organization, (3) knowledge management, and (4) Technology-based CRM (Stefanou *et al.*, 2003; Sin *et al.*, 2005a; Yim *et al.*, 2005; Yueh *et al.*, 2010). In addition, the components of CRM performance were entirely adopted from the founding developers of the scale i.e. Sin *et al.* (2005a) who first stated that CRM performance is a multi-dimensional construct comprising four general behavioral components namely, Key Customer Focus, CRM Organization, Knowledge Management and Technology-based CRM. A

reliable and effective measuring scale was developed for the present study for the measurement of the dimensions of CRM performance. To this end, Akroush *et al.* (2011) conducted an examination regarding the generalizability of the CRM scale which was developed by Sin *et al.* (2005a). They also examined the relationship between CRM components and business performance in the financial service organizations in Jordan. They found that the CRM performance scale by Sin *et al.* (2005a) can be generalized to the context of Jordanian financial service organizations. The results indicated a positive and significant relationship between CRM components and financial service organization business performance consisting of both financial and marketing performances. In addition, CRM organization and CRM technology-based are the most effective predictors of differences in financial service organization's business performance.

3.4.2.1 Key Customer Focus

The main theme in the Key Customer Focus component of the CRM construct is adherence to the needs of selected key customers, through providing personalized/customized products and/or services that meet such needs and expectations (Sin *et al.*, 2005a). In this research, the instrument developed by Sin *et al.* (2005a), Yim *et al.* (2005), and Yueh *et al.* (2010) was used to measure key customer focus in the hotel industry. The instrument has four items measured on a five-point Likert scale ranging from '1' "very low." to '5' "very high." The reported alpha values in the previous study for the Key Customer Focus is 0.84 (Akroush *et al.*, 2011). The four item measurement is shown in the Table 3.3.

Table 3.3
Key Customer Focus Measures

Items
1. Through ongoing dialogue, we work with individual key customers to customize our offerings.
2. We provide customized services and products to our key customers.
3. We make an effort to find out what our key customer needs.
4. When we find that customers would like to modify services offered, the departments involved make coordinated efforts to do so.

Source: Adopted from Sin *et al.* (2005a).

3.4.2.2 CRM Organization

The goal of CRM in an organization is to inculcate and practice the values of customer relations that fulfill the customers' needs in the organizational culture. This inculcation can be carried out in different ways. For instance, management can design a team-based structure supported by a high-level of coordination and integration among various sections of the organization, with the sole aim of improving value-creation and customer relations (Akroush *et al.*, 2011). A total of five items were used to measure managers' views and understanding about CRM organization. These items were obtained from Sin *et al.*'s (2005a) study and measured on a five-point Likert scale ranging from '1' "very low." to '5' "very high.". Akroush *et al.* (2011) tested the instrument on Jordanian financial service organizations and found its reliability coefficient to be 0.96. Table 3.4 exhibits the five items of CRM organization scale.

Table 3.4
CRM Organization Measures

Items
1. We have expertise and resources to run the CRM.
2. Our training programs are designed to develop skills for acquiring and deepening customer relationships.
3. We have established clear business goals related to customer acquisition, development, retention, and reactivation.
4. Our employee performance is measured and rewarded based on meeting customer needs and on successfully service to the customer.
5. Our hotel structure is designed around our customers.

Source: Adopted from Sin *et al.* (2005a).

3.4.2.3 Knowledge Management

The basic function of Knowledge Management according to the knowledge-based view of the firm comprises knowledge creation and knowledge utilization (Grant, 1996). Both functions are strongly linked to CRM since they have their basis on acquiring and analyzing information culled from customers and transforming this information into useful knowledge that can be utilized to enhance business performance. In addition, these functions generally interlink with knowledge learning and knowledge generation (Sin *et al.*, 2005a; Stefanou *et al.*, 2003), knowledge dissemination and sharing (Schulz, 2001; Sin *et al.*, 2005a), and knowledge responsiveness (Kohli & Jaworski, 1990; Sin *et al.*, 2005a). These functions can facilitate an informed service to customers that are readily available, responsive, and based on well-utilized customer-specific knowledge (Jaworski & Kohli, 1993).

In this research, knowledge management was measured using an instrument developed by Sin *et al.* (2005a) and Yim *et al.* (2005) and measured on a five-point

Likert scale, ranging from ‘1’ “very low.” to ‘5’ “very high.”. Akroush *et al.* (2011) found the reliability coefficient of the instrument to be 0.96 in the Jordanian financial service organizations. Table 3.5 exhibits the five items of knowledge management scale.

Table 3.5
Knowledge Management Measures

Items
1. Our employees are willing to help customers in a responsive manner.
2. Our customers can expect exactly the level of services.
3. We understand the needs of our key customers via knowledge learning.
4. We provide channels to enable ongoing, two-way communication with our key customers and us.
5. Our customers can expect prompt service from employees of our hotel.

Source: Adopted from Sin *et al.* (2005a).

3.4.2.4 Technology-based CRM

In this research, the instrument developed by Sin *et al.* (2005a), Yim *et al.* (2005a), and Yueh *et al.* (2010) was used to measure technology-based CRM. The instrument has five items measured on a five-point Likert scale, ranging from “1” “very low.” to “5” “very high.”. Akroush *et al.* (2011) found its reliability coefficient to be 0.83 in the Jordanian financial service organizations. The five items measurement is shown in Table 3.6.

Table 3.6
Technology-based CRM Measures

Items
1. We have the right technical personnel to provide technical support for the utilization of computer technology in building customer relationships.
2. We have the right software to serve our customers.
3. We have the right hardware to serve our customers.
4. Our customer information is available at every point of contact.
5. We maintain a comprehensive database of our customers.

Source: Adopted from Sin *et al.* (2005a).

3.4.3 Top Management

Kennedy *et al.* (2006) argue that top management is a strong key success factor behind CRM performance in any organization. Top management is measured by eight items in the present study: (a) four items that measure the extent top management promotes the efforts of the CRM implementation, developed by Croteau and Li (2003), and (b) four items that measure top management commitment, which refers to the development and implementation of the CRM success and the continuous effectiveness by motivating the employees to live the CRM vision, intensively communicating the CRM vision internally and externally in the hotel, informing the employees regularly about high customer orientation, conducting management reviews, and managing a large degree of the availability of resources in CRM implementation (Becker *et al.*, 2009). Top management commitment was measured using an instrument developed by Becker *et al.* (2009). All items were measured on a five-point Likert scale, ranging from ‘1’ “strongly disagree” to ‘5’ “strongly agree.” The previous alpha score for this variable was reported at 0.95 (Becker *et al.*, 2009). Table 3.7 shows the items used to measure top management.

Table 3.7
Top Management Measures

Items
1. Top management frequently discusses CRM with the staff involved.
2. CRM is regarded a high priority by top management.
3. Our top management regularly is involved throughout the CRM project.
4. Our top management perceives CRM to be part of the organization's vision.
5. Our top management informs the employees regularly about the importance of customers.
6. Top management motivates the employees to achieve the CRM objectives.
7. Top management is involved to a large degree in CRM implementation and entrusted with it.
8. Top management intensively communicates the importance of CRM internally and externally.

Source: Adopted from Croteau and Li (2003), and Becker *et al.* (2009).

3.4.4 Customer Orientation

Customer orientation was measured by nine items adapted from Narver and Slater (1990). This measurement scale has been used extensively and validated in different research settings (Eid, 2007; Jayachandran *et al.*, 2005; Kim, 2008; Narver & Slater 1990). Respondents were asked to evaluate activities and behaviors of their hotel customers in order to understand their needs and preferences, and consider customer retention and past/current behaviors that might facilitate creating customer value. The instrument has nine items measured on a five-point Likert scale, ranging from ‘1’ “strongly disagree” to ‘5’ “strongly agree.” Kim (2009) reported the reliability of this measurement at 0.93. Nor Azila and Azli (2005) indicated a reliability coefficient of 0.79 in their study. The items measuring customer orientation is shown in Table 3.8.

Table 3.8
Customer Orientation Measures

Items
1. We strive to improve value we provide to our customers.
2. Customer satisfaction is an important business objective.
3. We attempt to understand customer needs.
4. We measure customer satisfaction.
5. We pay close attention to customer service.
6. In our hotels, retaining customers is considered to be a top priority.
7. Our employees are encouraged to focus on customer relationships.
8. In our hotels, customer relationships are considered to be a valuable asset.
9. Our senior management emphasizes the importance of customer relationships

Source: Adopted from Kim (2008).

3.4.5 Training Orientation

Ten items were used to measure training orientation, which refers to the degree to which hotel firms are engaged in employee training. Respondents were asked to evaluate and describe employee training activities, behaviors, and/or philosophy on how they meet diverse customer demands on product and service quality and create customer value. Items capturing the dimension of training orientation were adapted from previous studies (e.g. Kim, 2008; Piercy, 1995). The items were measured on a five-point-Likert scale, ranging from ‘1’ “strongly disagree” to ‘5’ “strongly agree.” The previous alpha score reported for this instrument was 0.91 (Kim, 2009). Table 3.9 shows the items used to measure training orientation.

Table 3.9
Training Orientation Measures

Items
1. Our training helps employees understand customer needs.
2. Our training facilitates interpersonal skill training to build customer relationships.
3. Our training helps develop employee's technical skills to provide quality products/ services for our customers.
4. Our training evaluates improved employee performance after training.
5. Our hotel schedules new employee training in a timely manner.
6. Our training helps improve employee's team building skills to enhance hotel operations.
7. Our training facilitates learning to promote the quality of our products/services.
8. We recognize employee career development opportunities.
9. Our training facilitates employee's learning of effective ways to address customer complaints.
10. We provide our employees with the necessary training manual.

Source: Adopted from Kim (2008).

3.4.6 Customer Data

Customer data was measured by eight items. Customer data was measured in such a way that clarifies how helpful it is for increasing the ability of the hotel to target customer in a long term basis, (with more probability of the customers getting interested about the hotel's offerings), to communicate varied messages to different customers, and to offer insights into product distribution channel (Bose & Chong, 2003). All items in this scale were developed from Bose and Chon (2003) study. The items were measured on a five-point Likert scale, ranging from '1' "strongly disagree" to '5' "strongly agree." The previous alpha score for this scale was reported at 0.92 (Bose & Chon, 2003). Table 3.10 shows the items used to measure customer data.

Table 3.10
Customer Data Measures

Items
1. The cost of acquiring data within our hotel is reasonable.
2. Data (error rates, defect rates, scrap, defects, etc) are easily available when needed.
3. We can get access to the quality data on time.
4. We use tools to manage quality (cost of quality, defects, errors, scrap, etc.) data up to a certain extent.
5. Quality data are available to hourly employees up to a great extent.
6. Quality data are available to managers and supervisors up to a great extent.
7. Quality data are used to evaluate supervisor and managerial performance to a great extent.
8. Quality data, control charts, etc. are displayed at employee's work stations up to a great extent.

Source: Adopted from Bose and Chon (2003).

3.4.7 Customer-Information Processing

Customer-information processing has four dimensions, and it refers to the extent to which hotel's information is constructed. It consists of consequential activities, practices and behaviors such as acquisition/generation, analysis, interpretation, and storage of customer information. Eight items relating to customer-information processing were used to measure the extent to which hotel firms were involved in information processing activities and behaviors. The measurement scales were adapted from the study of Kim *et al.* (2008). The original scales were developed by Jayachandran *et al.* (2005). The instrument has eight items measured on a five-point Likert scale, ranging from '1' "strongly disagree" to '5' "strongly agree." The previous alpha score for the scales was reported at 0.98 (Kim, 2008). Table 3.11 shows the items used to measure customer-information processing.

Table 3.11
Customer-Information Processing Measures

Items
1. We gather customer-related data.
2. We maintain a customer data base.
3. We store data extracted from operational data.
4. We use customer database information to develop attractive offerings.
5. We offer loyalty program to reward repeat customers.
6. We monitor customer satisfaction.
7. We make use of customer satisfaction feedback studies to change offerings.
8. We extract useful knowledge from large customer data sets.

Source: Adopted from Kim (2008).

3.4.8 Integration of CRM

In this research, the instrument developed by Han, Kim and Srivastavas (1998), and Jayachandran *et al.* (2005) was used. Twenty items relating to integration of CRM were used to measure the extent to which hotel firms integrate CRM. CRM integration has two dimensional measures:(a) function integration (which includes sales support, marketing support, customer service support, data analysis support), and (b) data integration and access support. Respondents were asked to mark from a list of CRM technology applications those that are utilized in their respective organizations. All questions were adapted from Jayachandran *et al.* (2005). The previous alpha score for this variable was reported at 0.81 (Kim, 2008). Table 3.12 shows the items used to measure integration of CRM.

Table 3.12
Integration of CRM Measures

Items
1. We provide our sales force with adequate customer information.
2. We provide our sales force in the field with competitor information.
3. We assign prospects to appropriate sales personnel.
4. We provide customized offers to sales people on field.
5. We provide our sales force with information for cross-selling.
6. We track product availability and facilitate inventory management.
7. We control sales through multiple sales channels.
8. We support marketing planning and budgeting.
9. We help marketing department analyze responses to marketing campaigns.
10. We provide automated routine activities such as providing promotional literature.
11. We facilitate management of marketing promotions.
12. We assist marketing department in generating customized offers.
13. We assist marketing department in customizing our communication to customers.
14. We allow customer support personnel to access data on customer interactions with all functional areas.
15. We provide customers access to a knowledge base of solutions to commonly occurring problems (e.g. frequently asked questions).
16. We regularly schedule and track service delivery.
17. We emphasize customizing service scripts to a particular customer's need.
18. Data consists of customer's transaction data and external source data.
19. Our customer information is integrated from different contact points (e.g. mail, telephone, Web, fax).
20. We allow relevant employees to access unified consumer data.

Source: Adopted from Jayachandran *et al.* (2005)

3.4.9 Profile of the Hotels

Information of the hotel's profile captured in this study comprised of annual income, number of employees, years of operation, and rating of hotels. For questions regarding these items, respondents were required to check the appropriate answers.

3.4.10 Reasons for not Using CRM

With a view to assess the underlying reasons for not using CRM, respondents were asked to rank the probable challenges or barriers, as they were applied to tourism sector. Twelve items were used to measure the reasons for not using CRM. Items capturing the dimension of not using CRM were adopted from the study of O'zgener and I'raz (2006). The instrument comprises 12 items measured on a categorical scale of '1' "yes" to '2' "no." Table 3.14 below shows the items.

Table 3.14
Reasons for not Using CRM

Items
1. Inadequate supporting budgets.
2. Lack of senior management commitment to CRM.
3. Poor communication.
4. An absence of customer management skills.
5. Inefficiencies in business process.
6. Lack of end-user input at service stage.
7. A lack of standardization.
8. Inter-departmental conflicts.
9. Lack of cultural readiness.
10. Poor quality customer data and information.
11. Limited or no input from the customers' perspective on CRM.

Source: Adopted from O'zgener and I'raz (2006).

3.4.11 CRM Tools

In this study, the tools of CRM strategies provided by Little and Marandi (2003) were applied to tourism sector. Respondents were required to choose the best response regarding CRM use in their hotels. The instrument comprises ten items measured on a categorical scale of ‘1’ “use” to ‘2’ “not use.” Table 3.13 below shows the items used to measure CRM tools.

Table 3.13
CRM Tools

Items
1. E-CRM (interaction with of your customer via internet).
2. CRM system software (e.g. Siebei, SAP, Oracle).
3. Mobile CRM (interactive communication with customer using a mobile device).
4. Call centers.
5. Voice response systems (computer system that responds to voice commands).
6. Smart cards: (e.g.: Loyalty card)
7. Sales force.
8. Customer service: personal is an after-sales activity to satisfy customers
9. Point of sale terminals: interaction with your customer via electronic payment device.
10. Telephone contact.

Source: Adopted from Little and Marandi (2003).

A summary of the measures of the variables in this study are summarized in

Table 3.15.

Table 3.15
Summary of the Variable Measures

Variables	Scale	No. of items	Sources
Organizational performance	Likert scale 1-5	4	Sin <i>et al.</i> (2005a, 2005b)
CRM performance	Likert scale 1-5	19	Sin <i>et al.</i> (2005a)
Top management	Likert scale 1-5	8	Becker <i>et al.</i> (2009); Croteau and Li (2003)
Customer orientation	Likert scale 1-5	9	Kim (2008)
Employee training	Likert scale 1-5	10	Kim (2008)
Customer data	Likert scale 1-5	8	Bose and Chong (2003)
Customer-information processing	Likert scale 1-5	8	Kim (2008)
Integration of CRM	Likert scale 1-5	20	Jaychandran <i>et al.</i> (2005)
Reasons for not using CRM	Nominal scale 1-2	11	Ozgener and Iraz (2006)
CRM Tools	Nominal scale 1-2	10	Little and Marandi (2003)
Hotel's profile	Open ended		Self-constructed measure

3.5 Study Population and Sample

The population of this study comprises hotels of various ratings located in Jordan. The Jordanian Ministry of Tourism and Antiquities (2010) divides the hotels into five categories using a formula that takes into account factors such as facilities and average daily rate (ADR). These categories are: one star, two star, three star, four star and five star hotels (Jordan Tourism and Antiquities, 2010). This categorization is supported by significant differences in the ADR and the number of employees per room. Based on the information gathered from the Jordanian Ministry of Tourism and Antiquities, there are 220 hotels currently operating in Jordan? These hotels vary from five stars to one star.

We followed the key-informant methodology in this work, choosing the hotel managers as informants, consistent with previous studies (Adam *et al.*, 2010). Questionnaires were sent directly to general managers or similar level senior managers at each hotel selected for the study. These senior-level respondents were deemed to be highly knowledgeable about CRM implementation and practice within their company as indicated by their ability to effectively answer virtually all questions (Yam *et al.*, 2005; Smith & Chang, 2010).

The reason for choosing the hotel industry was that CRM is extremely important in the tourism sector, particularly in hotels owing to the importance of customer relations involved. Moreover, various authors see this sector as an ideal place to exploit the strategic advantages that CRM offers (Moreno & Melendez, 2011; Piccoli, *et al.*, 2003; Smith & Chang, 2010). Hotels also have sufficient resources to be mobilized for managing the profitability of customers more formally (Adam *et al.*, 2010).

Given the nature of the study, a probability (proportionate stratified) sampling was chosen. To obtain a representative cross-section of the population, the sample was drawn from a wide range of schemes of study (Sekaran, 2010). The proportionate stratified sampling design used in this study most suitably represents and facilitates generalization compared to non-probability method of sampling (Sekaran, 2010). The stratified sampling used in the present was based on the category of hotels. Such sampling technique is consistent with other studies conducted in the hotel industry (Adam *et al.*, 2010).

To determine the sample size, we used the rule of thumb by Roscoe (1975, as cited in Sekaran (2010) by multiplying the number of variables by 10. The present study has eight variables. Following this rule, the minimum sample size required was 80. However, to ensure this minimal response number and taking into account that a survey method has poor response rate (Hair *et al.*, 2007), we distributed 200 questionnaires to selected hotels.

3.6 Data Collection Procedure

As mentioned earlier, data was collected by self-report questionnaire from the selected hotels in Jordan. Data from the Jordan Hotel Association showed that in 2010, there were 220 hotels. The number of hotels for each category can be divided as shown in Table 3.16. Stratified sampling was chosen to select a sample of hotels due to time and financial constraints faced by the researcher. Furthermore, such sampling technique was comparable to previous studies conducted in a hotel industry (Adam *et al.*, 2010). Table 3.16 also shows the number of each hotel category based on stratified sampling.

Table 3.16
Number of Selected Hotels in each Category

Hotel Classification	Number of Population	Number of Sample
Five stars	25	23
Four stars	24	22
Three stars	52	47
Two stars	59	54
One star	60	54
Total	220	200

Source: Jordan Hotel Association (2010).

Once sample size was identified using stratified sampling, the next procedure involved the selection of hotels by different categories. For each category, a simple random sample technique was used to select the hotels.

Once the sample was chosen, the next procedure involved the distribution of the questionnaires. Questionnaires were distributed to the respondents by mail and personal distribution. Accompanying the questionnaire was a cover letter from the researcher requesting a prompt response and research contract promising complete anonymity. The respondents were given one week to complete the questionnaires and those who did not respond were followed up by sending letters of reminders to them. A total of two weeks were spent to obtain the responses. To differentiate the responses, the hotel classification was written above the questionnaire cover.

The researcher did a follow up on those who did not return the questionnaires on the time by calling and emailing them. When it was evident that the respondents could not submit the questionnaire within a specific time period, they were given an

additional week to accomplish the task; nevertheless, the extension did not work out as expected.

3.7 Pilot Study

Before deciding on the actual instrument to be utilized in this study, a pilot study was conducted using a convenient sample of 30 managers from Jordanian hotels. The researcher sat with the respondents while they were completing the questionnaires to identify difficulties in understanding the questions and check on the ease of completion. Each respondent took approximately 20 minutes to complete the entire questionnaire. As expected, there was some confusion on the sentences in the questionnaire. Based on the feedback gathered in the pilot test, the questions were further improved to facilitate completion of the final version of the questionnaires. For example, some vague sentences were noted and corrected. The final version of the questionnaire can be seen in the appendix.

The reliability test for each instrument was calculated using the pilot study data. One of the selection criteria of past instruments was internal consistency of the scales. This can be checked by considering Cronbach's alpha reliability coefficients. The result of the measures of the pilot study is shown in Table 3.17. The reliability estimates range from .84 to .94 and this is generally considered sufficient for research purposes (Nunally, 1978). This means that the scales can be regarded as relatively reliable.

Table 3.17
Reliability Coefficient for Multiple Items in Pilot Study (n=30)

Variables	Alpha (α)
Organizational performance	.94
Key customer focus	.85
CRM organization	.84
Knowledge management	.89
Technology-based CRM	.91
Top management	.91
Customer orientation	.88
Training orientation	.86
Customer data	.94
Customer-information processing	.89
Integration of CRM	.88

3.8 Data Analysis

For the purpose of data analysis and hypotheses testing, several statistical tools and methods were employed with the help of SPSS software, version 19. These include factor and reliability analyses to test the goodness of measures, descriptive statistics to describe the characteristics of the respondents, test of differences to test non-response bias and to compare the customer relationship management performance by the respondents with different hotel profiles, correlation analysis to describe the relationship between variables, and regression analysis to test the influence of organizational and technology factors on customer relationship management performance, and the impact of CRM performance on organizational performance.

3.8.1 Factor and Reliability Analyses

One important step in data analysis is to understand the dimension of the variables in the proposed model or relationships in an empirical research (Hair *et al.*,2010). Toward this end, factor analysis was conducted to identify the structure of inter-relationships (correlations) among a large number of items. This was done by defining common underlying dimensions, known as factors (Hair *et al.*, 2010). In the present study, the cut-off point chosen for significant factor loading was .55, as suggested by Hair *et al.* (2010) for a sample of between 80 and 100. In a similar vein, the criterion used by Pallant (2007) to identify and interpret factors is that each item should load .50 or greater on one factor and .35 or lower on the other factors.

Several authors (e.g. Han, Kim & Srivastava, 1998; Hair *et al.*, 2010) recommend factor analysis to be conducted for the purpose of testing convergent and discriminant validity of the constructs. If the item is related with other items measuring the same constructs (factor loading), then the construct can be said to possess convergent validity. If the items in the construct differ from the items that measure different constructs (cross loading), then discriminant validity is ensured.

In assessing the appropriateness of factor analysis, Hair *et al.* (2010) suggest that as a general rule, the minimum sample size should be at least five times as many observations as there are variables to be analyzed. The more acceptable size would have a ten-to-one ratio. The present study comprises eight variables, and therefore, the minimum sample size needed was 80 (8 X 10 variables) or preferably 80 observations (10 X 10 variables).

Another test to determine the appropriateness of factor analysis is the Barlett's test of sphericity, which examines the presence of sufficient number of significant correlations among the variables. It provides the statistical probability that the correlation matrix has significant correlations among at least some of the variables (Hair *et al.*, 2010). In addition, the measure of sampling adequacy (MSA) was examined to quantify the degree of correlations among the variables and the appropriateness of factor analysis. Hair *et al.* (2010) indicate that the measure can be interpreted with the following guidelines: .80 or above, meritorious; .70 or above, middling; .60 or above, mediocre; .50 or above, miserable; and below .50, unacceptable. In the present study, the MSA value for each variable was first examined and those values falling to the unacceptable range were excluded. Once the individual variables achieved an acceptable level, then the overall MSA was evaluated before decision on continuance of the factor analysis was made.

To test the internal consistency of the measurement, reliability analysis was conducted on the factors extracted using the recommendation from Nunally (1978). In general, the closer the reliability coefficient gets to 1.0, the better it would be. Sekaran (2010) notes that reliability less than .60 is considered poor, those in the .70 range are acceptable, and those over .80 are good. However, for the purpose of the present study, a minimum reliability (Cronbach's alpha) value of .60 was set, which is the threshold recommended by Nunally (1978) for exploratory research.

3.8.2 Descriptive Statistics

To acquire a feel of the data, descriptive statistics (mean values and standard deviations) for all the variables of interest were obtained. The purpose of descriptive analysis was to present raw data into a transformed form that will make them easy to understand and interpret.

3.8.3 Test of Differences

One way analysis of variance (ANOVA) was employed to examine whether there exists any difference in the degree of customer relationship management performance performed by hotel variables with more than two categories (that is annual income, number of operation in years, number of employee, and categories of hotels). As ANOVA test assumes equal variances, the Levene's test for homogeneity of variance was first examined in order to ensure that the assumptions of homogeneity of variance were not violated.

3.8.4 Correlation Analysis

Pearson correlation was used to describe the strength and direction of the relationship between two variables. In this study, the relationships between organizational factors and technology factors on customer relationship management performance and the impact on CRM performance and organizational performance were examined using this analysis. A positive correlation indicates that as one variable increases, so do the others. A negative correlation indicates that as one variable increases, the other decreases. A perfect correlation of 1 or -1 indicates that the value of one variable can

be determined exactly by knowing the value of the other variable. On the other hand, a correlation of 0 indicates no relationship between the two variables.

3.8.5 Multiple Regressions

Multiple regressions analysis can be conducted by three different methods: standard regressions or simultaneous regression, hierarchical regression and stepwise regression (Tabachnick & Fidell, 2001). Since all independent variables are assumed to have an equal importance and potentially equal interest, standard regressions have been used in this study. Multiple regression is a more sophisticated extension of correlation and is used to explore the predictive ability of a set of independent variables on one dependent variable (Pallant, 2001). For this study, the multiple regression analysis (slandered regression) issued to test the hypotheses. The test would determine the extent of the interactive effects of independent variables on dependent variable.

Before proceeding with the analysis, basic assumption of the linearity (representing the degree to which the change in the dependent variable is associated with the independent variable), normality of the error terms distribution and homoscedasticity (constant variance of the error terms) was first examined.

Due the similarity between the multiple regressions and pearson's, the regressions were considered as a powerful tool for describing the nature of the relationship between variables. In addition to that, regression is also necessary for making prediction of likely values of independent variables. Furthermore, since multiple regressions is very sensitive to outliers, that is standardized residual value

more than 3.3 or less than -3.3 (Pallant, 2001), it was detected by case wise diagnostics in the regression analysis in SPSS package version 19.

3.8.6 Multicollinearity Diagnostics

Before the regression results could be considered valid, the degree of multicollinearity and its effect on the results was examined. The variance inflation factors (VIF) and the condition indices for all variables were examined.

Before proceeding with the regression analysis, the predictor variables were checked for the presence of multicollinearity. Nevertheless, multicollinearity exists when the independent variables are too highly correlated with other independent variables (Hair *et al.*, 2007). The variance inflation factors (VIF) method are used to detect for the severity of multicollinearity and to ensure there is no serious problem that may weaken the accuracy and stability of the models parameter estimates. Generally, VIF measure how much the variance of the estimated regression coefficients are inflated as compared to when independent variables are linearity related.

According to Hair *et al.* (2007), acceptable values for collinearity are considered from the tolerance value of more than 0.1 or the VIFs value of less than 10.00 to indicate little or no multicollinearity. Furthermore, a maximum VIFs value when excess of 10.00 is often taken as indication that multicollinearity may influence the least squares estimates. Accordingly, large VIFs value and small tolerance values will reveal the problem of correlation items probably are redundant.

3.9 Chapter Summary

This chapter has provided a detailed discussion on how the study was actually carried out. Amongst others, this chapter has elaborated the study's research design, operationalization of variables, hotel profile, CRM tools, reasons for not using CRM, population and sample of the study, as well as data collection procedures. This chapter ends with a description of the data analysis and the rationale for the statistical techniques used to analyze the data.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the result of data analysis. Firstly, this chapter describes an overview of data collection. Secondly, it presents a profile of the respondents. It is then followed by an analysis on goodness of measures to test the validity and reliability of the variables. Finally, the results of hypotheses testing are presented.

4.2 Response Rate

To collect the data, 200 questionnaires were distributed to hotels in Jordan. Out of these, 141 were returned of which 10 were excluded because they were incomplete (missing responses). Thus, a total of 131 completed questionnaires were used for empirical analysis, giving a response rate of 66 percent. Out of 131, only 98 respondents were CRM users while the remaining 33 indicated that there were not utilizing CRM in their daily operations. Therefore, the latter group of respondents was not considered for further analysis. But to gauge the underlying reasons for not adopting CRM, a descriptive analysis was carried out on the 33 respondents. The 98 CRM users were considered as the sample for this study and used for subsequent analysis. The sample size appears to be adequate and the response rate obtained was comparable to several studies on CRM implementation in hotels that reported a response rate of 69.81% (Eid, 2007) and 44% (Aydin & Ozer, 2004).

4.3 Profile of the Hotels

Table 4.1 shows the background information of the responding hotels. In terms of the hotels' annual income, it was found that the majority of the participating hotels (41.9%) reported an annual income that fell in the range of US\$ 19,999, whereas 25% reported to have a volume between US\$ 60,000 and US\$ 100,000, while 20.6% a volume between US\$ 20,000 and US\$ 59,999. A minority of the participating hotels fell under the category of above US\$ 100,000 revenue range.

In terms of the number of hotel employees, it was found that the majority of the participating hotels (51%) reported to employ between 1 and 19 employees, whereas 38% had 20 to 99 employees, and 8% had between 100 and 500 employees. A minority of the participating hotels employed above 500 employees. But the majority of the participating hotels (89%) have between 1 and 100 employees. In general, it can be said that the hotels in Jordan are small- and medium-sized.

With regard to the number of years in operation, it was found that slightly more than one-third of the participating hotels (36%) were in operation for 11-20 years. Fourteen percent of hotels were operating for 1-10 years. Those operating above 40 years occupy the least proportion of 4.6% only. Majority (63%) of the participating hotels had less than 20 years of operating experience. In general, hotels in Jordanian hotel industry are relatively young in their operation.

With respect to hotel categories, 30.5% were one-star hotels, 29% two-star hotels, 24.5% belonged to the three-star category, 8.5% to the five-star category while 7.5% to the four-star category.

The results of the descriptive analysis are depicted Table 4.1.

Table 4.1
Background Information of the Responding Hotels (n=98)

Variable	Categories	N	%
Annual income (US\$)	1,000-19,999	55	41.9
	20,000-59,999	33	25
	60,000-100,000	27	20.6
	Above 100,000	16	12.5
Number of employees	1-19	67	51
	20-99	50	38
	100-500	11	8
	Above 500	4	3
Years of operation	1-10	25	19
	11-20	48	36.8
	21-30	26	19.8
	31-40	26	19.8
	Above 40	6	4.6
Hotel category	One star	40	30.5
	Tow star	38	29
	Three star	32	24.5
	Four star	10	7.5
	Five star	11	8.5
Total		131	100

4.4 Reasons of not Using CRM

Thirty three respondents who did not use CRM were asked to provide reasons for non-utilization of CRM. Table 4.2 shows the result. Among the reasons given are: limited or no input from the customers' perspective on CRM (81.8%), poor quality of customer data and information (63.6%), inadequate supporting budget (60.6%), lack of senior management commitment to CRM (54.5%), absence of customer management skills (51.1%), lack of cultural readiness (48.5%), and lack of end-user input at service stage (45.5%).

Table 4.2
Reasons for not Using CRM

Reasons	Frequency	%
1. Limited or no input from the customers' perspective on CRM.	27	81.8
2. Poor quality customer data and information.	21	63.6
3. Inadequate supporting budget.	20	60.6
4. Lack of senior management commitment to CRM.	18	54.5
5. Absence of customer management skills.	17	51.5
6. Lack of cultural readiness.	16	48.5
7. Lack of end-user input at service stage.	15	45.5
8. Poor communication.	14	42.4
9. Inefficiencies in business process.	11	33.3
10. Inter-departmental conflicts.	10	30.3
11. Lack of standardization.	9	27.3

4.5 CRM Tools

Table 4.3 shows the CRM tools used by 98 participating hotels by category. Among five-star hotels, the most common tools used was call centers (90.9%), followed by sales force (90.9%), customer service (90.9%), telephone contacts(90.9%), E-CRM (81.8%), mobile CRM (81.8%), smart cards (72.7%), and CRM system software (72.7%).

Among four-star hotels, the most common tools used was call centers (90%), telephone contacts(90%), customer service (90%), mobile CRM (80%), sales force (80%), e-CRM (70%), CRM system software (70%),and smart cards (70%). Among

three-star hotels, the highest percentage of tools used is customer service (91.7%), followed by telephone contacts (91.7%), sales force (75%), call centers (66.7%), mobile CRM (62.5%), and e-CRM (62.5%). Amongst two-star hotels, the most common tools used were telephone contacts (92.3%), sales force (65.4%), and customer service (65.4%). Amongst one-star hotels, 88.9% used telephone contacts, customer service (70%), and sales force (55.4%).

Table 4.3
CRM Tools

CRM tools																					
Hotel type	Total	E-CRM		CRM system software		Mobile CRM		call centers		Voice response systems		Smart cards		Sales Force		Customer Service		Point of sale terminals		Telephone contact	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Five stars	11	9	81.8	8	72.7	9	81.8	10	90.9	6	54.5	8	72.7	10	90.9	10	90.9	5	45.5	1	90.9
Four stars	10	7	70	7	70	8	80	9	90	5	50	7	70	8	80	9	90	4	40	9	90
Three stars	24	15	62.5	13	54.2	15	62.5	16	66.7	5	20.8	13	54.2	18	75	22	91.7	23	20	2	91.7
Two stars	26	10	38.5	8	30.8	15	57.7	12	46.2	2	7.7	11	42.3	17	65.4	17	65.4	00	00	2	92.3
One star	27	9	33.3	7	25.9	15	55.6	13	48.1	1	3.7	12	44.4	15	55.6	19	70.4	00	00	2	88.9

* Respondents were asked to tick all the related tools used.

4.6 Goodness of Measures

4.6.1 Construct Validity

Construct validity demonstrates the extent the constructs hypothetically relate to one another to measure a concept based on the theories underlying a research (Zikmund, 2000). Reliability refers to the instrument's ability to provide consistent results in repeated uses and an assessment of the degree of consistency between multiple measurements of a variable validity that refers to the degree that the instrument measures (Malhotra, 1999). In this research, factor analysis was conducted to measure the variable and to identify which items were appropriate for each variable.

As mentioned in Chapter 3, even though the borrowed measurements have been confirmed of its discriminate and convergent validity, it is felt necessary to re-examine the validity of these measures. This is because this study was undertaken in the Jordanian context whilst previous studies were done in the West. There are sufficient published literatures on customer relationship management in other countries, particularly in the West, where the environment and culture are entirely different from Jordan's.

In order to ascertain whether the measurements used in this study have construct validity, that is, measure what they are supposed to measure, exploratory factor analysis was conducted on all items measuring the constructs of CRM performance, top management, customer orientation, training orientation, quality customer data, customer-information processing, and integration of CRM.

4.6.2 Result of Exploratory Factor Analysis

Factor analysis was conducted in order to summarize the patterns of correlations among the dimensions and variables and to reduce the large number of variables to a smaller, yet manageable, number of variables (Hair *et al.*, 2010). For factor analysis purposes, the items in the questionnaire were grouped into two components. The first component was customer relationship management performance and organizational performance consisting of items in Section D of the questionnaire. The second component comprises all influencing variables located in Section F and Section G in the questionnaire. Results of the study were analyzed using the Statistical Package for Social Sciences (SPSS) version 19.0 for Windows. Factor analysis was carried out to determine the constructs in combination with the principal components as a method of extraction and Varimax rotation. The results for each factor analysis conducted are summarized in Appendix B-H.

4.6.2.1 Organizational Performance

The factor analysis conducted on organizational performance shows the Kaiser-Meyer-Okin value of .82, exceeding the recommended value of .5 (Hair *et al.*, 1998) or above .6 (Pallant, 2004) and the Barlett's test of sphericity was highly significant ($p = .00$), supporting the factorability of the correlation matrix. Furthermore, a close inspection of the individual MSA value revealed that all the items have values within the acceptable range, which is between .79 and .84 (see Appendix B, p. 282). These indicate that the assumptions of factor analysis were met. Principal component analysis revealed the presence of only one component

with an eigenvalue exceeding one. This factor captured 84.40 percent of the total variance in the items.

As shown in Table 4.4, factor loadings are between .89 and .93. Reliability (Cronbach's alpha) for this factor is .93, which indicates high reliability. Item-to-total correlations revealed that removal of any item would not increase the alpha beyond .93, thus supporting the inclusion of all scale items.

Table 4.4
Factor Analysis on Organizational Performance

Items	Component
1. Our market share compared to hotel's competitors.	.93
2. Our sales growth compared to hotel's competitors.	.92
3. Our return on sales (ROS) compared to hotel's competitors.	.91
4. Our return on investment (ROI) compared to hotel's competitors.	.89
Reliability	.93
Eigenvalue	3.37
Percentage of Variance	84.4
KMO	.82

4.6.2.2 CRM Performance

For CRM performance, factor analysis was conducted based on the 19 questions on customer relationship management performance. These items represented four dimensions.

Further analysis followed the basic guidelines mentioned by Hair *et al.* (1998) i.e. satisfaction of the conditions of having sufficient correlations among the factors (not more than .55), MSA values from anti image matrices (values over .55), KMO and Bartlett's test of sphericity and the component matrices

values reaching the accepted level of factor loading (.55). The exploratory factor analysis was carried out in two steps to attain the optimum number of factors for further analysis.

At the initial stage for all 19 items, the overall value of Kaiser-Meyer-Olkin was found to be .83. A closer inspection of the individual MSA value of all the items revealed that it is within acceptable range, between .62 and .92. Furthermore, the result of the Bartlett's test was highly significant ($p=.00$), which indicates that the assumptions of factor analysis were met. But in the communalities table one item (CRMT3) was below the level of 0.55. So, it was deleted for the next step of factor analysis.

At the second stage for all 18 items, the overall value of Kaiser-Meyer-Olkin was found to be .83. A close inspection of the individual MSA value revealed that all items have values within the acceptable range, which is between .59 and .91. Furthermore, the result of the Bartlett test was highly significant ($p=.00$), which indicates the assumptions of factor analysis were met.

From the output, factor analyses of the CRM performance produced five factors with eigenvalues of more than 1. These five factors captured 64.06 percent of the total variance of the items. However, after Varimax rotation, two factors (factor 2 and 4) were found to have only one item in them, therefore, they were considered unstable (Hair *et al.*, 1998) and eliminated from further consideration. The reliability analysis conducted shows two factors with alpha values below .60 that is, factor 3 ($\alpha = .51$) and factor 5 ($\alpha = .46$). These factors were therefore dropped from subsequent analysis as they had limited use in the regression analysis due to their low reliabilities (Hier, 1998).

There are also quite a number of items that had not loaded on any factors (the items values below .55) (CRMO3, CRMT4, CRMO1, CRM and KCF4). A common practice is to delete these items, which reduces the inconsistent correlations among the factors and consequently, improve the scale reliability (Hair *et al.*, 1998). Therefore, these items were deleted.

As shown in Table 4.5, with one factor remains, the factor loading of the items was between .57 and .82. These loadings were greater than .55, which is the minimum level required for a sample of size 98 (Hair *et al.*, 1998). Reliability (Cronbach's alpha) for this factor is .88, which indicates high reliability. Item-to-total correlations revealed that removal of any item would not increase the alpha beyond .88, thus supporting the inclusion of all scale items. As factor one remains and is dominated by questions related to the extent of CRM performance, it is named as CRM performance.

Table 4.5
Factor and Reliability Analysis on CRM Performance

Items	Component
1. Our customers can expect prompt service from employees of our hotel.	.82
2. We provide channels to enable ongoing, two-way communication with our key customers and us.	.69
3. We have the right technical personnel to provide technical support for the utilization of computer technology in building customer relationships.	.69
4. We understand the needs of our key customers via knowledge learning.	.67
5. Our employees are willing to help customers in a responsive	.66

manner.	
6. Our customers can expect exactly the level of services.	.65

Table 4.5 (continued)

Items	Component
7. We pay close attention to customer service.	.58
8. We maintain a comprehensive database of our customers.	.57
Reliability	.88
Eigen value	34.85
Percentage of Variance	64.06
KMO	.83

4.6.2.3 Factor Analysis on Organizational Factors

The antecedents of CRM performance are made up of two components: the first component that is organization factors were divided into three variables: top management, customer orientation and training orientation.

Further analysis followed the basic guidelines mentioned by Hair *et al.* (1998), which lists satisfying the conditions of having sufficient correlations among the factors (not more than .55), MSA values from anti image matrices (values over .50), KMO and Bartlett's test of sphericity and the component matrices values reaching the accepted level of factor loading (.55). The exploratory factor analysis was carried out in two steps to attain the optimum number of factors for further analysis.

At the initial stage for all 27 items, the overall value of Kaiser-Meyer-Olikin was found to be .81. A close inspection of the individual, MSA value of all the items showed that they are within the acceptable range, between .67 and

.92. Furthermore, the result of the Bartlett's test was highly significant ($p=.00$), which indicates the assumptions of factor analysis were met. But in the communalities table, one item (TM8) was below the level of 0.55. So it was deleted for the next step of factor analysis.

At the second stage for 26 items, the overall value of Kaiser-Meyer-Olkin was found to be .82. A close inspection of the individual MSA value showed that all the 26 items have values within the acceptable range, which is between .71 and .91. Furthermore, the result of the Bartlett test was highly significant ($p=.00$), which indicates the assumptions of factor analysis were met.

From the output, factor analysis of the organization factors produced six factors with eigen-values more than 1. These six factors captured 75.90 percent of the total variance of the items. However, after Varimax rotation, two factors (6 and 5) were found to have only one item in it, which was considered as unstable (Hair *et al.*, 1998). They were eliminated from further consideration. The reliability analysis conducted shows one factor with alpha values below .60, that is, factor 4 ($\alpha = .51$). This factor was therefore dropped from subsequent analysis as it had limited use in the regression analysis due to its low reliabilities (Hair *et al.*, 2010).

There are also two items that had not loaded on any factors (the items values below .55) (CO1 and TM7). A common practice is to delete these items, which reduces the inconsistent correlations among the factors and consequently, improve the scale reliability (Hair *et al.*, 1998). Therefore, these items were deleted.

As shown in Table 4.6, the remaining three factors have factor loading of the items between .58 and .83. These loadings were greater than .55, which is the minimum level required for a sample of size 98 (Hair *et al.*, 2010).

On the basis of the factor loadings, the three factors remained are named accordingly. The first factor is dominated by questions related to the extent top management promotes the efforts of the CRM performance. Therefore, the factor is named top management. The second factor is dominated by questions related to activities, behaviors, and beliefs that place high priority on customers' interests and continuously create superior customer value. Therefore, this factor is labeled customer orientation. The third factor describes employee training activities - behaviors, and/or philosophy -to emphasize customer relations and help employees deal with customer problems Therefore, this factor is labeled employee training.

Table 4.6
Factor and Reliability Analysis on Organizational Factors

Items	Component		
Customer orientation			
1. Customer satisfaction is an important business objective.	.71		
2. We attempt to understand customer needs.	.83		
3. We measure customer satisfaction.	.68		
4. We pay close attention to customer service.	.71		
5. In our hotels, retaining customers is considered to be a top priority.	.78		
6. Our employees are encouraged to focus on customer relationships.	.64		
7. In our hotels, customer relationships are considered	.62		

to be a valuable asset.			
Top management			
1. Top management frequently discusses CRM with the staff involved.		73	

Table 4.6 (Continued)

Items	Component		
2. CRM is regarded as a high priority by top management.		.74	
3. Our top management is regularly involved throughout the CRM project.		.80	
4. Our top management perceives CRM to be part of the organization's vision.		.78	
5. Our top management informs the employees regularly about the importance of customers.		.78	
Training orientation			
1. Our training help employees understand customer needs.			.69
2. Our training facilitates interpersonal skill to build customer relationships.			.64
3. Our training helps develop employee's technical skills to provide quality products/ services for our customers.			.78
4. Our training evaluates improved employee performance after training.			.73
5. Our training helps improve employee's team building skills to enhance hotel operations.			.64
6. We recognize employee career development opportunities.			.58
7. Our training facilitates employee's learning of effective ways to address customer complaints.			.71

8. We provide our employee's with the necessary training manual.			.76
Reliability	.89	.91	.89
Initial Eigenvalues	7.58	11.44	42.98
Initial Eigenvalues % of Variance	75.90		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.82		

4.6.2.4 Factor Analysis on Technology Factors

The second component is technology factors, which were divided into three variables: customer data, and customer information-processing and integration of CRM. Further analysis followed the basic guidelines mentioned by Hair *et al.* (1998), i.e. satisfying the conditions of having sufficient correlations among the factors (not more than .55), MSA values from anti image matrices (values over .55), KMO and Bartlett's test of sphericity and the component matrices values reaching the accepted level of factor loading (.55). The exploratory factor analysis was carried out in four steps to attain the optimum number of factors for further analysis.

At the initial stage for all 36 items, the overall value of Kaiser-Meyer-Olkin was found to be .80. The result of the Bartlett's test was highly significant ($p=.00$). A close inspection of the individual MSA value showed that one item (ICRM 16) is not within the acceptable range, that is, it is below .55. So it was deleted for the next step of factor analysis.

In the second stage for the remaining 35 items, the overall value of Kaiser-Meyer-Olkin was found to be .81. Furthermore, the result of the Bartlett

test was highly significant ($p=.00$). A close inspection of the individual MSA value revealed that one item (ICRM 15) is not within the acceptable range. So it was deleted for the next step of factor analysis.

In the third stage for the remaining 34 items, the overall value of Kaiser-Meyer-Olkin was found to be .80. A close inspection of the individual revealed that MSA value of all the items were within the acceptable range, from .71 to .92. Furthermore, the result of the Bartlett's test was highly significant ($p=.00$), which indicates that further assumptions of factor analysis were met. But in the communalities, one item (ICRM 12) was below the level of 0.55. So it was deleted for the next step of factor analysis.

In the fourth stage for the remaining 33 items, the overall value of Kaiser-Meyer-Olkin was found to be .82. The result of the Bartlett test was highly significant ($p= .00$). A close inspection of the individual MSA value revealed that all 33 items have values within the acceptable range, between .68 and .93, indicating that the assumptions of factor analysis were met.

From the output of measures of the technology factors, seven factors had eigen values of more than 1. These factors captured 70.56 percent of the total variance of the items. However, after Varimax rotation, two factors (factor 6 and 7) were found to have only one item in it. Therefore, it was considered unstable (Hair *et al.*, 1998) and was eliminated from further consideration. There are also two items that had not loading to any factor (ICRM 20 and CIP 5). A common practice is to delete these items, which reduces the inconsistent correlations among the factors and consequently, improve the scale reliability (Hair *et al.*, 1998). Therefore, these items were deleted.

As shown in Table 4.7, the factor loadings of the items were between .68 and .93. These loadings were greater than .55, which is the minimum level required for a sample of size 98 (Hair *et al.*, 1998). The reliability analysis conducted shows that there is one factor with an alpha value below .60 that is, factor 5 ($\alpha = .51$). This factor was therefore dropped from subsequent analysis as it had limited use in the regression analysis due to its low reliabilities (Hair *et al.*, 1998).

On the basis of the factor loadings, the four factors remain are named accordingly. The first factor is dominated by questions relating to the extent to which hotels firms have available and quality data. Accordingly, the factor is named as customer data. The second factor is dominated by questions relating to the extent to which hotels firms maintain, analyze, and integrate customer information. Therefore, it is labeled as customer information processing. The third factor is dominated by questions related to the alignment and integration between corporate sales and marketing functions. Therefore, it is labeled as CRM functionality. The fourth factor is related to combining data residing in different sources and providing users with a unified view of these data. Therefore, it is named perceived data integration.

Table 4.7
Factor and Reliability Analysis on Technology Factors

Items	Component			
Customer Data				
1. Quality data are available to employees up to a great extent.	.77			
2. We can get access to the quality data on time.	.76			
3. Data (error rates, defect rates, scrap, defects, etc) are easily available when needed.	.74			

4.The cost of acquiring data within our hotel is reasonable.	.71			
5.Quality data are used to evaluate supervisor and managerial performance to a great extent.	.66			
6.Quality data are available to managers and supervisors up to a great extent.	.64			
7.Quality data, control charts, etc. are displayed at employee’s work stations up to a great extent.	.62			
8.We use tools to manage quality (cost of quality, defects, errors, scrap, etc.) data up to certain extent.	.55			

Table 4.7 (Continued)

Items	Component			
CRM Functionality				
1.We provide our sales force with information for cross- selling.		.89		
2.We provide customized offers to sales people on field.		.76		
3.We assign prospects to appropriate sales personnel.		.70		
4.We tracks product availability and facilitate inventory management.		.65		
5.We provide our sales force with adequate customer information.		.58		
6.We control sales through multiple sales channels.		.57		
7.We provide automated routine activities such as providing promotional literature.		.56		
8.We help marketing department analyzing responses to marketing campaigns.		.56		
9.We provide our sales force in the field with competitor information.		.56		
Data Integration				

1. Our customer information is integrated from different contact points (e.g. mail, telephone, Web, fax).			.86	
2. Data consists of customers' transaction data and external source data.			.83	
3. We emphasis customizing service scripts to the particular customer's needs.			.72	
Customer Information-Processing				
1. We maintain a customer data base.				.80
2. We monitor customer satisfaction.				.79
3. We extract useful knowledge from large customer data sets.				.77
4. We make use of customer satisfaction feedback studies to change offerings.				.72
5. We use customer data base information to develop attractive offerings.				.66

Table 4.7 (Continued)

Items	Component			
6. We store data extracted from operational data.				.61
7. We gather customer-related data.				.60
Reliability	.90	.91	.87	.90
Initial Eigenvalues	38.224	6.156	7.366	7.431
Initial Eigenvalues % of Variance	70.563			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.81			

In general, results of the exploratory factor analysis on the main variables proposed in the conceptual framework indicate dimensions that are different from the original dimension. Variables such as CRM performance produced one

dimension. Integration of CRM produced two dimensions, CRM Functionality and Data Integration. On the other hand, variables such as top management, customer orientation, customer information-processing, customer data and training orientation are categorized as one separate dimension on their own. Table 4.8 shows the comparison between the original dimension and the final dimension (after factor analysis).

Table 4.8
Comparing Original Dimensions with Final Dimensions after Factor Analysis

Original dimension	Dimension derived after factor analysis
Customer Relationship Management Performance Dimensions	Customer Relationship Management Performance
- Key Customer CRM	
- Knowledge Management	
- Organization Based CRM	
- Technology Based CRM	
Top Management	Top Management
Customer Orientation	Customer Orientation
Training Orientation	Training Orientation
Customer Data	Customer Data
Customer Information Processing	Customer Information Processing
Integration Of CRM	CRM Functionality
	Data Integration

4.6.3 Reliability Analysis

Reliability is defined as the extent to which measurements of the particular test are repeatable (Nunnally, 1970), which means that the measuring procedure should yield consistent results on repeated tests. However, the most recommended measure of internal consistency is provided by Coefficient alpha or Cronbach's alpha as it provides good reliability estimates.

The coefficient alphas for the different constructs were computed using the reliability procedure in SPSS and are presented in Table 4.9 below. According to Nunnally (1967), the reliability between .50 - .60 is sufficient for the early stages of the research, while Hair *et al.* (1998) argue that coefficient of .70 is desirable. However, the reliabilities of all of the constructs are within the acceptable range, which is above .70. The SPSS output is appended in Appendix C.

Table 4.9
Reliability Coefficients for the Variables in the Study

Variables	Number items	Reliability
Organizational Performance	4	.93
Customer Relationship Management Performance	8	.88
Top Management	5	.91
Customer Orientation	6	.89
Training Orientation	6	.89
Customer Data	8	.90
Customer Information Processing	7	.90
CRM Functionality	9	.91

Data Integration	3	.87
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4.7 Descriptive Analysis

4.7.1 Major Variables

Descriptive statistics for the final list of variables of the study are shown in Table 4.10. For ease of interpretation, the ranges of five point Likert-scales were categorized into equal sized categories of low, moderate and high. Therefore, scores of less than 2.33 [$4/3 + \text{lowest value (1)}$] is considered low; scores of 3.67 onward [$\text{highest value (5)} - 4/3$] is considered high, and those in between are considered moderate.

From Table 4.10, the mean values for customer relationship management performance, training orientation, customer data, customer information processing, and integration of CRM fall in the range of 3.19 and 4.41. Clearly, this indicates that respondents perceived a moderate degree of customer relationship management performance offered and they perceived their hotels are high in top management support, training orientation, customer data, customer information processing, integration functions of CRM and integration data of CRM. Their customer-orientation fully emphasized customer relationship management performance. However, in terms of organizational performance measure, the mean scores are at the moderate level.

Table 4.10
Descriptive Statistics for Dimensions of Variables

Variables	M	SD
Organizational Performance	3.19	.80
CRM Performance	3.66	.62

Top Management	3.90	.74
Customer Orientation	4.41	.56
Training Orientation	3.80	.65
Customer Data	3.87	.82
Customer Information Processing	3.99	.68
Data Integration	3.72	.85
CRM Functionality	3.80	.59

4.7.2 Degree of CRM Performance as Perceived by Hoteliers in Jordan

The first research question asks: “What is the degree of customer relationship management performance as perceived by hoteliers in Jordan?” Table 4.10 shows that a mean of 3.66 for customer relationship management performance. Following the categories discussed earlier in section 4.7.1, where a mean score of less than 3.67 is considered low, it can be said that hoteliers in Jordan perceived a moderate degree of CRM performance.

Although not stated as the objective of the present study, it is also interesting to explore if the degree of customer relationship management performance differs across profiles of the hotels. This is investigated in the following section to understand further the customer relationship management performance in the Jordanian hotel industry. Analysis of variance (ANOVA) was used to test the difference between these variables. Table 4.11 summarizes the results of the test. It was found that the degree of customer relationship management performance as perceived by the respondents did not vary by hotel categories ($F= 1.254$; $p= .29$). However, the degree of customer relationship management performance perceived were found to be different by the number of employees ($F = 5.142$; $p = .002$), annual income ($F = 6.201$; $p = .01$) and operational years ($F= 2.53$; $p= .04$).

Table 4.11
Customer Relationship Management Performance by Years of Operation, Annual Income, Number of Employees and Hotel Category (n = 98)

Independent Variables	Categories	M	F-value	p value
Years of Operation	1-10	3.64	2.53	.04*
	11-20	3.69		
	21-30	3.32		
	31-40	3.52		
	Above 40	3.02		
Annual Income (US\$)	1,000-19,999	3.54	6.201	.01**
	20,000-59,999	4.02		
	60,000-100,000	3.71		
	Above 100,000	3.17		
Number of Employees	1-19	3.69	5.142	.002**
	20-99	3.71		
	100-500	2.93		
	Above 500	3.70		
Hotel Category	One star	3.68	1.25	.29
	Two star	3.67		
	Three star	3.71		
	Four star	3.44		
	Five star	3.26		

Note: *p< .05; **p< .01; N

To summarize, the degree of CRM performance perceived by respondents in Jordan hotels is encouraging. Respondents with different annual income, number of employees and years in operation tended to perceive different degrees of CRM performance. However, respondents from different categories tended to perceive similar degree of CRM performance.

4.8 Correlation Analysis

Table 4.12 provides a summary of the correlation analysis results. The computation of the Pearson correlation coefficients was performed to obtain an understanding of the relationship between all variables in the study. The values of the correlation coefficients (r) given in Table 4.12 indicate the strength of the relationship between variables. As shown in Table 4.12, the overall correlation values of the variables show correlation coefficients with positive values above .35.

With regard to the relationship between CRM performance and organizational performance, the correlation is significantly correlated. However, the association is medium ($r = .38$). Cohen (1988) suggests that if there score is between .35 and .50, the correlation between the two variables is considered as a medium correlation. If the r score is above .50, the correlation between the two variables is a strong one.

As shown in Table 4.12, the majority of the antecedents are statistically correlated with CRM performance, with correlation values ranging from .35 to .68.

Table 4.12
Pearson Correlations of Study Variables

	OP	CRMP	TOP	CO	TO	CD	CIP	ICR
OP	1.0							
CRMP	.38(**)	1.0						
TOP	.36(**)	.64(**)	1.0					
CO	.35(**)	.	.66(**)	1.0				
TO	.31(**)	.56(**)	.61(**)	.44(**)	1.0			
CD	.25(*)	.49(**)	.50(**)	.50(**)	.61(**)	1.0		
CIP	.46(**)	.67(**)	.68(**)	.59(**)	.65(**)	.55(**)	1.0	
CRMF	.29(**)	.41(**)	.43(**)	.40(**)	.60(**)	.59(**)	.60(**)	1.0

	OP	CRMP	TOP	CO	TO	CD	CIP	ICR
ID	.30(**)	.31(**)	.58(**)	.51(**)	.49(**)	.48(**)	.40(**)	.43(**)

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Note: OP=Organizational Performance; CRMP= CRM Performance; TOP= Top Management; CO= Customer Orientation; TO= Training Orientation; CD=Customer Data; CIP= Customer Information Processing; CRMF= CRM Functionality of CRM; ID= Integration Data.

4.9 Hypotheses Amendments

In light of the results of factor analysis, some amendments have to be made to the statement of hypotheses stated earlier. The amended hypotheses tested in this study are as follows:

(I) Relationships between customer relationship management performance and its consequence.

Hypothesis 1: CRM performance is positively related to organizational performance.

(II) Relationship between antecedent factors and customer relationship management performance.

Organizational factors

Hypothesis 2a: Top management is positively related to CRM performance.

Hypothesis 2b: Customer orientation is positively related to CRM performance.

Hypothesis 2c: Training orientation is positively related to CRM performance.

Technology factors

Hypothesis 3a: Customer data is positively related to CRM performance.

Hypothesis 3b: Customer-information processing is positively related CRM performance.

Hypothesis 3c: CRM functionality is positively related to CRM performance.

Hypothesis 3d: Data integration is positively related to CRM performance.

4.10 Regressions

To answer the research question that addresses the relationship between CRM performance and organizational performance, as well as the influence of organizational factors and technology factors on CRM performance, regression analysis was conducted. However, before conducting the analysis, the data were first examined to detect whether there are any violations of the basic assumptions underlying the regression analysis, namely linearity, normality and homoscedasticity (Hair *et al.*, 2010).

The first assumption, linearity, is assessed by analysis of partial plots. The plots in Appendix F show the relationship between a single independent variable and the dependent variable. A visual examination of the plots indicates that it was obviously U-shaped, thus meeting the assumption of linearity for each independent variable. The next assumption deals with homoscedasticity. As suggested by Hair *et al.* (2010), to show the existence of homoscedasticity, diagnosis is made by plotting the residuals against the predicted dependent values and comparing them to the null plot. The scatter plots in Appendix G show no discernible patterns, thus indicating homoscedasticity in the multivariate (the set of independent variables) case. The final assumption that is normality is examined by normal probability-plot (P-P) of residuals. From the normal p-p plot

in Appendix H, the values fall along the diagonal with no substantial or systematic departures, indicating that the residuals are normally distributed. Overall, inspection of data revealed no serious violation of the basic assumptions. Therefore, the use of regression for subsequent analysis is appropriate.

The interpretation of the regression analysis is based on the standardized coefficient beta (β) and R^2 which provide evidence on whether to support or not to support the hypotheses stated in the chapter.

4.10.1 Multiple Regression Analysis on Factors that Influence CRM Performance

In order to answer the second research question on the factors that influence customer relationship management performance, regression analysis was undertaken on the predicted factors and customer relationship management performance.

At the beginning stage of data analysis, all outliers were filtered out. There are four reasons that cause outliers (Hamid, 2006). The first reason occurs from incorrect data entry. In this research, a few cases of these errors were noted and corrected. The second type of outlier is the inclusion of missing values, and the third type is the result of sampling error where cases are not representative of the intended population. Finally, outliers include those observations within the intended population but are extreme in their combination of values across the variables.

From the first run of the regression analysis, the outliers were examined. The case wise diagnostics indicate that observation numbers 90, 84 and 78 were outliers, and therefore, filtered out in the next regression run.

Table 4.13 shows that the relationships between independent and dependent variables are significant ($F = 31.707$; $Sig. = .00$). The R^2 obtained indicates that the influencing factors account for 71% of the variation in CRM performance. Of all the variables included in the regression equation, only four variables emerged as significant predictors of customer relationship management performance. These are top management, customer data, customer information processing, and CRM functionality. Based on these results, hypotheses H2a, H3a, H3b and H3c are supported. This leads to the conclusion that management support, customer data, customer information processing, and CRM functionality are positively related to customer relationship management performance. Other influential variables are found to have no significant influence on customer relationship management performance. Therefore, hypotheses H2b, H2c and H3d were rejected.

Table 4.13
Summary of Multiple Regression Analysis for Factors Influencing Customer Relationship Management Performance (n=95)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (constant)	275	304		905	.368		
Customer data	.160	.060	.211	2.682	.009*	.521	1.920
Customer information	.396	.094	.434	4.234	.000*	.307	3.252
Integration data	.047	.098	.045	.481	.632	.371	2.694

Customer orientation	159	.092	.146	1.717	.090	.450	2.222
Top management	.328	.080	.392	4.091	.000*	.352	2.842
Training orientation	-.082-	.110	-.087-	-.749-	.456	.238	4.199
CRM functionality	.178	.056	.243	3.167	.002**	.549	1.823

Note: a. Dependent Variable: mean_ CRM performance

b. DV = CRM performance, R= .848 (a), R2= .71, F= 31.707, Sig=.000.

c. Note: Significant levels: *p<0.05; **p<0.01.

To investigate which factors have the most influence on CRM performance, we used the beta values as shown in Table 4.14. Based on the beta values of the three significant variables, the predictor variables that exercise the most influence on CRM performance is: customer information processing ($\beta = .434$), followed by top management ($\beta = .392$), CRM functionality ($\beta = .243$) and customer Data ($\beta = .211$).

For the regression of independent variables on customer relationship management performance, the tolerance values and the condition index for all the independent variables were examined to detect multicollinearity. The tolerance should be close to 1.00 to indicate little or no multicollinearity (Pallant, 2004). Hair *et al.* (1998) suggest a cutoff value of 10.00 as an acceptable VIF. From the tolerance and VIF values shown in Table 4.14 the output indicates no multicollinearity effect among independent variables on dependent variables.

4.10.2 Regression Analysis on CRM Performance and Organizational Performance

In order to answer the third research question, that is, the relationship between CRM performance and hotel's organizational performance, a regression analysis was conducted to test the first hypothesis. In this analysis, CRM performance was

treated as the independent variable, while organizational performance as the dependent variable. Through regression analysis procedures, organizational performance was regressed on CRM performance. Table 4.14 shows the relationship between CRM performance and organizational performance.

Table 4.14
Summary of Multiple Regression Analysis on the Impact of CRM Performance on Organization Performance (n=98)

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.447	.429		3.376	.001
	CRM Performance	.482	.117	.389	4.133	.000**

R=. 389 (a), R²=. 151, F= 17.083, Sig=.000

Note: Significant levels: *p<0.05; **p<0.01.

The F value of 17.083 (p<.05) indicates that the CRM performance significantly influences organizational performance. However, the model is rather weak with CRM performance explaining 15.1 percent of the variation (R = .15) in organizational performance. Furthermore, we note that CRM performance positively influence on organization performance (B=.482). Therefore, hypothesis 1 is supported.

4.11 Chapter Findings

This chapter has managed to present findings of the present study. Descriptive statistics showed that, in general, respondents tend to perceive a moderate degree of customer relationship management performance. Furthermore, the standard deviation demonstrated that statistically the variation of customer relationship management performance among respondents tend to be high.

To examine the relationship between customer relationship management performances and organizational performance as well as the factors influencing CRM performance, regression analysis was conducted. Presented below is the summary of the findings of the hypotheses testing.

Table 4.15
Summary of Hypotheses Testing Results

Hypothesis	Accept/Reject
Hypothesis 1: CRM performance is positively related to organizational performance.	Accept
Hypothesis 2a: Top management is positively related to CRM performance.	Accept
Hypothesis 2b: Customer orientation is positively related to CRM performance.	Reject
Hypothesis 2c: Training orientation is positively related to CRM performance.	Reject
Hypothesis 3a: Customer data is positively related to CRM performance.	Accept
Hypothesis 3b: Customer information processing is positively related to CRM performance	Accept
Hypothesis 3c: CRM functionality is positively related to CRM performance.	Accept
Hypothesis 3d: Integration of data is positively related to CRM performance.	Reject

4.12 Chapter Summary

This chapter presented the results of data analysis used for the purpose of this study. A good response rate was achieved (49%). For the survey, the background information of the responding hotels, reasons for not using CRM and CRM tools descriptive statistics showed that. As a result of that, Factors analysis was conducted in order to test the construct validity of for all interval scale variables; reliability was also tested for all interval scale variables to see how free it is from random error. Further, the researcher tested the assumption of normality,

linearity, and homoscedasticity and the results show that the assumptions were generally met.

The result from logistic regression analysis that were meant to identify factors that were perceived to be associated with CRM performance. Drawing upon RBV theory, a mode was developed for assessing CRM performance, incorporating four factors related to firm CRM performance. One of the three organizational factors (top management). Three of the four technological factors (customer data, customer information processing and CRM functionality) were found to influence CRM performance.

Finally, this chapter examined the relationship between the extent of CRM performance and its impacts on organizational performance. The analysis indicates that the CRM performance significantly influences organizational performance. The findings in this chapter will be discussed and concluded in the next chapter with recommendations presenting based on the findings.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter recapitulates the findings, followed by a discussion of the pertinent points. Both the theoretical and managerial implications together with limitations are also discussed. This chapter ends with suggestions for future research.

5.2 Recapitulation of the Study Findings

Based on Recourse Based View (RBV) theory by Barey (1991), the model of competitive advantage and previous research on customer relationship management (CRM) and CRM performance, this study investigated the antecedents of CRM performance and its impact on organizational performance.

This research was conducted to achieve three main objectives. The first objective was to examine the degree of CRM performance of the hotels industry in Jordan. The second objective was to examine whether CRM performance by the hotel industry impacts the hotel performance. The third objective was to identify the antecedent of CRM performance in the hotel industry. To achieve these objectives, quantitative approach was utilized. In particular, this study sought to answer several research questions: (i) a) What is the degree of customer relationship management performance as perceived by hoteliers in Jordan?, (ii) Does customer relationship management performance influence hotel performance in Jordan?, and (iii) What are the factors that lead to customer relationship management in Jordanian hotel industry?

As noted in Chapter 4, data were gathered from managers working in Jordanian hotels. Two hundred questionnaires were distributed and 141 questionnaires were returned. However, only 98 questionnaires were useable. Thus, the effective response rate is 49 %. Exploratory principal component factor analyses were utilized to test the factorial validity of the measures in this study. The analyses run produced various dimensions of the antecedent factors and CRM performance. The hypotheses were then reformulated using these new dimensions. The internal consistency of the measures was then tested by computing the reliability coefficient. Finally, the data were analyzed using

regression analyses to test the hypotheses of the study. A .05 level of significance was used as the critical level for decision making regarding the hypotheses.

5.3 DISCUSSIONS

5.3.1 Degree of CRM Performance as Perceived by the Hotelier in Jordan

To answer the first research question, this study demonstrates that the degree of customer relationship management performance as perceived by hoteliers in Jordanian hotels tend to be moderate. Such perception indicates that hoteliers tend to perceive moderate degree consideration for CRM performance in improving the quality of service to customers, enhancing and maintaining workflow, and maintaining a good long term relationship with their customers. This allows hotels to interact, respond, and communicate more effectively to significantly improve retention rates.

According to Sin *et al.* (2005a), CRM performance is conceptualized as a four-dimensional construct: key customer focus, CRM organization, knowledge management, and technology-based CRM. Key customer focus refers to the ability of a hotel to provide important customer focus involving an overwhelming customer-centric focus and continuously delivering superior and added value to selected key customers through personalized/customized offerings. CRM organization refers to the alignment of viable business strategies, customer information and technology on the existing organizational structures and cultures with the primary aim of achieving long-term customer satisfaction and organizational profits (Coltman, 2007a; Eid, 2007; Sin *et al.*, 2005a; Yim *et al.*, 2005). Knowledge management refers to the strategy through which companies capture, organize, manipulate, and share implicit and explicit data

with both internal and external users (Eid, 2007; Sin *et al.*, 2005a). Technology-based CRM can be described as any technology or system that assists organizations in collecting, storing, analyzing, and sharing both current and potential customers' information in such ways that greatly enhance employees' ability in responding to the needs and request of the individual customers and thereby leading to better ways of attracting and retaining customers(Sin *et al.*, 2005a). In other words, the moderate degree CRM performance reflects that hoteliers tend to possess moderate degree of the CRM performance in Jordanian hotel industry. The moderate perception of hoteliers of CRM performance is consistent with that of Yueh *et al.* (2010) who found that Taiwanese hotel industry perceives moderate CRM performance. Hotel organizations are increasingly concerned with building and maintaining relationships with customers by implementing customer relationship management.

One reason to explain the moderate degree of CRM performance as perceive by hotelier in Jordan is due to the increasing business competition and higher degree of customer turnover. In addition, growing customer acquisition costs and rising customer expectations are forcing the hotels to depend on their ability to satisfy customers efficiently and effectively particularly when the number of hotels in Jordan has increased from 161 to 484 within five years from 1996 until 2010. Given these challenges, hotel managers in Jordan have to continuously improve their standard of service to meet the increasingly sophisticated needs of their customers. To do this, the managers of Jordanian hotels have begun to raise their standard of services by focusing on CRM performance, which implies solving customer's problems and providing customer's opportunities and adding value over an extended period. By seeking,

gathering and storing the right information, validating and sharing it throughout the entire organization and then using it throughout all organization levels, the hotel organization seeks to create personalized relationship and unique guest's experiences. Consequently, this leads to positive perceptions of customers regarding services in Jordanian hotels.

The present study also found that the extent of customer relationship management performance does not vary by hotel categories. To put it simple, regardless of whether one-star or five-star hotel, the customer relationship management performance does not differ. A plausible reason for this is perhaps all hotel categories (1-5 stars) selected in this study offer the same services and all hotels seek to differentiate themselves from their competitors to achieve customer satisfaction and customer loyalty through customer service (Sigala, 2005).

However, this study found that the degree of customer relationship management performance significantly varies according to the number of employees in the hotel. Hotels with more than 500 employees rated CRM performance higher than those with less number of employees (the mean value for respondents with more than 500 employees is (4.3). A plausible reason for this is that large hotels may differ in some specific motives, which indicate different operational problems and managerial situations in different hotels. It can be implied that large hotels require high skilled and professional staff to satisfy guests and for this, the hotels need reward and motivation programs to make them satisfied and hence retain them. This leads to the importance of implementing CRM to increase employee satisfaction and/or reduce costs. A study by Sigala (2005) found that large hotels in comparison to small hotels

perceive the value of CRM highly in “reducing costs”, “guests’ complaints” and “improving processes”. This finding indicates that CRM in large hotels is greatly driven by a need to streamline and integrate fragmented, disconnected processes and guests’ information to enhance monitoring/control and improvement of processes; handle and reduce guests’ complaints; and reduce errors’ costs. Therefore, the hotels need a large number of employees to accomplish the tasks which in turn calls for staff training and staff development.

The present study also found that the extent of customer relationship management performance does vary by the year of operation of the hotel. There is a difference between customer relationship management performances of hotels with different years of establishment. A plausible reason for this is that the analysis showed that year of operation in CRM directly affects CRM success. The results show that as firms use CRM, they learn on how to use the strategy more efficiently, and hence success ensues. These results provide empirical evidence that CRM is a long-term relationship strategy; as hotels become experienced in the strategy, organizational learning takes place. Consequently, organizational change is necessary for the firm to benefit from the improvement of CRM.

The degree of customer relationship management performance was found to be different by the hotel’s income levels. The higher the annual income of the hotel, the higher the customer relationship management performance. According to Sigala (2005), the more profitable the hotels are, the greater the implementation of the CRM processes is. In fact the national income generated from the tourism sector rose from JD 943 million in 2004 to JD 1021.6 million in 2005, JD 1460.8 million in 2006, and to over JD 1638.9 million in 2007.

Specifically, tourism contributed 6.2% to the GDP in 2002, 11.6% in 2004, and more than 14.6% in 2006, while its contribution slowed down a little in 2007 at 14.4%³. In 2010, its contribution was more than 16%.

5.3.2 The Influence of Customer Relationship Management Performance on Organizational Performance

The second research question is related to the relationship between customer relationship management performance and organizational performance. This study shows that customer relationship management performance explains a modest percentage of the variation of 15% in hotel performance in Jordan. This indicates that customer relationship management performance has a small explanatory power to predict organizational performance. There might be other possible factors that may contribute to organizational performance such as human resource (Abdellatif, 2011; Adam *et al.*, 2010) and total quality management (Harrigan *et al.*, 2009). Larger R^2 value would be desirable because this value indicates the strength of the relationship between two variables. A few studies conducted in customer relationship management performance reported the value of CRM found to contribute to organizational performance. For example, Akroush *et al.* (2011) in their study among Jordan financial service organizations revealed 38.5 percent of variation in financial performance. Additionally, Sin *et al.* (2005a) developed a reliable and valid measuring scale for customer relationship management performance, and found 20.9 percent of the variation among Hong Kong financial firms.

The analysis undertaken has demonstrated that CRM performance has a positive relationship to organizational performance. Hoteliers who perform

higher CRM are known to be better at developing and maintaining relationship with positional customers. They are willing to invest time and effort to understand their customer' needs and problems, and modify their actions in a manner that responds to those needs and expectations in an honest way. This influences the amount of satisfaction and customers experience as well as the quality and duration of the relationship, which in turn, positively attracts new customers and retains the existing ones for the purpose of competitive advantage, sales and profitability (Akurosh *et al.*, 2011; Roh *et al.*, 2005). Since CRM success depends on continuous process development of market intelligence and maintenance of profit maximizing portfolio of customer relationship, a firm's performance is enhanced.

The positive relationship between CRM performance and organizational performance in this study is consistent with the previous finding of Akroush *et al.* (2011), who found that CRM is a critical success factor for business performance. The findings indicate a positive and significant relationship between CRM components and financial and marketing performance of a business. There was the pioneering systematic research project in Jordan devoted to investigating the scale and components of CRM implementation in Jordan and in the Middle East. Similarly, a study by Sin *et al.* (2005a) showed a positive correlation between four dimensions of CRM and marketing performance, as well as financial performance in Hong Kong financial industry. An empirical investigation of 253 respondents in 14 companies by Roh *et al.* (2005) found a positive relation between CRM performance and profitability.

Hotel organizations are increasingly concerned with building and maintaining relationships with customers through customer relationship

management. The positive association between CRM performance and organizational performance among Jordanian hotels lends credence to the findings of the majority of empirical efforts that have explored the relationship between CRM performance and organizational performance among hotels in various national contexts (e.g. Sin *et al.*, 2005a; Shea *et al.*, 2006). Thus, the current study shares with the CRM literature in that CRM is a critical success factor for business performance (Akroush *et al.*, 2011; Kim *et al.*, 2004; Sin *et al.*, 2005a; Yim *et al.*, 2004). This perhaps can be best explained through the argument made by Wu (2001), who states that an organization's investments in developing and nurturing relationships with its customers often sway customers to its favor by making them feel obliged to reciprocate such gesture by becoming more loyal, which in turn, reflects positively on sales and profitability.

To sum up the discussions, the positive relationship between CRM performance and organizational performance means that activities relating to dealing with customers' privacy concerns, understanding their requirements, making a corporate cultural shift from product centric to customer centric organization, overcoming lack of functional working support in order to serve customers better, organizational resistance towards change in developing CRM system, effectively communicating with end users through feedback systems, and overcoming and adapting technology required for implementing CRM, lead to higher sales growth, return on investment, market share, return on sales, increased customer satisfaction, and higher customer loyalty (Nath *et al.*, 2009).

5.3.3 The Effects of Antecedent Factors on Customer Relationship Management Performance

The third research question relates to the antecedent factors of customer relationship management performance. Analysis showed that the antecedent factors could be categorized into two: organizational factors and technology factors, with each having distinct dimensions. The analyses further showed that only some dimensions of the factors were found to have significant relationship to customer relationship management. For example, only the top management dimension of organizational factors was found to have a significant relation with CRM performance. While other organizational factors of training orientation and customer orientation were found to have insignificant effect on CRM performance. For technology factors, despite the three factors hypothesized to be related to CRM performance namely customer data, customer information-processing, and integration of CRM functionally and data integration, it appears that only data integration was found to have an insignificant relationship with CRM performance. The following explains the finding of each influential factor.

5.3.3.1 Organizational Factors

a. Top Management

This research found a significant relationship between top management and customer relationship management performance in Jordanian hotel industry. The results of this study confirmed the fundamental role of top management in determining CRM success. The study's findings are consistent with many studies in different contexts (Capacity, 2004; Croteau & Li, 2003; Greve & Albers, 2006; Kim *et al.*, 2004; Kim *et al.*, 2010; Ou & Banerjee, 2009; Sohrabi *et al.*, 2010) that demonstrated that top management support and/or commitment positively influences the success of CRM. Among these studies, Kim *et al.* (2004) showed

that the support from top management for the successful CRM in retailer network was in the form of improving customer retention rate, and marketing effectiveness. Additionally, Kim *et al.* (2010) argue that in order to introduce new technologies within traditional business activities, top management support can be a strong and effective means in assisting the improvement of the relationship and for meeting customers' needs. In their empirical study, Kim *et al.* (2010) found that the support from the firms' top management is a key success factor in CRM performance (customer acquisition, retention, and expansion). Another study by Moreno and Meléndez (2011) found that top management is an important component of CRM success. Finally, a study by Kiat (2008) found that top management support is a significant factor in influencing SMEs' intention to adopt CRM. This finding is also consistent with Love *et al.* (2008), who revealed that top management support is a significant factor that can positively influence the impact of CRM in Western Australia. Such results indicate that top management support is crucial for CRM success.

The notion that top management is the most crucial factor in impacting successful CRM performance can be explained in the light of Jordanian hotel industry. First and foremost, the involvement of top management is core to a successful CRM performance as they enable the stimulation of change through communication and reinforcement of values embedded in the articulated vision of the hotels. The said vision should address how customer centricity will assist the hotel in facing challenges in its future market place and how CRM can be utilized to enable lasting interactions with customers in a way that both parties derive value (Croteau & Li, 2003). This is verified by findings from prior studies regarding small and large businesses (Sin, 2005).

This study also reveals that management of Jordanian hotels not only actively participate in customer-related issues but also frequently discuss the issue of customer interaction with staff, to motivate everyone in the hotel to participate in improving customer relationships. In addition, this study also suggests that top management consideration of CRM is closely associated with its success. In particular, managers' efforts to promote CRM not only increase staff recognition and acceptance of the concept, but also motivate employees to participate in the project. This suggests that top management factor should remain in the model as an influential factor for CRM performance.

b. Customer Orientation

Customer orientation is the organization-wide gathering, sharing, and use of intelligence about customers, and coordinated actions based on that intelligence (Narver & Slater, 1990). In line with Jaychandran's *et al.* (2005) conceptual proposal, we assume that customer orientation implies having a sufficient understanding of the customers to be able to offer them greater added value. Likewise, customer orientation implies unequivocally placing the customer at the center of all the firm's activities in order to gradually build long-term relationships (Van Bentum & Stone, 2005). This is why this variable is a fundamental component of the organizational climate needed for CRM performance; an organization that is strongly oriented to the customers will be able to design its processes better, since organizational culture is conducive to improving employees' understanding of the customers (Rapp *et al.*, 2010). Researchers (e.g., Chang *et al.*, 2009; Day & Bulte, 2003; Jayachandran *et al.*, 2005) describe customer-centric organizational culture as representing the top

priority on the customer relationship, embedded in the mind-set, values, and norms of the organization. Consequently, a customer orientation is an indispensable prerequisite for a successful CRM.

However, this research found insignificant relationship between customer orientation and customer relationship management performance in Jordanian hotels. In other words, this finding indicates that customer orientation does not guarantee superior CRM performance. This finding is consistent with past research by Becker *et al.* (2010) who found that customer orientation does not significantly influence any CRM performance phase namely initiation phase (e.g. customer acquisition), maintenance phase (e.g. customer satisfaction, up-cross-selling), and retention phase (e.g. customer retention and migration) in ten European countries. Similar findings by Greve and Albers (2006) revealed that customer orientation show negative impacts upon CRM performance in the phases of “initiation” and “maintenance” in 10 European countries. These results suggest that CRM today still concentrates on initiation and maintenance instead of the whole customer lifecycle.

The reason for the insignificant impact of customer orientation on CRM performance may be that customer orientation alone does guarantee superior CRM performance with regard to customer satisfaction, customer loyalty, customer retention, market share, and profitability, unless the hotel train employees in specific behaviors that can promote customer orientation. Researchers emphasize that customer-oriented hotels tend to provide a unifying focus for individual employees' efforts in delivering value to customers (Narver & Slater, 1990; Kim, 2008). Consequently, training can enable hotel employees

to provide superior products and services to their customers and help achieve CRM performance goals such as high customer satisfaction and profitability.

c. Employee Training

Plakoyiannaki *et al.* (2008) state that employees who deal closely with customers are the building blocks of customer relations. Chen and Popovich (2003) assert that employees need to be trained to enhance their skills and knowledge and to collect rich information while serving customers (Stringfellow *et al.*, 2004). Organizations must also ensure that job evaluations, compensation programs, and reward systems are modified on a basis that facilitate and reward customer orientation.

This research however found no significant relationship between perceived employee training and customer relationship management performance. In other words, employee training is not related to continuous improvement of hotels services. This finding is consistent with past research by Becker *et al.* (2010) who found that employee training (e.g. training on CRM skills) does not significantly influence any CRM performance phase: namely initiation phase (e.g., customer acquisition), maintenance phase (e.g. customer satisfaction, up-cross-selling), and retention phase (e.g. customer retention and migration) in ten European countries. Similar findings by Plakoyiannaki *et al.* (2008) indicate that empowerment of employees could have negative effects on elements of the information and value creation and CRM performance. This is because empowerment is associated with high levels of work-related stress that stems from lack of role clarity in situations in which employees are faced with critical customer incidents. According to Avlonitis and Panagopoulos (2005),

CRM training is not significantly associated with CRM acceptance. It is quite likely that satisfaction with the system and training are necessary but not sufficient conditions for CRM acceptance by industrial salespersons. Apparently, merely training salespersons on CRM use or providing them with a superior CRM system, will not lead to system acceptance, if salespeople do not perceive the system to be useful and easy-to-use.

Training orientation is not a sufficient condition for CRM performance of Jordanian hotel industry. A plausible reason could be that employee orientation entails a substantive capital investment in human resource policies and activities. This might not be feasible for service hotels operating under different organizational and environmental contingencies. To illustrate, hotels with limited resources or hotels wishing to serve their customers on a very low-cost basis may not be encouraged to invest in the development of multi-skilled service-oriented employees because such an investment escalates costs and product prices. If this is true, lack of training and orientation would not impact CRM performance.

One of the most common mistakes hotel management make is to force-feed new technology across the organization without training employees to operate the new technology (Kim, 2008). This is another plausible explanation for the insignificant finding. The significant relationship between training orientation and customer relationship management performance suggests that management should conflate technology and human resources to achieve a successful customer relationship management performance and stay ahead of competition (Plakoyiannaki *et al.*, 2008).

5.3.3.2 Technology Factors

a. Customer Data

Researchers and practitioners studying or dealing with the impact of data quality on enterprise-wide CRM efforts in particular, often assume that the common language provided by customer data quality and processes exists, or that they will be developed because of the benefits of increased communication within (or across) the whole organization Alshawi *et al.* (2011). However, there is an evidence that this common language of logically compatible data does not exist in a great many organizations that have implemented CRM in particular (Even *et al.*, 2010; Goodhue *et al.*, 2002).

It is widely reported that poor data quality can have a severe impact on the overall performance of an organization (Even *et al.*, 2010). In spite of the conceptual appeal of methods and programs for achieving data quality, many organizations undertaking a CRM initiative are unaware of customer's data quality problems (Abbott *et al.*, 2001b), or are not investing enough efforts in improving data quality processes to support their CRM applications and its impact on CRM performance (Even *et al.*, 2010; Goodhue *et al.*, 2002; Ryals & Knox, 2001; Siegel, 2005).

In the present study, the researcher found significant relationship between customer data quality and customer relationship management performance. In other words, customer data quality could predict continuous improvement of customer relationship management performance in Jordanian hotels. This finding supports past studies such as those done by Becker *et al.* (2009) who investigated the relationship between the storage and accessibility of customer data and CRM

performance. Likewise, in another study, Alshawi (2011) found data quality to be related to CRM adoption in 30 SMEs in the UK. Moreover, Minamia and Dawson (2008) also found a significant relationship between using customer data and customer relationship management performance in Japan in the retail and service industries. But Stone *et al.* (2003) showed that because only a few companies reach good standards in this area, they run the risk of their data not being able to support their CRM strategies and policies or even privacy or data protection requirements.

This dimension is validated according to the literature that suggests that customer data quality issues have a direct influence on successful CRM. CRM is often normally considered as a technology-focused database management approach, which gathers and analyzes information with the goal to achieve customer satisfaction (John *et al.*, 2005; Haug & Arlbjorn, 2011). Therefore, the importance of customer data quality as one of the predicted factors for customer relationship management is fully validated by the Jordanian hotel industry. The main Jordanian hotels collect customer data and customer's profile and transaction history for the purpose of higher successful CRM (to recruit new customers, sell more to existing customers, support customer service operations and retain customers) (Park & Kim, 2003).

Based on these findings, it can be argued that the success of CRM performance requires the existence of historical data to identify the main market segments and create an accurate customer profile in the Jordanian hotel industry. As argued by Stimpson (2004), CRM is all about having the information readily available to understand the client, communicating back to them, and tracking correspondence. Radcliffe (2001) argues that having the right information at the

right time is essential to successful CRM strategies as it provides customers with insight and allows effective interaction across any channel.

b. Customer-Information Processing

This research found a significant relationship between customer-information processing and customer relationship management performance. Processing customer information can help hotels monitor emerging and changing customer needs toward high CRM performance. This finding supports past studies such as those done by Kim (2008) who investigated the relationship between customer-information processing and CRM performance in American restaurants. He found a significant positive relationship. Restaurant firms can be assisted in identifying their most significant customers to increase their business value through the enrichment of customer information coupled with a suitably designed database. Another study by Day and Bulte (2003) found superior customer information to have a significant positive relationship with relative sales, profitability, customer retention performance, and relational advantage. The survey by Roh *et al.* (2005) on life insurance and casualty insurance firms in Korea that implement and operate CRM system, found that customer information quality positively improves efficiency. In their investigation, Jayachandran *et al.* (2005) provided a conceptualized notion and a measurement of relational information processes. The results of their study indicated significant positive effects on CRM performance. The results of their study substantiated the claim that relational information processes outline guidelines to assist firms on how to handle customer information and how to communicate with customers in ways that are aligned with the CRM requirements. In addition, the results also

indicated that relational information processes play a key role in improving an organization's customer relationship performance. Therefore, the importance of customer information as one of the predicted factors for customer relationship management is supported by past research. This research finding has also confirmed the importance of customer information as one of the predictors of intention in the original RBV model (Barney, 1991).

The current study's data analysis reveals that Jordanian hotels held a positive view in identifying their most significant customers who contribute to increasing their business value through the enrichment of customer information coupled with a suitably designed database. The results also suggest that hotels should have processes to maintain, analyze, and integrate customer information. However, in reality, many hotels tend to have customer information that is often fragmentary, incomplete, and/or inadequate; resulting in loss of revenue opportunities due to inaccurate interpretations of customer needs (Kim, 2008). Effective customer-information processing can help hotels thoroughly assess the quality of their existing and new customer information. Consequently, enriching customer information with a carefully designed customer database can help firms identify their most profitable customers and increase their business value. This study has identified the key relational information processes that should be implemented by hotels that opt to pursue CRM. Delineation of relational information processes enables managers to track and evaluate the information routines that are relevant for higher CRM performance. A capability to process customer information can be a valuable resource that potentially enhances CRM performance in Jordanian hotel industry.

Generally speaking, CRM focuses on effectively turning information into intelligent business knowledge to manage customer relationships more efficiently. This information will help the organizations to access the historical data of their customers and in turn will identify the main market segments and create an accurate customer profile.

c. CRM Functionality

According to Stein and Smith (2009), the integration of CRM functionality allows integrating a company's marketing activities (i.e. sales, service, communication, order management, market research, and analytics) for the purpose of creating knowledge on individual customers, leading the firm to concentrate on customer acquisition, retention, and profitability. However, Pushmann and Alt (2001) state that a comprehensive management of marketing comprising sales and service processes requires the integration of interactive processes in the front-office with the transaction-oriented processes in the back-office.

This research found a significant relationship between CRM functionality (marketing, sales, and customer service), and customer relationship management performance in Jordanian hotels. This result is consistent with previous study findings by Desai *et al.* (2007) who revealed a positive impact of CRM functionality on CRM performance with customer focus (achieving customer satisfaction, keeping current customers). Organizational focus perspective shows a positive association between CRM technology and CRM performance like securing desired market share and securing desired financial performance (Desai *et al.*, 2007). Using data from Korean companies, Chang *et al.* (2009) focused

upon three elements of CRM technologies namely sales support, service support and marketing support. They found positive relationships between these activities and customer relationships effectiveness. An empirical study by Chang *et al.* (2005) found CRM functionality has a positive impact on the CRM performance service sectors in Taiwan. Ten marketing and sales managers, and their respective customers, from a variety of New Zealand companies were interviewed by Richard *et al.* (2007), who found that CRM functionality does have a role to play in sustaining and maintaining B2C relationships.

This study has successfully supported the argument that integration of CRM functionality consideration is sufficiently regarded in CRM performance of Jordanian hotel industry. Hotels recognize that CRM functionality plays an invaluable role in enhancing customer satisfaction and customer loyalty. In light of this, CRM technology allows the integration of a firm's marketing activities (e.g. sales, service, communication, order management, market research and analytics) to bring a focus on individual customer acquisition, retention, and profitability. Therefore, more adoption of CRM functionality results in better marketing practices, sales automation, and customer services that assist the firm to deal with customer relations more properly in Jordanian hotel industry. Consequently, it is no doubt that the adoption of CRM technology for hotels sectors in Jordan contributes to their CRM performance.

Finally, CRM functionality makes it possible to develop good communication with customers and this will allow hotels to respond to customers' requests. By doing so, the hotels are able to attract new clients, generate loyalty among the existing ones, and develop long-time relations with the customers.

d. Data Integration

For many organizations, the ability to make coordinated, organization-wide responses to today's business problems is thwarted by the lack of data integration or commonly defined data elements and codes across different information systems. Data integration generally means the standardization of data definitions and structures through the use of a common conceptual schema across a collection of data sources (Goodhue *et al.*, 1992; Haug & Arlbjorn, 2011).

This research found no significant relationship between data integration and customer relationship management performance. In other words, data integration is not a predictor of continuous enhancement of customer relationship management performance in Jordanian hotels. This research finding is consistent with past research by Jayachandran *et al.* (2005) involving senior marketing managers, sales managers, and customer service managers in 1105 SBUs of top firms in the United States. They found no significant difference in the influence of data integration on the customer relationship performance of goods and service firms. Their results suggest that business-to-business and service SBUs do not enjoy any advantage over their business-to-consumer and goods counterparts respectively, in terms of the influence of data integration use on customer relationship performance. In another study on Indian banking, telecom, and retail industry, Desai *et al.* (2007) found no positive association between data integration and CRM performance. However, Wells *et al.* (1999) found a negative link between integration of customer data and successful customer interaction. The inconsistent results indicate the necessity of further research for the integration function. Greve and Albers (2006) revealed that customer data

integration has no significant direct impact on CRM performance in all lifecycle phases; “initiation, maintenance, and retention”, in 10 European countries.

The plausible reasons for the insignificant impact of data integration on CRM performance in Jordanian hotels may be because successful CRM necessitates full data integration and its associated costs (Hart, 2006). It could be that Jordanian hotels have not yet invested substantially in full data integration to construct a single view of the customer. Hotels that fail to address data integration issues risk missed opportunities and operational inefficiencies. Although it is rarely a trivial undertaking, developing and maintaining a high-quality, integrated data repository is worth the effort. It is the means to achieve the important benefits: Cost savings from the removal of redundant customer data, increased revenue from identifying and targeting first-time customers, enhanced revenue from higher customer satisfaction and retention, savings in operational costs. Consequently, developing and maintaining integrated customer data repository and eliminating excess operational costs caused by redundant data are prerequisites to achieve the cost reduction, revenue enhancement benefits, and enhancing revenue through improved customer targeting and retention and higher CRM performance (Malte *et al.*, 2006; Neslin *et al.*, 2006).

5.4 Theoretical Contribution

From the theoretical perspective, the contribution of this research lies in identifying multiple ways through which organizational and technology-related factors impact customer relationship management performance, principally, in the context of Jordanian hotel industry.

The present research contributes to new theoretical grounds for studying customer relationship management performance. It also supplies hotels with a number of operative success factors that may be essential if they are to remain competitive in the dynamic marketplace. Not only does this study provide an empirical assessment of the essential elements in CRM performance, it also assesses the success factors distilled from a comprehensive review of the relevant literature. These success factors include two basic categories: (1) organizational related factors; and (2) technological related factors. This study helps build theory concerning customer relationship management performance and provides some insights toward effective hotel management in the hotel industry.

This study has systematically examined the factors that contribute to CRM performance from a managerial perspective in the Jordanian hotel industry. The findings of the study contribute to the empirical knowledge toward increasing the customer relationship management performance and its impact upon Jordanian hotels performance. Alshawia *et al.* (2011) indicate that there is still no integrated conceptual framework to guide companies and only a few studies have uncovered the factors that influence the customer relationship management performance success. Therefore, this research has added other organizational and technological support to contribute further to the existing literature.

The study also validates the importance of top management, customer data customer information processing and CRM functionality motivation in influencing customer relationship management performance. The existence of top management, customer data customer information processing and CRM functionality motivation factors are essential to drive the customer relationship

management performance of the hotels rather than other factors. Researchers who studied the antecedent variables of customer relationship management performance have mainly focused on the larger USA and European economies (Gronroos, 2004; Harrigan *et al.*, 2009). The present study has proved that these factors hold true in Jordanian hotel industry. Therefore, it would appear that some findings obtained in the West can also be generalized to Asian and Middle East settings and hence lending credence to efforts to test Western findings using local samples.

However, no significant influence of training-orientation, customer orientation and data integration on customer relationship management performance was found to support assertions by Desai *et al.* (2007) and Jayachandran *et al.* (2005) that antecedents of customer relationship management performance may be consistent across selling environments. As shown by the present study, the antecedents may be significant in one industry and might not be in other industries.

Reinartz *et al.* (2004) indicate that technology plays a role in the successful implementation of CRM, but only a few studies have uncovered the factors that influence the use of CRM technology (Avlonitis & Panagopoulos, 2005). According to Greve and Albers (2006), further research is needed to understand whether and how CRM technology capabilities provide a factor for success in CRM and this study has included other technologies as recommended. Other technology factors such as perceived customer data, customer information processing, CRM functionality factors have also been considered and examined as success factors.

This study has addressed perceived gaps in the CRM performance literature and responded to calls that advocated that CRM performance lacks empirical research and there is a need to understand its components and their impact on business performance especially in emerging markets. This study has tested a valid and reliable scale of CRM performance, which was originally developed by Sin *et al.* (2005a), in hotels in Jordan, an emerging market. This is one of the very few CRM performance studies conducted in the emerging markets especially in the Middle East region. In Jordan, this is the first research effort devoted to investigating CRM implementation and business performance in hotels in Jordan. The empirical research has extended understanding of CRM components and their impact on business performance which have not been addressed together in previous empirical studies in Jordan.

Another interesting finding in the current study involves the relationship between customer relationship management performance and organizational performance. According to Beary (1991), resource based view (RBV) postulates a relationship between position competitive advantage and company performance. Similar to our study, the construction of CRM performance exists between the position of competitive advantage (relationship management performance competitive) and organizational performance as company performance provides evidence of a positive relationship, as proposed by resource based view (RBV).

5.5 Methodological Contribution

Apart from theoretical contribution, this study has also contributed to the methodological perspective. To date, most literatures on customer relationship

management performance have focused on customer behavior-based performance since it is an underlying source of value for current customers of a firm (e.g. Wang *et al.*, 2004). Sin *et al.* (2005a) developed a reliable and valid scale to measure the four dimensions of CRM: key customer focus, CRM organization, knowledge management, and technology-based CRM. However, these scales were developed in Hong Kong and tested only on financial firms. To show robustness and validity of this measurement, they suggested that the instrument should be tested with different groups and in different settings. In response to their suggestion, this study assessed the broader applicability of Sin *et al.* (2005a) four dimensions of CRM scale and tested it in the context of Jordanian hotel industry. As suggested by Sin *et al.* (2005a), the scope of customer relationship management performance study has to be extended to various contexts. Therefore, in the current study, the hotel industry was selected as the context of the customer relationship management performance study. The positive result of this study strengthens the methodology by adding a new setting and research context.

Based upon recommendations of previous studies (Akroush *et al.*, 2011; Sin *et al.*, 2005a; Yim *et al.*, 2005), this study tested the validity of the umbrella construct (key customer focus, CRM organization, knowledge management, and technology-based CRM) of CRM. These studies assessed CRM using multiple dimensions, while the present study considered the most dominant constructs of CRM. Eventually after exploratory factor analysis was run, all the four dimensions resulted in one single dimension. This phenomenon of single dimensionality of CRM is similar to that found by Yueh *et al.* (2010). The single dimensionality of CRM also supports previous study by Sigala (2005).

5.6 Managerial Implications

Besides theoretical and methodological contributions of this study, several managerial implications can be highlighted. This study has provided key leads to hotels on strategies to manage their customer relationship management through organizational and technological factors so as to ensure a high level of customer relationship management performance.

This study serves as an attempt to provide hotels in Jordan with practical advice as to how they can build and sustain their competitiveness in their sector, which is marred by structural changes and increasing competition and customer demands that require hotel companies to focus on certain core competencies in order to deliver better value to their customers (Sin et al., 2005). Managers will be well served to understand that the CRM performance is indeed generalizable to the Jordanian hotel industry with very slight modifications, which demonstrates similarity in conceptualization and practice concerning CRM components between the Jordanian context and the original setting in which the CRM construct was developed (Hong Kong).

Furthermore, hotel managers in Jordan can acquire insights concerning CRM performance which would help them develop and implement successful CRM strategies. Other service industries among developing countries could also benefit from the study's findings. This becomes important especially in light of Sin *et al.* (2005a) assertion that it is no longer sufficient to advise practitioners or researchers that the key to successful marketing is through CRM, without providing information on what dimensions actually constitute relationships upon which CRM can be considered to exist. Such empirical validation is needed to

provide a sufficient advice as to how the CRM concept can be properly translated into a comprehensive set of concrete organizational activities conducive to CRM success.

The information provided through the evaluation of the relative importance of the antecedent variables can be used by managers to attain greater focus in creating work conditions that promote customer relationship management performance. Specifically, this study found that top management support is the most important predictor of customer relationship management performance in the hotel industry, followed by customer data, customer information processing and CRM functionality. This implies that promotion of customer relationship management performance should start from the top management themselves.

Commitment and support from top management should be highlighted. Top management should show commitment and support in ways such as demonstrating the importance of CRM, providing training to hotels and investing in CRM programs development. Employee training may be developed to teach skills that enhance CRM performance and ultimately improve performance. Moreover, the involvement of top management is core to a successful CRM performance as they enable the stimulation of change through communication and reinforcement of values embedded in the articulated vision of the hotels. The said vision should address how customer centricity will assist the hotel in facing challenges in its future market place and how CRM can be utilized to enable lasting interactions with customers in a way that both parties derive value (Croteau & Li, 2003). This is verified by findings from prior studies regarding

small and large businesses (Sin, 2005). This suggests that the top management factor should remain in the model as an influential factor for CRM performance.

The results also suggest that hotels should have processes to maintain, analyze, and integrate customer information. Processing customer information can help hotels monitor emerging and changing customer needs toward high CRM performance. In reality, many hotels tend to have customer information that is often fragmented, incomplete, and/or inadequate, resulting in loss of revenue opportunities due to inaccurate interpretations of customer needs. Effective customer-information processing can help hotels thoroughly assess the quality of their existing and new customer information. Consequently, enriching customer information with a carefully designed customer database can help hotels identify their most profitable customers and increase their business value.

According to research, customer data are the foundation of every CRM initiative (Goodhue *et al.*, 2002). Evidence from a study stresses the importance of aligning customer data quality and CRM performance. In other words, many studies considered poor data quality to have a severe impact on the CRM performance of an organization (Abbott *et al.*, 2001a). For example, within a single hotel even minor inconsistencies in key business entities identifiers, such as customer, product and sales attributes, can cause major problems when firms ask questions that span multiple data storage systems or hotel's different departments, thwarting their ability to make coordinated, hotel-wide CRM responses to today's business needs. Consequently, enhanced customer data quality with a carefully designed customer database can help hotels identify their most profitable customers and increase their business value.

In terms of CRM functionality, consideration is sufficiently regarded in CRM performance. Hotels recognize that CRM functionality plays an invaluable role in enhancing customer satisfaction and customer loyalty. In light of this, CRM technology allows the integration of a firm's marketing activities (e.g. sales, service, communication, order management, market research and analytics) to bring focus on individual customer acquisition, retention, and profitability. CRM functionality makes it possible to develop good communication with customers and this will allow hotels to respond to customers' requests. Consequently, more adoption of CRM functionality results in better marketing practices, sales automation, and customer services that assist the firm to deal with customer relations, to attract new clients, to generate loyalty among the existing ones, and develop long-time relations with the customers (Eid, 2007).

5.7 Limitations and Future Research Directions

As with any empirical study, some limitations resulted from trade-off decisions in research design can be identified. In light of this, this study suggests some future research directions for studying CRM.

Firstly, this study has provided an innovative step on the prediction of success factors of customer relationship management performance, its impact on hotel performance in the context of Jordanian hotel industry. The research framework investigated technology-related factors and organizational-related factors as the predictors for customer relationship management performance in Jordanian hotel industry. According to the model proposed by Becker *et al.*

(2009), organizational-related factors such as top management, and technology-related factors such as customer data, are the pillars for successful customer relationship management. Therefore, future research should consider other organizational and technological factors that could influence customer relationship management performance.

Secondly, from a methodological standpoint, our research has addressed CRM implementation by adopting a scale developed by Sin *et al.* (2005a). We used this scale in our study since it was claimed to be a valid and reliable scale in a research area that lacks well-established scales in which research and debate is still going on. It has been revealed that the scale of CRM proposed by Sin *et al.* (2005a) is valid, reliable, and generalizable to the Jordanian hotel industry despite producing one dimension only in contrast to the four original dimensions. It is suggested that a potential area of future research lies in the expansion of the four components of CRM success and the investigation of whether any other components impact organizational performance in a way that could add value to CRM implementation.

Thirdly, our study was conducted in the hotel industry in Jordan only. This implies that the generalizability of this study's findings is limited to the hotel industry in Jordan and may not be applicable to other markets without further validation. Although the generalizability of this research is limited to hotel industry in Jordan, this research is consistent with and supportive of the literature of services marketing which strongly recommended conducting research projects in a single hotel industry (Adam, 2010) in order to develop a distinctive body of marketing literature for that particular single hotel industry. A fruitful area of future research is to replicate our modified scale of CRM implementation in other

industries (e.g. tourism, telecommunications, and even manufacturing) in Jordan and other developing and developed countries to examine the generalizability of our modified CRM implementation scale.

Fourthly, this study has investigated the direct relationship between CRM performance and financial performance in hotel industry in Jordan. The major focus of this study was on CRM performance from the CRM and marketing perspectives. A valuable area of future research is to examine interactions between four dimensions of CRM and other functional areas of business and examine how they affect performance. Future studies should examine the moderating effect of environmental factors (e.g. market turbulence, competitive hostility, and market growth) on the association between CRM and financial performance (Sin *et al.*, 2005a).

Fifthly, data for this study were collected by using a key informant approach. Although managers as key informants are adequate sources for reliable and valid data (Sin *et al.*, 2005a), the information about the level of CRM generated by a hotel is not the only source of information. Clearly, it is important to compare the degree of CRM as assessed by internal information (e.g. managers' responses to questionnaires, as we have done in this study) with the level of CRM as perceived by the hotel's customers, competitors, and distributors. This is possibly another challenging area of future research in CRM.

Finally, an empirical investigation of the four dimensions of CRM and their effect on customer satisfaction and loyalty from customers perspectives could be a valuable research area in the future especially in developing countries, e.g. Jordan and the Middle East.

Since the current study did not investigate the mediating role of customer relationship management performance on other variables, future research should study to what extent customer relationship management mediates the relationship between people, technological and process factors and an outcome such as performance.

7.8 Conclusions

The aims of the present research are to investigate the success factors of customer relationship management performance and its impact on financial performance. This study integrates two disciplines of knowledge in one framework, namely customer relationship management performance and financial performance. By integrating these two constructs together in one framework, this study has provided some exploratory information to understand the relationship between customer relationship management performance and organizational performance. Findings of this study suggest that customer relationship management performance has a positive influence on organizational performance. The finding gives managers and academicians a much stronger basis than intuition and success factors, for recommending CRM strategies to ensure high level of Organizational performance. In addition, hotel managers should strive to improve customer relationship management performance in their efforts to increase and improve Organizational performance.

These findings provide additional evidence to the growing body of knowledge concerning the importance of achieving moderate degree of customer relationship management performance. Before readers could disregard the findings as counter intuitive, it should be noted that the results reported are

consistent with prior results. Consequently, the results lead to the conclusion that customer relationship management performance, as measured in this study, is related positively to organizational performance.

With regards to the factors influencing customer relationship management performance, several inferences can be concluded from these findings. It can be concluded that antecedents of customer relationship management performance are quite diverse in their nature and origin. The present study suggests several factors as important determinants of a customer relationship management performance. Specifically, customer relationship management performance appears to be facilitated by the amount of emphasis top management gives to customer relationship management performance through continual reminders to employees that it is critical for them to be sensitive and responsive to customers' needs. Top management's reinforcement of the importance of customer relationship management performance is likely to encourage individuals in the organization to respond to a customer's needs and satisfaction and it can stimulate change by communicating and reinforcing values through an articulated CRM vision for the hotels.

The role of customer information processing in engendering customer relationship management performance appears to be strong, suggesting that hotels in Jordan should have processes to maintain, analyze, and integrate customer information. Processing customer information can help hotels monitor emerging and changing customer needs catering toward high CRM performance. This study has successfully supported the argument that integration of CRM functionality consideration is sufficiently regarded in CRM performance of Jordanian hotel industry. Thus, the more adoption of CRM functionality results in

better marketing practices, sales automation, and customer services that assist the firm to deal with customer relations more properly in Jordanian hotel industry. Customer data quality issues have a direct influence on successful CRM. Therefore, the importance of customer data quality as one of the predicted factors for customer relationship management is fully validated by the Jordanian hotel industry

The research findings reported have been discussed a length in the context of the study's objectives and prior literatures. Implications of individual outcome as well as academic and researcher's perspectives. The model can be used as an explanatory model for CRM performance in another industry, and considered as an original contribution to the knowledge in the field of CRM performance.

In summary, we believe that the current study provided beneficial implications for both academic research and practitioners based on an insightful review of the existing work on CRM performance and organizational performance.

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Appendix (A)
Questionnaire



University Utara Malaysia

College Of Business

Dear Manager,

The purpose of this survey is to investigate the degree of customer relationship management performance among the hotel managers. Besides that, it is also the aim of the study to identify the factors that may influence customer relationship management performance and its impact on hotels performance in Jordan.

I would appreciate your co-operation in making my research a success. Please spare some of your valuable time to complete this questionnaire. I would like to ensure that all the information gained from this survey will be strictly confidential. The results from this research will be used only for academic purposes and not for commercial purposes.

Thank you for participating in this study. Your cooperation in the matter is highly appreciated.

Yours sincerely,

Sultan Mahmoud Alshourah

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CRM (customer relationship management)

CRM definition as a comprehensive strategy and process of acquiring, retaining and collaborating with customer using various technologies such as internet, mobile phone, call center, sales force and other.

Section (1): Hotel profile

The following section lists some questions about your hotel profile, Please tick (√) the appropriate answers

SECTION (2) About Customer Relationship Management (CRM)

1. Annual income : A. 1,000-19,999 [] B. 20,000-59,999 []
 C. 60,000-100,000 [] D. Above 100,000 []
2. Number of employees: A. 1-19 [] B. 20-99 []
 C. 100-500 [] D. Above 500 []
3. Operating age : A. 1-10 years [] B. 11-20 years []
 C. 21-30 years [] D. 31-40 years []
 E. Above 40years []
4. Hotel Category: A. One star [] B. Two stars []
 C. Three stars [] D. Four stars []
 E. Five stars []

1. Does your hotel use CRM? Please tick (√) once only where appropriate :

- A. Yes [] B. No []

If your answer is **NO** please select the reason below to indicate why your hotel does not use CRM.

****You may stop from answering the other questions. Thank you**

Reason	Pleas tick (√) whenever appropriate
• Inadequate supporting budgets.	
• Lack of senior management commitment to CRM.	

<ul style="list-style-type: none"> • Poor communication within department. 	
<ul style="list-style-type: none"> • An absence of customer management skills. 	
<ul style="list-style-type: none"> • Inefficiencies in business process. 	
<ul style="list-style-type: none"> • Lack of end-user input at service stage. 	
<ul style="list-style-type: none"> • A lack of standardization. 	
<ul style="list-style-type: none"> • Inter-departmental conflicts. 	
<ul style="list-style-type: none"> • Lack of cultural readiness. 	
<ul style="list-style-type: none"> • Poor quality customer data and information. 	
<ul style="list-style-type: none"> • Limited or no input from the customers' perspective on CRM. 	

IF your answer is **yes** please proceed with the following questions.

2. Below are list of CRM tools that your hotel might use in your CRM strategy, Please tick (√) the tools that you currently use:

CRM Tools	Yes	No
• E-CRM (interaction with of your customer via internet).		
• CRM system software (e.g.: Siebei, SAP, Oracle).		
• Mobile CRM (interactive communication with customer using a mobile device).		
• Call centers.		
• Voice response systems: (computer system that responds to voice commands).		
• Smart cards: (e.g.: Loyalty card).		
• Sales Force.		
• Customer Service: personal is an after-sales activity to satisfy customers.		
• Point of sale terminals: interaction with of your customer via electronic payment device.		
• Telephone Contact.		

SECTION (3): Organizational Performance

Relative to your sales, how would you rate your hotel's level of achievement on the following criteria? Please CIRCLE your answer according to the following scale:

1- far below expectation 2- below expectation 3- as expected
 4- above expectation 5- far above expectation

1. Our sales growth compared to hotel's competitors is ...	1	2	3	4	5
2. Our Return on investment (ROI) compared to hotel's competitors is ..	1	2	3	4	5
3. Our market share compared to hotel's competitors is...	1	2	3	4	5
4. Our Return on sales (ROS) compared to hotel's Competitors is...	1	2	3	4	5

SECTION (4): Customer Relationship Management (CRM) Performance

Below are the statements related to your perception on the degree of CRM performance of your hotel. Kindly indicate your response based on the following scale:

1 =Very Low 2= Low 3=Neutral 4=High 5= Very High

Key Customer Focus

1. Through ongoing dialogue, we work with individual key customers to Customize our offerings.	1	2	3	4	5
2. We provide customized services and products to our key customers.	1	2	3	4	5
3. We make an effort to find out what our key customer needs.	1	2	3	4	5
4. When we find that our customers would like to modify any services offered, the departments involved make coordinated efforts to do so.	1	2	3	4	5

Organizing Around CRM

1. We have expertise and resources to run the CRM.	1	2	3	4	5
2. Our training programs are designed to develop skills for acquiring and deepening customer relationships.	1	2	3	4	5
3. We have established clear business goals related to customer acquisition, development, retention, and reactivation.	1	2	3	4	5
4. Our Employees performance is measured and rewarded based on meeting customer needs and on successfully service to the customer.	1	2	3	4	5
5. Our hotel structure is designed around our customers.	1	2	3	4	5

Knowledge Management

1. Our employees willing to help customers in a responsive manner.	1	2	3	4	5
--	---	---	---	---	---

2. Our Customer's can expect exactly the level of services.	1	2	3	4	5
3. We understand the needs of our key customer's via knowledge learning.	1	2	3	4	5
4. We provide channels to enable ongoing, two-way communication with our key customer's and us.	1	2	3	4	5
5. Our Customer's can expect prompt service from employees of our hotel	1	2	3	4	5

Technology-based CRM

1. We have the right technical personnel to provide technical support for the utilization of computer technology in building customer relationships.	1	2	3	4	5
2. We have the right software to serve our customers.	1	2	3	4	5
3. We have the right hardware to serve our customers.	1	2	3	4	5
4. Our customer information is available at every point of contact.	1	2	3	4	5
5. We maintain a comprehensive database of our customers.	1	2	3	4	5

SECTION (5): Organizational Factor

The statements below are related to the level of your top management support on CRM, your level of customer orientation and training orientation of your hotel.

For each statement, please indicate your level of agreement based on the following scale:

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

Top Management

1. Top management frequently discusses about CRM with the staff involved	1	2	3	4	5
2. CRM is regarded as a high priority by top management.	1	2	3	4	5
3. Our top management regularly involved throughout the CRM project.	1	2	3	4	5
4. Our Top management perceives CRM to be part of the organization's vision.	1	2	3	4	5
5. Our Top management informs the employees regularly importance of customers.	1	2	3	4	5
6. Top management motivates the employees to achieve the CRM objectives.	1	2	3	4	5
7. Top management involves to a large degree in CRM implementation and entrusted with it.	1	2	3	4	5
8. Top management intensively communicates the importance of CRM internally and externally.	1	2	3	4	5

Customer Orientation

1. We strive to improve value we provide to our customers.	1	2	3	4	5
--	---	---	---	---	---

2. Customer satisfaction is our important business objective.	1	2	3	4	5
3. We attempt to understand customer needs.	1	2	3	4	5
4. We measure customer satisfaction.	1	2	3	4	5
5. We pay close attention to customer service.	1	2	3	4	5
6. In our hotel, retaining customers is considered to be a top priority.	1	2	3	4	5
7. Our employees are encouraged to focus on customer relationships.	1	2	3	4	5
8. In our hotel, customer relationships are considered to be a valuable asset.	1	2	3	4	5
9. Our senior management emphasizes the importance of customer relationships.	1	2	3	4	5

Training Orientation

1. Our training help employees understand customer needs.	1	2	3	4	5
2. Our training facilitates interpersonal skill training to build customer relationships.	1	2	3	4	5
3. Our training helps in developing employee's technical skills to provide quality products / services for our customers.	1	2	3	4	5
4. Our training evaluates improved employee performance after training.	1	2	3	4	5
5. Our hotel schedules new employee training in a timely manner.	1	2	3	4	5
6. Our training helps in improving employee's team building skills to enhance hotel operations.	1	2	3	4	5
7. Our training facilitates learning to promote the quality of our products/ services	1	2	3	4	5
8. We recognize employee career development opportunities.	1	2	3	4	5
9. Our training facilitates employee's learning of effective ways to address customer complaints.	1	2	3	4	5
10. We provides our employee's with the necessary training manual.	1	2	3	4	5

SECTION (6): Technology Factors

The statement below describe about the customer data and customer information processing system implemented in your hotel, please CIRCLE your answer according to the following scale:

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

Customer Data

1. The cost of acquiring data within our hotel is reasonable.	1	2	3	4	5
2. Data (error rates, defect rates, scrap, defects, etc) are easily available when needed.	1	2	3	4	5
3. We can easily access to customer data.	1	2	3	4	5
4. We use tools to manage quality (cost of quality, defects, errors, scrap, etc.)data up to certain extent.	1	2	3	4	5
5. Quality data are available to employees up to a great extent.	1	2	3	4	5
6. Quality data are available to managers and supervisors up to a great extent.	1	2	3	4	5
7. Quality data are used to evaluate supervisor and managerial performance to a great extent.	1	2	3	4	5
8. Quality data, control charts, etc. are displayed at employee's work stations up to a great extent.	1	2	3	4	5

Customer-Information Processing

1. We gather customer-related data.	1	2	3	4	5
2. We maintain a customer data base.	1	2	3	4	5
3. We store data extracted from operational data.	1	2	3	4	5
4. We use customer data base information to develop attractive offerings.	1	2	3	4	5
5. We offer loyalty program to reward repeat customers.	1	2	3	4	5
6. We monitor customer satisfaction.	1	2	3	4	5
7. We make use of customer satisfaction feedback studies to change offerings.	1	2	3	4	5
8. We extract useful knowledge from large customer data sets.	1	2	3	4	5

Integration of CRM

Describe the extent of CRM data integration in your hotel. For each statement please CIRCLE your agreement according to the following scale:

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

1. We provide our sales force with adequate customer information.	1	2	3	4	5
2. We provide our sales force in the field with competitor information.	1	2	3	4	5
3. We assign prospects to appropriate sales personnel.	1	2	3	4	5
4. We provide customized offers to sales people on field.	1	2	3	4	5
5. We provide our sales force with information for cross- selling.	1	2	3	4	5
6. We track product availability and facilitate inventory management.	1	2	3	4	5
7. We control sales through multiple sales channels.	1	2	3	4	5
8. We support marketing planning and budgeting.	1	2	3	4	5
9. We help marketing department analyzing responses to marketing campaigns.	1	2	3	4	5
10. We provide automated routine activities such as providing promotional literature.	1	2	3	4	5
11. We facilitate management of marketing promotions.	1	2	3	4	5
12. We assist marketing department in generating customized offers.	1	2	3	4	5
13. We assist marketing department in customizing our communication to customers.	1	2	3	4	5
14. We allow customer support personnel to access data on customer interactions with all functional areas.	1	2	3	4	5
15. We provide customers access to a knowledge base of solutions to commonly occurring problems (e.g., frequently asked questions).	1	2	3	4	5
16. We regularly schedule and track service delivery.	1	2	3	4	5
17. We emphasis on customizing service scripts to the particular customer's needs.	1	2	3	4	5
18. Data consists of customers' transaction data and external source data.	1	2	3	4	5
19. Our customer information is integrated from different contact points (e.g., mail, telephone, Web, fax).	1	2	3	4	5
20. We allow relevant employees to access unified consumer data.	1	2	3	4	5

Appendix (B)
Factor Analysis

Factors Organizational Initial stage

kMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.817
Bartlett's Test of Sphericity Approx. Chi-Square	2186.510
df	351
Sig.	.000

Anti-image Matrices

		TM1	TM2	TM3	TM4	TM5	TM6	TM7	TM8	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9	TO1	TO2	TO3	TO4	TO5	TO6	TO7	TO8	TO9	TO10
Anti-image Correlation	TM1	.856 ^a	-.024-	-.440-	.173	-.165-	.031	-.355-	.085	.071	-.038-	.067	-.027-	-.359-	.135	-.102-	-.101-	.451	-.244-	.120	.128	-.172-	.016	-.169-	-.162-	.112	.212	.119
	TM2	-.024-	.919 ^a	-.285-	-.101-	-.162-	-.154-	.005	-.007-	.201	.199	.050	.085	-.230-	-.193-	-.129-	.120	.078	.117	.047	-.078-	.156	-.177-	-.275-	.175	-.117-	-.004-	-.115-
	TM3	-.440-	-.285-	.771 ^a	-.456-	-.194-	.280	.177	.081	-.078-	.078	-.040-	-.434-	.497	-.233-	.098	.111	-.297-	.000	.045	-.015-	-.268-	.165	.291	.003	.178	-.490-	.215
	TM4	.173	-.101-	-.456-	.805 ^a	-.232-	-.279-	.006	-.449-	.119	-.332-	.294	.185	-.281-	.252	-.344-	-.220-	.427	.194	-.090-	-.286-	.108	-.077-	-.040-	.017	.101	.173	-.051-
	TM5	-.165-	-.162-	-.194-	-.232-	.859 ^a	-.073-	-.208-	.144	-.046-	-.036-	-.044-	.174	-.074-	.061	.410	-.215-	-.392-	.082	-.161-	.083	.134	-.015-	-.063-	.157	-.124-	.180	-.171-
	TM6	.031	-.154-	.280	-.279-	-.073-	.686 ^a	-.425-	.422	-.280-	.406	-.238-	-.117-	.183	-.088-	.080	.057	-.230-	-.107-	-.048-	.111	-.268-	.132	.159	-.112-	.131	-.195-	.205
	TM7	-.355-	.005	.177	.006	-.208-	-.425-	.877 ^a	-.547-	.221	-.187-	-.046-	.007	.103	.026	-.122-	.084	-.020-	-.029-	-.054-	-.069-	.273	-.144-	.028	-.059-	-.152-	-.124-	-.065-
	TM8	.085	-.007-	.081	-.449-	.144	.422	-.547-	.769 ^a	-.329-	.397	-.211-	-.157-	.272	-.255-	.082	.166	-.157-	-.219-	.089	.218	-.218-	.153	-.099-	-.116-	.167	.014	.000
CO1	.071	.201	-.078-	.119	-.046-	-.280-	.221	-.329-	.686 ^a	-.258-	-.018-	.096	-.298-	.223	-.025-	-.182-	.087	-.071-	-.097-	-.037-	.056	-.166-	.104	.045	-.153-	-.084-	.141	
CO2	-.038-	.199	.078	-.332-	-.036-	.406	-.187-	.397	-.258-	.770 ^a	-.380-	-.176-	.226	-.261-	.108	.056	-.273-	.010	.019	-.034-	-.125-	.125	-.103-	-.009-	.191	-.136-	.027	
CO3	.067	.050	-.040-	.294	-.044-	-.238-	-.046-	-.211-	-.018-	-.380-	.779 ^a	-.210-	-.173-	-.204-	-.369-	.094	.163	.200	.046	-.331-	.192	-.309-	.036	.413	.171	-.065-	.004	
CO4	-.027-	.085	-.434-	.185	.174	-.117-	.007	-.157-	.096	-.176-	-.210-	.874 ^a	-.429-	.224	-.057-	-.093-	.082	-.105-	-.098-	.229	.073	-.023-	-.195-	-.176-	-.208-	.251	.021	
CO5	-.359-	-.230-	.497	-.281-	-.074-	.183	.103	.272	-.298-	.226	-.173-	-.429-	.797 ^a	-.466-	.041	.158	-.322-	.197	-.035-	-.053-	-.042-	.128	.086	-.022-	.159	-.203-	-.211-	
CO6	.135	-.193-	-.233-	.252	.061	-.088-	.026	-.255-	.223	-.261-	-.204-	.224	-.466-	.807 ^a	-.001-	-.527-	.251	-.342-	.276	.007	-.233-	.111	.226	-.228-	-.207-	.251	.038	
CO7	-.102-	-.129-	.098	-.344-	.410	.080	-.122-	.082	-.025-	.108	-.369-	-.057-	.041	-.001-	.838 ^a	-.331-	-.461-	.044	-.254-	.235	-.137-	.238	.139	-.034-	-.266-	.131	-.123-	

CO8	-.101-	.120	.111	-.220-	-.215-	.057	.084	.166	-.182-	.056	.094	-.093-	.158	-.527-	-.331-	.863 ^a	-.180-	.027	-.043-	.198	.228	-.036-	-.093-	.056	.084	-.299-	.019
CO9	.451	.078	-.297-	.427	-.392-	-.230-	-.020-	-.157-	.087	-.273-	.163	.082	-.322-	.251	-.461-	-.180-	.698 ^a	-.240-	.129	-.017-	-.014-	-.146-	-.216-	-.223-	-.021-	.242	.251
TO1	-.244-	.117	.000	.194	.082	-.107-	-.029-	-.219-	-.071-	.010	.200	-.105-	.197	-.342-	.044	.027	-.240-	.838 ^a	-.368-	-.489-	.224	-.036-	-.004-	.256	.133	-.066-	-.296-
TO2	.120	.047	.045	-.090-	-.161-	-.048-	-.054-	.089	-.097-	.019	.046	-.098-	-.035-	.276	-.254-	-.043-	.129	-.368-	.882 ^a	-.009-	-.304-	.073	-.002-	.160	-.182-	-.048-	-.014-
TO3	.128	-.078-	-.015-	-.286-	.083	.111	-.069-	.218	-.037-	-.034-	-.331-	.229	-.053-	.007	.235	.198	-.017-	-.489-	-.009-	.799 ^a	-.264-	.195	-.188-	-.433-	-.173-	.035	.118
TO4	-.172-	.156	-.268-	.108	.134	-.268-	.273	-.218-	.056	-.125-	.192	.073	-.042-	-.233-	-.137-	.228	-.014-	.224	-.304-	-.264-	.782 ^a	-.510-	-.205-	.378	-.102-	.038	-.357-
TO5	.016	-.177-	.165	-.077-	-.015-	.132	-.144-	.153	-.166-	.125	-.309-	-.023-	.128	.111	.238	-.036-	-.146-	-.036-	.073	.195	-.510-	.653 ^a	-.065-	-.444-	.170	-.090-	.114
TO6	-.169-	-.275-	.291	-.040-	-.063-	.159	.028	-.099-	.104	-.103-	.036	-.195-	.086	.226	.139	-.093-	-.216-	-.004-	-.002-	-.188-	-.205-	-.065-	.877 ^a	.046	-.080-	-.297-	.024
TO7	-.162-	.175	.003	.017	.157	-.112-	-.059-	-.116-	.045	-.009-	.413	-.176-	-.022-	-.228-	-.034-	.056	-.223-	.256	.160	-.433-	.378	-.444-	.046	.748 ^a	-.217-	-.144-	-.287-
TO8	.112	-.117-	.178	.101	-.124-	.131	-.152-	.167	-.153-	.191	.171	-.208-	.159	-.207-	-.266-	.084	-.021-	.133	-.182-	-.173-	-.102-	.170	-.080-	-.217-	.839 ^a	-.307-	.131
TO9	.212	-.004-	-.490-	.173	.180	-.195-	-.124-	.014	-.084-	-.136-	-.065-	.251	-.203-	.251	.131	-.299-	.242	-.066-	-.048-	.035	.038	-.090-	-.297-	-.144-	-.307-	.838 ^a	-.327-
TO10	.119	-.115-	.215	-.051-	-.171-	.205	-.065-	.000	.141	.027	.004	.021	-.211-	.038	-.123-	.019	.251	-.296-	-.014-	.118	-.357-	.114	.024	-.287-	.131	-.327-	.875 ^a

a. Measures of Sampling Adequacy(MSA)

Communalities

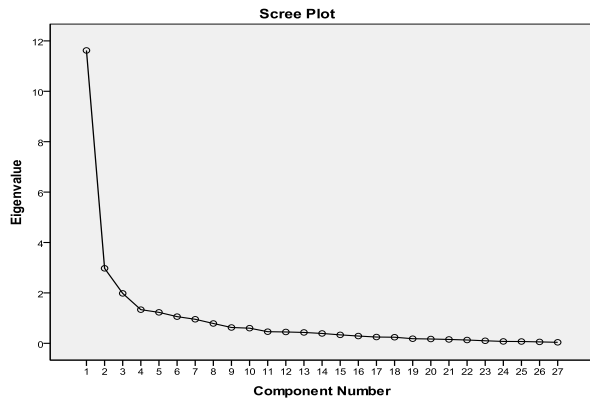
	Initial	Extraction
TM1	1.000	.790
TM2	1.000	.798
TM3	1.000	.832
TM4	1.000	.810
TM5	1.000	.811
TM6	1.000	.614
TM7	1.000	.707
TM8	1.000	.518
CO1	1.000	.654
CO2	1.000	.730
CO3	1.000	.766
CO4	1.000	.704
CO5	1.000	.737
CO6	1.000	.864
CO7	1.000	.839
CO8	1.000	.784
CO9	1.000	.743
TO1	1.000	.691
TO2	1.000	.839
TO3	1.000	.716
TO4	1.000	.755
TO5	1.000	.772
TO6	1.000	.708
TO7	1.000	.849
TO8	1.000	.718
TO9	1.000	.702
TO10	1.000	.749

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	11.621	43.041	43.041	11.621	43.041	43.041	5.131	19.003
2	2.975	11.020	54.061	2.975	11.020	54.061	4.693	17.382	36.385
3	1.981	7.336	61.397	1.981	7.336	61.397	4.478	16.586	52.971
4	1.336	4.946	66.344	1.336	4.946	66.344	3.029	11.220	64.191
5	1.228	4.548	70.892	1.228	4.548	70.892	1.505	5.576	69.767
6	1.059	3.922	74.814	1.059	3.922	74.814	1.363	5.047	74.814
7	.954	3.533	78.347						
8	.787	2.915	81.262						
9	.628	2.325	83.587						
10	.601	2.225	85.812						
11	.461	1.709	87.520						
12	.450	1.667	89.188						
13	.431	1.598	90.785						
14	.391	1.449	92.234						
15	.335	1.242	93.477						
16	.289	1.069	94.546						
17	.249	.923	95.469						
18	.241	.894	96.363						
19	.183	.678	97.041						
20	.171	.634	97.675						
21	.154	.569	98.243						
22	.131	.486	98.729						
23	.101	.374	99.103						
24	.075	.277	99.379						
25	.072	.266	99.645						
26	.056	.208	99.853						
27	.040	.147	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component					
	1	2	3	4	5	6
TM7	.803					
TM2	.781					
TM4	.763					
CO4	.760					
CO6	.755					
TM1	.748					
CO5	.744					
TM3	.736					
CO7	.722					
TO1	.715					
TO9	.714					
CO8	.689					
TO10	.688					
TM8	.685					
TM5	.670					
TO4	.654					
TO2	.610					
TO6	.606					
TO3	.590					
CO3	.575					
TO8	.574					
CO2	.566					
CO9	.556					
TO7						
TM6						
CO1						
TO5						.582

Extraction Method: Principal Component Analysis.
6 components extracted

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
TO3	.777				
TO10	.760				
TO1	.724				
TO4	.712				
TO9	.678				
TO2	.633				
TO6	.610				
TO8	.557			.554	
TM8					
CO3		.841			
CO6		.773			
CO2		.714			
CO5		.700			
CO4		.677			
CO7		.635			
CO8		.617			
TM3			.801		
TM4			.787		
TM5			.777		
TM2			.740		
TM1			.731		
TM7					
TM6				.741	
CO9				.718	
CO1					
TO5					.807
TO7					

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

a. Rotation converged in 16 iterations.

Factors Organizational Second stage

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.828
Bartlett's Test of Sphericity	Approx. Chi-Square
	2059.549
	df
	325
	Sig.
	.000

Anti-image Matrices

	TM1	TM2	TM3	TM4	TM5	TM6	TM7	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9	TO1	TO2	TO3	TO4	TO5	TO6	TO7	TO8	TO9	TO10	
Anti-image Correlation	TM1	.838 ^a	-.024-	-.450-	.237	-.180-	-.005-	-.370-	.105	-.079-	.087	-.014-	-.398-	.163	-.110-	-.117-	.472	-.232-	.113	.113	-.158-	.003	-.162-	-.154-	.099	.211	.119
	TM2	-.024-	.912 ^a	-.286-	-.117-	-.162-	-.166-	.001	.211	.220	.049	.085	-.237-	-.202-	-.129-	.123	.078	.118	.048	-.078-	.158	-.178-	-.278-	.175	-.118-	-.004-	-.115-
	TM3	-.450-	-.286-	.760 ^a	-.471-	-.209-	.272	.264	-.054-	.051	-.024-	-.428-	.495	-.221-	.092	.099	-.289-	.018	.038	-.034-	-.258-	.155	.302	.012	.168	-.493-	.216
	TM4	.237	-.117-	-.471-	.845 ^a	-.190-	-.110-	-.320-	-.034-	-.187-	.228	.130	-.184-	.160	-.345-	-.165-	.404	.109	-.056-	-.216-	.012	-.009-	-.095-	-.039-	.200	.200	-.057-
	TM5	-.180-	-.162-	-.209-	-.190-	.850 ^a	-.148-	-.156-	.002	-.102-	-.015-	.201	-.119-	.102	.404	-.245-	-.378-	.117	-.176-	.053	.171	-.038-	-.050-	.176	-.151-	.180	-.173-
	TM6	-.005-	-.166-	.272	-.110-	-.148-	.812 ^a	-.256-	-.165-	.287	-.168-	-.056-	.079	.022	.050	-.015-	-.183-	-.017-	-.095-	.022	-.199-	.075	.223	-.070-	.067	-.221-	.226
	TM7	-.370-	.001	.264	-.320-	-.156-	-.256-	.890 ^a	.052	.039	-.197-	-.095-	.312	-.141-	-.092-	.212	-.129-	-.183-	-.007-	.062	.188	-.073-	-.032-	-.147-	-.074-	-.139-	-.078-
	CO1	.105	.211	-.054-	-.034-	.002	-.165-	.052	.820 ^a	-.147-	-.094-	.048	-.230-	.152	.002	-.137-	.037	-.155-	-.072-	.037	-.016-	-.124-	.076	.007	-.106-	-.084-	.149
	CO2	-.079-	.220	.051	-.187-	-.102-	.287	.039	-.147-	.868 ^a	-.331-	-.126-	.134	-.181-	.083	-.011-	-.233-	.108	-.017-	-.134-	-.043-	.071	-.070-	.041	.138	-.154-	.029
	CO3	.087	.049	-.024-	.228	-.015-	-.168-	-.197-	-.094-	-.331-	.791 ^a	-.252-	-.124-	-.272-	-.361-	.133	.135	.161	.067	-.299-	.154	-.287-	.016	.400	.214	-.063-	.004
	CO4	-.014-	.085	-.428-	.130	.201	-.056-	-.095-	.048	-.126-	-.252-	.875 ^a	-.407-	.193	-.045-	-.069-	.059	-.144-	-.085-	.273	.040	.001	-.214-	-.198-	-.186-	.256	.021
	CO5	-.398-	-.237-	.495	-.184-	-.119-	.079	.312	-.230-	.134	-.124-	-.407-	.809 ^a	-.427-	.019	.119	-.294-	.274	-.062-	-.119-	.018	.091	.118	.010	.120	-.214-	-.219-
	CO6	.163	-.202-	-.221-	.160	.102	.022	-.141-	.152	-.181-	-.272-	.193	-.427-	.805 ^a	.021	-.509-	.221	-.421-	.310	.066	-.305-	.157	.209	-.268-	-.172-	.263	.039
	CO7	-.110-	-.129-	.092	-.345-	.404	.050	-.092-	.002	.083	-.361-	-.045-	.019	.021	.835 ^a	-.351-	-.456-	.064	-.263-	.223	-.122-	.229	.148	-.024-	-.285-	.130	-.124-
	CO8	-.117-	.123	.099	-.165-	-.245-	-.015-	.212	-.137-	-.011-	.133	-.069-	.119	-.509-	-.351-	.861 ^a	-.158-	.066	-.059-	.168	.275	-.063-	-.078-	.077	.058	-.306-	.020
	CO9	.472	.078	-.289-	.404	-.378-	-.183-	-.129-	.037	-.233-	.135	.059	-.294-	.221	-.456-	-.158-	.704 ^a	-.285-	.146	.017	-.050-	-.125-	-.235-	-.246-	.005	.247	.254
	TO1	-.232-	.118	.018	.109	.117	-.017-	-.183-	-.155-	.108	.161	-.144-	.274	-.421-	.064	.066	-.285-	.820 ^a	-.358-	-.464-	.185	-.002-	-.027-	.238	.176	-.064-	-.303-
	TO2	.113	.048	.038	-.056-	-.176-	-.095-	-.007-	-.072-	-.017-	.067	-.085-	-.062-	.310	-.263-	-.059-	.146	-.358-	.874 ^a	-.029-	-.293-	.060	.007	.172	-.200-	-.050-	-.015-
	TO3	.113	-.078-	-.034-	-.216-	.053	.022	.062	.037	-.134-	-.299-	.273	-.119-	.066	.223	.168	.017	-.464-	-.029-	.814 ^a	-.228-	.167	-.172-	-.420-	-.218-	.033	.121

TO4	-.158-	.158	-.258-	.012	.171	-.199-	.188	-.016-	-.043-	.154	.040	.018	-.305-	-.122-	.275	-.050-	.185	-.293-	-.228-	.796 ^a	-.494-	-.234-	.364	-.068-	.042	-.366-
TO5	.003	-.178-	.155	-.009-	-.038-	.075	-.073-	-.124-	.071	-.287-	.001	.091	.157	.229	-.063-	-.125-	-.002-	.060	.167	-.494-	.684 ^a	-.050-	-.434-	.148	-.093-	.115
TO6	-.162-	-.278-	.302	-.095-	-.050-	.223	-.032-	.076	-.070-	.016	-.214-	.118	.209	.148	-.078-	-.235-	-.027-	.007	-.172-	-.234-	-.050-	.868 ^a	.035	-.065-	-.298-	.024
TO7	-.154-	.175	.012	-.039-	.176	-.070-	-.147-	.007	.041	.400	-.198-	.010	-.268-	-.024-	.077	-.246-	.238	.172	-.420-	.364	-.434-	.035	.741 ^a	-.202-	-.143-	-.289-
TO8	.099	-.118-	.168	.200	-.151-	.067	-.074-	-.106-	.138	.214	-.186-	.120	-.172-	-.285-	.058	.005	.176	-.200-	-.218-	-.068-	.148	-.065-	-.202-	.845 ^a	-.314-	.132
TO9	.211	-.004-	-.493-	.200	.180	-.221-	-.139-	-.084-	-.154-	-.063-	.256	-.214-	.263	.130	-.306-	.247	-.064-	-.050-	.033	.042	-.093-	-.298-	-.143-	-.314-	.827 ^a	-.327-
TO10	.119	-.115-	.216	-.057-	-.173-	.226	-.078-	.149	.029	.004	.021	-.219-	.039	-.124-	.020	.254	-.303-	-.015-	.121	-.366-	.115	.024	-.289-	.132	-.327-	.865 ^a

a. Measures of Sampling Adequacy(MSA)

Communalities

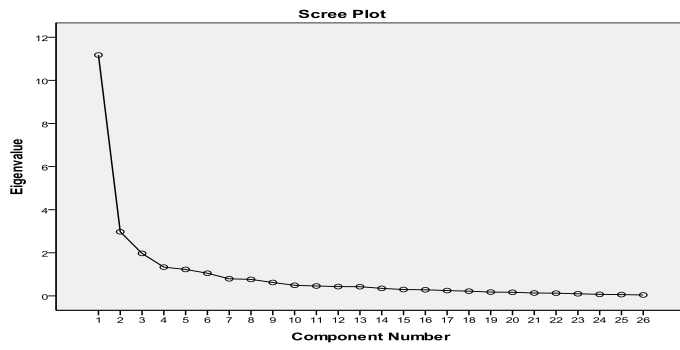
	Initial	Extraction
TM1	1.000	.792
TM2	1.000	.807
TM3	1.000	.832
TM4	1.000	.799
TM5	1.000	.806
TM6	1.000	.622
TM7	1.000	.696
CO1	1.000	.658
CO2	1.000	.728
CO3	1.000	.766
CO4	1.000	.704
CO5	1.000	.761
CO6	1.000	.863
CO7	1.000	.843
CO8	1.000	.790
CO9	1.000	.740
TO1	1.000	.649
TO2	1.000	.855
TO3	1.000	.716
TO4	1.000	.761
TO5	1.000	.779
TO6	1.000	.700
TO7	1.000	.850
TO8	1.000	.742
TO9	1.000	.711
TO10	1.000	.766

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.175	42.980	42.980	11.175	42.980	42.980	5.038	19.378	19.378
2	2.975	11.441	54.421	2.975	11.441	54.421	4.637	17.835	37.214
3	1.971	7.581	62.002	1.971	7.581	62.002	4.290	16.502	53.715
4	1.335	5.134	67.136	1.335	5.134	67.136	3.010	11.575	65.290
5	1.228	4.721	71.857	1.228	4.721	71.857	1.388	5.337	70.628
6	1.052	4.045	75.902	1.052	4.045	75.902	1.371	5.275	75.902
7	.794	3.053	78.955						
8	.765	2.942	81.897						
9	.622	2.392	84.289						
10	.492	1.891	86.180						
11	.460	1.768	87.948						
12	.432	1.662	89.610						
13	.427	1.642	91.252						
14	.349	1.343	92.595						
15	.295	1.135	93.730						
16	.284	1.093	94.824						
17	.247	.951	95.774						
18	.220	.845	96.620						
19	.177	.682	97.301						
20	.167	.642	97.944						
21	.135	.518	98.462						
22	.126	.486	98.948						
23	.099	.381	99.329						
24	.072	.276	99.605						
25	.060	.230	99.835						
26	.043	.165	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component					
	1	2	3	4	5	6
TM7	.791					
TM2	.783					
CO4	.760					
TM4	.756					
CO6	.753					
CO5	.752					
TM1	.745					
TM3	.734					
CO7	.724					
TO9	.719					
TO1	.708					
CO8	.695					
TO1	.687					
0						
TM5	.675					
TO4	.654					
TO2	.614					
TO6	.608					
TO3	.590					
TO8	.582					
CO3	.574					
CO2	.572					
CO9	.562					
TO7						
TM6						
CO1						
TO5						.588

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
TO3	.783					
TO10	.764					
TO4	.735					
TO9	.712					
TO1	.690					
TO6	.648					
TO2	.644					
TO8	.585					
CO3		.837				
CO6		.783				
CO5		.714				
CO2		.711				
CO4		.681				
CO7		.641				
CO8		.621				
TM3			.800			
TM4			.783			
TM5			.779			
TM2			.736			
TM1			.731			
TM6				.745		
CO9				.724		
CO1						
TM7						
TO5					.794	
TO7						.649

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

a. Rotation converged in 16 iterations.

Factors analyses to Organizational performance

Correlation Matrix

		Organizational performance 1	Organizational performance 2	Organizational performance 3	Organizational performance 4
Correlation	Organizational performance 1	1.000	.575	.691	.616
	Organizational performance 2	.575	1.000	.613	.517
	Organizational performance 3	.391	.513	1.000	.840
	Organizational performance 4	.216	.417	.640	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.817
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	348.073
	6
	.000

Anti-image Matrices

		Organizational performance 1	Organizational performance 2	Organizational performance 3	Organizational performance 4
Anti-image Correlation	Organizational performance 1	.845 ^a	-.362-	-.101-	-.452-
	Organizational performance 2	-.362-	.829 ^a	-.480-	.072
	Organizational performance 3	-.101-	-.480-	.797 ^a	-.515-
	Organizational performance 4	-.452-	.072	-.515-	.799 ^a

a. Measures of Sampling Adequacy(MSA)

Communalities

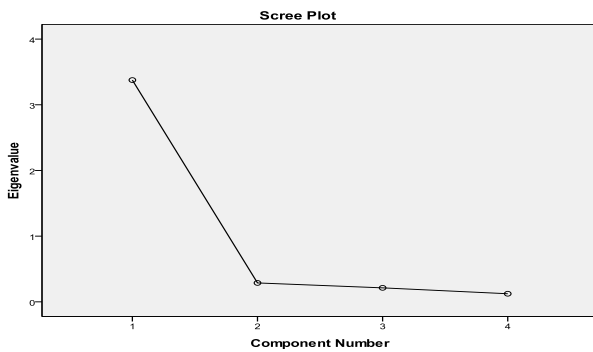
	Initial	Extraction
Organizational performance 1	1.000	.847
Organizational performance 2	1.000	.807
Organizational performance 3	1.000	.879
Organizational performance 4	1.000	.844

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.376	84.407	84.407	3.376	84.407	84.407
2	.288	7.193	91.600			
3	.213	5.320	96.920			
4	.123	3.080	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component
	1
Organizational performance 3	.938
Organizational performance 1	.920
Organizational performance 4	.918
Organizational performance 2	.898

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

CRM performance Initial stage

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.825
Bartlett's Test of Sphericity	Approx. Chi-Square	731.054
	df	171
	Sig.	.000

Anti-image Matrices

	CRM KCF1	CRM KCF2	CRM KCF3	CRM KCF4	CRM O1	CRM O2	CRM O3	CRM O4	CRM O5	CRM KM1	CRM KM2	CRM KM3	CRM KM4	CRM KM5	CRM T1	CRM T2	CRM T3	CRM T4	CRM T5
Anti-image Correlation	.786(a)	-.276	.034	.021	.005	.077	-.014	.053	.052	-.325	.051	-.068	-.085	.065	-.028	.040	-.093	-.009	-.010
CRM KCF1																			
CRM KCF2	-.276	.718(a)	-.211	-.052	-.041	-.172	-.028	-.034	-.074	.139	-.183	.050	.098	-.055	-.061	-.163	.115	.238	-.035
CRM KCF3	.034	-.211	.570(a)	-.165	-.087	.107	-.170	-.083	.125	.078	-.046	-.098	-.113	-.034	.130	.199	-.071	.028	.118
CRM KCF4	.021	-.052	-.165	.843(a)	.004	-.261	-.156	-.003	-.212	-.138	.137	-.107	.058	-.029	-.123	-.042	-.118	.002	.188
CRM O1	.005	-.041	-.087	.004	.793(a)	-.319	-.086	-.266	-.262	-.003	-.020	-.117	-.198	.194	-.069	-.127	-.041	.129	.251
CRM O2	.077	-.172	.107	-.261	-.319	.627(a)	.090	.181	.190	.025	-.044	.025	-.045	.076	.108	.074	-.086	-.279	-.272
CRM O3	-.014	-.028	-.170	-.156	-.086	.090	.847(a)	.024	-.288	.128	-.152	.146	-.050	.107	-.215	.146	-.036	-.307	-.170
CRM O4	.053	-.034	-.083	-.003	-.266	.181	.024	.784(a)	.229	-.048	-.069	-.125	-.033	.018	.067	-.177	-.206	-.166	-.031
CRM O5	.052	-.074	.125	-.212	-.262	.190	-.288	.229	.834(a)	-.140	-.298	-.230	.121	-.126	.150	-.143	-.039	.041	.026
CRM KM1	-.325	.139	.078	-.138	-.003	.025	.128	-.048	-.140	.808(a)	-.313	-.023	-.087	-.149	-.061	.120	.179	.234	-.189
CRM KM2	.051	-.183	-.046	.137	-.020	-.044	-.152	-.069	-.298	-.313	.891(a)	.111	-.253	.011	-.032	-.044	.005	-.195	-.067
CRM KM3	-.068	.050	-.098	-.107	-.117	.025	.146	-.125	-.230	-.023	.111	.839(a)	-.021	-.206	-.061	.006	.166	-.181	-.547

CRM KM4	-.085	.098	-.113	.058	-.198	-.045	-.050	-.033	.121	-.087	-.253	-.021	.884(a)	-.347	-.234	-.132	.036	.104	.017
CRM KM5	.065	-.055	-.034	-.029	.194	.076	.107	.018	-.126	-.149	.011	-.206	-.347	.866(a)	-.225	.114	-.174	-.186	.029
CRM T1	-.028	-.061	.130	-.123	-.069	.108	-.215	.067	.150	-.061	-.032	-.061	-.234	-.225	.903(a)	-.100	-.088	-.057	.042
CRM T2	.040	-.163	.199	-.042	-.127	.074	.146	-.177	-.143	.120	-.044	.006	-.132	.114	-.100	.850(a)	-.077	-.157	-.138
CRM T3	-.093	.115	-.071	-.118	-.041	-.086	-.036	-.206	-.039	.179	.005	.166	.036	-.174	-.088	-.077	.816(a)	.046	-.280
CRM T4	-.009	.238	.028	.002	.129	-.279	-.307	-.166	.041	.234	-.195	-.181	.104	-.186	-.057	-.157	.046	.777(a)	.042
CRM T5	-.010	-.035	.118	.188	.251	-.272	-.170	-.031	.026	-.189	-.067	-.547	.017	.029	.042	-.138	-.280	.042	.779(a)

a Measures of Sampling Adequacy(MSA)

Communalities

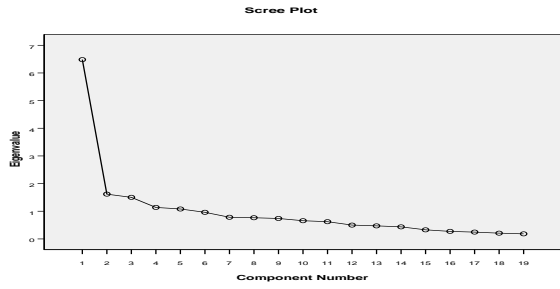
	Initial	Extraction
CRM KCF1	1.000	.552
CRM KCF2	1.000	.628
CRM KCF3	1.000	.601
CRM KCF4	1.000	.555
CRM O1	1.000	.600
CRM O2	1.000	.678
CRM O3	1.000	.647
CRM O4	1.000	.720
CRM O5	1.000	.614
CRM KM1	1.000	.710
CRM KM2	1.000	.646
CRM KM3	1.000	.640
CRM KM4	1.000	.655
CRM KM5	1.000	.690
CRM T1	1.000	.566
CRM T2	1.000	.571
CRM T3	1.000	.406
CRM T4	1.000	.650
CRM T5	1.000	.695

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.482	34.114	34.114	6.482	34.114	34.114	4.427	23.298	23.298
2	1.619	8.520	42.633	1.619	8.520	42.633	2.177	11.460	34.758
3	1.503	7.912	50.545	1.503	7.912	50.545	2.076	10.925	45.682
4	1.139	5.996	56.541	1.139	5.996	56.541	1.594	8.387	54.069
5	1.082	5.696	62.237	1.082	5.696	62.237	1.552	8.168	62.237
6	.961	5.060	67.298						
7	.782	4.118	71.415						
8	.766	4.032	75.447						
9	.739	3.890	79.337						
10	.658	3.464	82.801						
11	.623	3.278	86.079						
12	.500	2.630	88.709						
13	.471	2.480	91.190						
14	.436	2.295	93.484						
15	.328	1.728	95.212						
16	.273	1.434	96.647						
17	.246	1.295	97.942						
18	.208	1.094	99.035						
19	.183	.965	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix(a)

	Component				
	1	2	3	4	5
CRM KM2	.786				
CRM KM3	.737				
CRM KM4	.732				
CRM O5	.723				
CRM KM5	.692				
CRM T1	.688				
CRM O3	.666				
CRM T5	.653				
CRM O1	.566				
CRM T4					
CRM KCF4					
CRM T2					
CRM T3					
CRM KM1	.581	-.593			
CRM KCF1		-.554			
CRM KCF3			.640		
CRM KCF2					
CRM O2					
CRM O4					.629

Extraction Method: Principal Component Analysis.
a 5 components extracted.

Rotated Component Matrix(a)

	Component				
	1	2	3	4	5
CRM KM5	.813				
CRM KM1	.701				
CRM KM4	.696				
CRM T1	.688				
CRM KM2	.658				
CRM KM3	.649				
CRM O5	.591				
CRM T5					
CRM O3					
CRM O4		.823			
CRM T2		.659			
CRM T3					
CRM O1					
CRM O2			.794		
CRM KCF4					
CRM T4					
CRM KCF2				.687	
CRM KCF1				.624	
CRM KCF3					.768

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 11 iterations.

CRM performance Second stage

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.826
Bartlett's Test of Sphericity	Approx. Chi-Square df	697.118
	Sig.	.000

Anti-image Matrices

	CRM KCF1	CRM KCF2	CRM KCF3	CRM KCF4	CRM O1	CRM O2	CRM O3	CRM O4	CRM O5	CRM KM1	CRM KM2	CRM KM3	CRM KM4	CRM KM5	CRM T1	CRM T2	CRM T4	CRM T5
Anti-image Correlation CRM KCF1	.803(a)	-.268	.028	.010	.001	.070	-.018	.035	.049	-.315	.052	-.054	-.082	.050	-.037	.033	-.005	-.038
CRM KCF2	-.268	.742(a)	-.205	-.039	-.036	-.164	-.024	-.010	-.070	.122	-.184	.032	.095	-.036	-.051	-.156	.234	-.003
CRM KCF3	.028	-.205	.569(a)	-.175	-.091	.101	-.173	-.100	.123	.093	-.046	-.087	-.110	-.048	.125	.195	.031	.102
CRM KCF4	.010	-.039	-.175	.842(a)	-.001	-.274	-.162	-.028	-.218	-.120	.138	-.090	.063	-.050	-.134	-.052	.007	.163
CRM O1	.001	-.036	-.091	-.001	.785(a)	-.324	-.087	-.281	-.264	.004	-.020	-.111	-.197	.190	-.073	-.131	.131	.249
CRM O2	.070	-.164	.101	-.274	-.324	.605(a)	.088	.168	.187	.041	-.044	.040	-.043	.062	.101	.068	-.276	-.309
CRM O3	-.018	-.024	-.173	-.162	-.087	.088	.838(a)	.017	-.290	.137	-.152	.155	-.048	.102	-.219	.143	-.306	-.188
CRM O4	.035	-.010	-.100	-.028	-.281	.168	.017	.787(a)	.226	-.012	-.070	-.094	-.027	-.018	.050	-.197	-.160	-.094
CRM O5	.049	-.070	.123	-.218	-.264	.187	-.290	.226	.831(a)	-.135	-.298	-.227	.122	-.135	.147	-.146	.043	.016
CRM KM1	-.315	.122	.093	-.120	.004	.041	.137	-.012	-.135	.828(a)	-.319	-.055	-.095	-.122	-.047	.136	.230	-.147

CRM KM2	.052	-.184	-.046	.138	-.020	-.044	-.152	-.070	-.298	-.319	.887(a)	.112	-.253	.012	-.032	-.044	-.195	-.069
CRM KM3	-.054	.032	-.087	-.090	-.111	.040	.155	-.094	-.227	-.055	.112	.851(a)	-.027	-.182	-.047	.019	-.192	-.529
CRM KM4	-.082	.095	-.110	.063	-.197	-.043	-.048	-.027	.122	-.095	-.253	-.027	.882(a)	-.346	-.231	-.130	.103	.028
CRM KM5	.050	-.036	-.048	-.050	.190	.062	.102	-.018	-.135	-.122	.012	-.182	-.346	.875(a)	-.245	.102	-.180	-.021
CRM T1	-.037	-.051	.125	-.134	-.073	.101	-.219	.050	.147	-.047	-.032	-.047	-.231	-.245	.900(a)	-.107	-.053	.018
CRM T2	.033	-.156	.195	-.052	-.131	.068	.143	-.197	-.146	.136	-.044	.019	-.130	.102	-.107	.838(a)	-.154	-.167
CRM T4	-.005	.234	.031	.007	.131	-.276	-.306	-.160	.043	.230	-.195	-.192	.103	-.180	-.053	-.154	.771(a)	.058
CRM T5	-.038	-.003	.102	.163	.249	-.309	-.188	-.094	.016	-.147	-.069	-.529	.028	-.021	.018	-.167	.058	.789(a)

a Measures of Sampling Adequacy(MSA)

Communalities

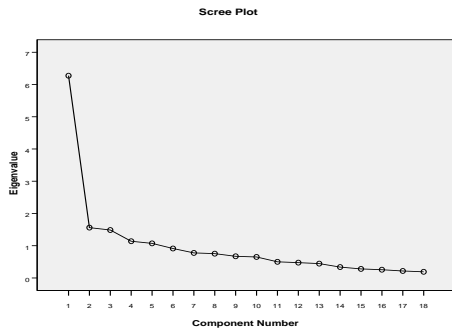
	Initial	Extraction
CRM KCF1	1.000	.583
CRM KCF2	1.000	.629
CRM KCF3	1.000	.597
CRM KCF4	1.000	.567
CRM O1	1.000	.623
CRM O2	1.000	.692
CRM O3	1.000	.641
CRM O4	1.000	.701
CRM O5	1.000	.591
CRM KM1	1.000	.701
CRM KM2	1.000	.646
CRM KM3	1.000	.652
CRM KM4	1.000	.662
CRM KM5	1.000	.688
CRM T1	1.000	.566
CRM T2	1.000	.620
CRM T4	1.000	.686
CRM T5	1.000	.688

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.273	34.851	34.851	6.273	34.851	34.851	4.473	24.849	24.849
2	1.561	8.674	43.525	1.561	8.674	43.525	1.942	10.786	35.635
3	1.486	8.257	51.782	1.486	8.257	51.782	1.872	10.398	46.033
4	1.139	6.327	58.109	1.139	6.327	58.109	1.654	9.189	55.222
5	1.072	5.958	64.068	1.072	5.958	64.068	1.592	8.846	64.068
6	.913	5.074	69.141						
7	.777	4.315	73.456						
8	.754	4.188	77.644						
9	.672	3.732	81.376						
10	.652	3.621	84.997						
11	.500	2.778	87.774						
12	.475	2.640	90.415						
13	.445	2.471	92.886						
14	.338	1.878	94.764						
15	.280	1.557	96.321						
16	.255	1.418	97.739						
17	.216	1.202	98.941						
18	.191	1.059	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix(a)

	Component				
	1	2	3	4	5
CRM KM2	.794				
CRM KM3	.740				
CRM KM4	.738				
CRM O5	.732				
CRM KM5	.692				
CRM T1	.689				
CRM O3	.666				
CRM T5	.644				
CRM KM1		-			
	.598	.57			
		4			
CRM O1	.568				
CRM KCF4					
CRM T4					
CRM T2					
CRM KCF1					
CRM KCF3			.59		
			4		
CRM KCF2					
CRM O2					
CRM O4					.63
					6

Extraction Method: Principal Component Analysis.
a 5 components extracted.

Rotated Component Matrix(a)

	Component				
	1	2	3	4	5
CRM KM5	.824				
CRM KM4	.699				
CRM T1	.698				
CRM KM3	.676				
CRM KM1	.665				
CRM KM2	.655				
CRM O5	.580				
CRM T5	.579				
CRM O3					
CRM T4					
CRM O2		.821			
CRM KCF4					
CRM O4			.80		
			4		
CRM T2			.69		
			3		
CRM O1					
CRM KCF3				.76	
				4	
CRM KCF1					.680
CRM KCF2					.643

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 9 iterations.

Technology Factors

Initial stage

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
Bartlett's Test of Sphericity	Approx. Chi-Square	2587.918
	df	630
	Sig.	.000

	CD1	CD2	CD3	CD4	CD5	CD6	CD7	CD8	CIP1	CIP2	CIP3	CIP4	CIP5	CIP6	CIP7	CIP8	ICRM1	ICRM2	ICRM3	ICRM4	ICRM5	
Anti-image Correlation	CD1	.813 ^a	.073	-.437-	-.108-	.271	-.219-	-.407-	-.294-	-.149-	.023	-.299-	.147	.103	-.038-	-.136-	.307	-.185-	.090	.229	-.055-	-.098-
	CD2	.073	.864 ^a	-.331-	-.336-	.048	.136	-.220-	-.101-	-.111-	.103	-.011-	-.140-	.134	.028	.003	-.025-	-.037-	.099	-.027-	-.202-	-.031-
	CD3	-.437-	-.331-	.786 ^a	.002	-.655-	-.060-	.422	-.165-	.299	-.028-	.018	-.046-	-.182-	.025	-.153-	.190	.167	-.025-	.053	-.116-	.145
	CD4	-.108-	-.336-	.002	.738 ^a	.168	-.451-	-.050-	.062	.232	-.102-	.175	-.047-	.237	-.269-	.119	-.045-	.161	-.126-	-.220-	.224	-.192-
	CD5	.271	.048	-.655-	.168	.830 ^a	-.119-	-.546-	-.113-	-.200-	.045	-.086-	.102	.240	-.148-	.161	-.088-	-.152-	-.057-	-.011-	.123	-.102-
	CD6	-.219-	.136	-.060-	-.451-	-.119-	.838 ^a	-.140-	.202	-.127-	.195	.243	-.286-	-.079-	.205	-.043-	-.264-	.129	-.028-	-.048-	-.072-	.008
	CD7	-.407-	-.220-	.422	-.050-	-.546-	-.140-	.863 ^a	.043	.060	.020	.099	-.002-	-.239-	-.044-	-.054-	-.005-	.050	.046	-.127-	.007	.073
	CD8	-.294-	-.101-	-.165-	.062	-.113-	.202	.043	.806 ^a	-.032-	-.165-	.200	-.083-	-.121-	.254	.029	-.325-	.040	-.162-	-.236-	.166	.063
	CIP1	-.149-	-.111-	.299	.232	-.200-	-.127-	.060	-.032-	.828 ^a	-.407-	.126	-.210-	.045	-.088-	.146	.004	.146	-.028-	-.186-	.062	.121
	CIP2	.023	.103	-.028-	-.102-	.045	.195	.020	-.165-	-.407-	.758 ^a	-.304-	.138	.007	-.116-	-.233-	-.140-	-.232-	.015	.257	-.117-	-.160-
	CIP3	-.299-	-.011-	.018	.175	-.086-	.243	.099	.200	.126	-.304-	.724 ^a	-.556-	.065	-.182-	.235	-.215-	.632	-.323-	-.409-	.294	-.138-
	CIP4	.147	-.140-	-.046-	-.047-	.102	-.286-	-.002-	-.083-	-.210-	.138	-.556-	.828 ^a	-.266-	-.215-	.027	-.072-	-.547-	.076	.320	-.087-	.061
	CIP5	.103	.134	-.182-	.237	.240	-.079-	-.239-	-.121-	.045	.007	.065	-.266-	.876 ^a	-.212-	-.208-	.192	.080	-.006-	-.088-	-.101-	-.155-
	CIP6	-.038-	.028	.025	-.269-	-.148-	.205	-.044-	.254	-.088-	-.116-	-.182-	-.215-	-.212-	.781 ^a	-.216-	-.084-	-.120-	-.008-	.011	-.192-	.499
	CIP7	-.136-	.003	-.153-	.119	.161	-.043-	-.054-	.029	.146	-.233-	.235	.027	-.208-	-.216-	.825 ^a	-.544-	-.071-	.055	-.144-	.228	.107
	CIP8	.307	-.025-	.190	-.045-	-.088-	-.264-	-.005-	-.325-	.004	-.140-	-.215-	-.072-	.192	-.084-	-.544-	.815 ^a	.153	.062	.014	-.159-	-.112-
	ICRM1	-.185-	-.037-	.167	.161	-.152-	.129	.050	.040	.146	-.232-	.632	-.547-	.080	-.120-	-.071-	.153	.766 ^a	-.296-	-.525-	.296	-.242-
ICRM2	.090	.099	-.025-	-.126-	-.057-	-.028-	.046	-.162-	-.028-	.015	-.323-	.076	-.006-	-.008-	.055	.062	-.296-	.917 ^a	-.025-	-.095-	-.126-	
ICRM3	.229	-.027-	.053	-.220-	-.011-	-.048-	-.127-	-.236-	-.186-	.257	-.409-	.320	-.088-	.011	-.144-	.014	-.525-	-.025-	.809 ^a	-.474-	-.009-	
ICRM4	-.055-	-.202-	-.116-	.224	.123	-.072-	.007	.166	.062	-.117-	.294	-.087-	-.101-	-.192-	.228	-.159-	.296	-.095-	-.474-	.827 ^a	-.333-	
ICRM5	-.098-	-.031-	.145	-.192-	-.102-	.008	.073	.063	.121	-.160-	-.138-	.061	-.155-	.499	.107	-.112-	-.242-	-.126-	-.009-	-.333-	.812 ^a	
ICRM6	-.303-	.174	-.047-	.061	-.028-	.146	.155	.209	.150	-.028-	.233	-.126-	-.016-	-.100-	.068	-.242-	.062	-.029-	-.258-	.106	-.319-	

ICRM7	.262	-.034-	-.183-	.074	.254	-.237-	-.315-	-.038-	.030	-.227-	-.264-	.409	-.037-	-.168-	.175	-.001-	-.229-	.057	.137	-.134-	-.039-
ICRM8	-.069-	.117	.189	-.181-	-.256-	-.010-	.068	-.024-	.061	-.046-	-.073-	-.077-	-.165-	.336	.084	-.119-	-.069-	.168	.057	-.075-	.273
ICRM9	.221	.173	-.108-	-.213-	-.041-	-.056-	.049	-.159-	-.335-	.245	-.327-	.050	-.082-	.105	-.151-	.335	-.121-	.058	.050	-.182-	-.055-
ICRM10	-.165-	-.018-	.014	-.137-	.023	.274	.056	.117	-.270-	.331	-.092-	.013	.097	.250	-.316-	-.201-	-.192-	.052	.200	-.171-	.036
ICRM11	.047	.158	-.241-	.012	.135	.050	-.114-	.104	-.128-	.121	.041	-.031-	-.008-	.068	-.093-	-.077-	.155	-.183-	-.061-	.011	-.006-
ICRM12	-.107-	-.257-	.183	.100	-.032-	-.002-	-.024-	.014	.049	-.102-	.058	.058	-.073-	-.058-	-.035-	-.016-	.109	-.178-	-.059-	.130	.062
ICRM13	-.051-	-.088-	.143	.200	-.009-	-.222-	.070	-.122-	.238	-.283-	.198	-.087-	-.053-	-.215-	.231	.158	.155	.014	-.224-	.212	.011
ICRM14	.261	-.022-	-.138-	-.043-	.015	-.124-	-.180-	.064	-.129-	.173	-.359-	.219	-.115-	.109	-.080-	-.013-	-.265-	-.085-	.377	-.010-	.031
ICRM15	-.054-	.125	-.161-	-.025-	-.012-	.090	-.168-	.308	-.004-	-.140-	-.050-	.020	-.099-	.316	.001	-.144-	.096	-.049-	-.190-	.044	.205
ICRM16	.046	.123	-.022-	.088	.017	-.127-	-.067-	-.066-	.164	-.361-	-.038-	.005	-.027-	-.037-	.207	.044	.024	.190	-.204-	.123	-.059-
ICRM17	.181	-.314-	.225	-.028-	-.070-	-.184-	.146	-.379-	.109	-.017-	.025	.058	-.032-	-.277-	-.046-	.303	.032	.045	.271	-.035-	-.062-
ICRM18	-.202-	-.041-	.014	.242	.024	.092	-.052-	.149	-.059-	.006	.250	-.237-	.386	-.090-	-.168-	-.028-	.176	.003	-.166-	-.052-	-.148-
ICRM19	-.134-	.266	-.258-	-.106-	.092	.117	.044	.087	-.035-	.158	-.076-	.146	-.246-	-.075-	.308	-.360-	-.160-	.080	.026	.071	-.113-
ICRM20	.172	-.134-	-.145-	.125	.086	-.080-	-.161-	.212	.007	-.132-	-.113-	-.067-	-.019-	.374	-.095-	.090	-.013-	-.212-	-.216-	.236	.279

ICRM6	ICRM7	ICRM8	ICRM9	ICRM10	ICRM11	ICRM12	ICRM13	ICRM14	ICRM15	ICRM16	ICRM17	ICRM18	ICRM19	ICRM20
-.303-	.262	-.069-	.221	-.165-	.047	-.107-	-.051-	.261	-.054-	.046	.181	-.202-	-.134-	.172
.174	-.034-	.117	.173	-.018-	.158	-.257-	-.088-	-.022-	.125	.123	-.314-	-.041-	.266	-.134-
-.047-	-.183-	.189	-.108-	.014	-.241-	.183	.143	-.138-	-.161-	-.022-	.225	.014	-.258-	-.145-
.061	.074	-.181-	-.213-	-.137-	.012	.100	.200	-.043-	-.025-	.088	-.028-	.242	-.106-	.125
-.028-	.254	-.256-	-.041-	.023	.135	-.032-	-.009-	.015	-.012-	.017	-.070-	.024	.092	.086
.146	-.237-	-.010-	-.056-	.274	.050	-.002-	-.222-	-.124-	.090	-.127-	-.184-	.092	.117	-.080-
.155	-.315-	.068	.049	.056	-.114-	-.024-	.070	-.180-	-.168-	-.067-	.146	-.052-	.044	-.161-
.209	-.038-	-.024-	-.159-	.117	.104	.014	-.122-	.064	.308	-.066-	-.379-	.149	.087	.212
.150	.030	.061	-.335-	-.270-	-.128-	.049	.238	-.129-	-.004-	.164	.109	-.059-	-.035-	.007
-.028-	-.227-	-.046-	.245	.331	.121	-.102-	-.283-	.173	-.140-	-.361-	-.017-	.006	.158	-.132-
.233	-.264-	-.073-	-.327-	-.092-	.041	.058	.198	-.359-	-.050-	-.038-	.025	.250	-.076-	-.113-
-.126-	.409	-.077-	.050	.013	-.031-	.058	-.087-	.219	.020	.005	.058	-.237-	.146	-.067-
-.016-	-.037-	-.165-	-.082-	.097	-.008-	-.073-	-.053-	-.115-	-.099-	-.027-	-.032-	.386	-.246-	-.019-
-.100-	-.168-	.336	.105	.250	.068	-.058-	-.215-	.109	.316	-.037-	-.277-	-.090-	-.075-	.374
.068	.175	.084	-.151-	-.316-	-.093-	-.035-	.231	-.080-	.001	.207	-.046-	-.168-	.308	-.095-
-.242-	-.001-	-.119-	.335	-.201-	-.077-	-.016-	.158	-.013-	-.144-	.044	.303	-.028-	-.360-	.090
.062	-.229-	-.069-	-.121-	-.192-	.155	.109	.155	-.265-	.096	.024	.032	.176	-.160-	-.013-

-.029-	.057	.168	.058	.052	-.183-	-.178-	.014	-.085-	-.049-	.190	.045	.003	.080	-.212-
-.258-	.137	.057	.050	.200	-.061-	-.059-	-.224-	.377	-.190-	-.204-	.271	-.166-	.026	-.216-
.106	-.134-	-.075-	-.182-	-.171-	.011	.130	.212	-.010-	.044	.123	-.035-	-.052-	.071	.236
-.319-	-.039-	.273	-.055-	.036	-.006-	.062	.011	.031	.205	-.059-	-.062-	-.148-	-.113-	.279
.826 ^a	-.201-	-.079-	-.134-	.027	-.148-	-.081-	-.064-	-.313-	.029	.168	-.297-	.169	.296	-.202-
-.201-	.834 ^a	-.228-	-.003-	-.371-	.038	.189	.004	.102	-.132-	.212	.020	.004	-.128-	-.047-
-.079-	-.228-	.707 ^a	-.095-	.112	-.035-	-.181-	-.040-	.041	.233	.171	-.145-	-.179-	.087	-.005-
-.134-	-.003-	-.095-	.864 ^a	-.313-	.045	-.155-	-.084-	.085	-.048-	-.048-	-.078-	-.185-	.086	.111
.027	-.371-	.112	-.313-	.820 ^a	-.046-	-.012-	-.262-	-.047-	.045	-.272-	-.141-	.096	.048	-.072-
-.148-	.038	-.035-	.045	-.046-	.736 ^a	-.078-	-.328-	.069	.195	-.230-	-.095-	-.047-	.096	.140
-.081-	.189	-.181-	-.155-	-.012-	-.078-	.797 ^a	-.039-	-.159-	-.063-	.078	.048	.177	-.271-	.085
-.064-	.004	-.040-	-.084-	-.262-	-.328-	-.039-	.646 ^a	-.215-	-.068-	.271	.022	-.093-	-.010-	.106
-.313-	.102	.041	.085	-.047-	.069	-.159-	-.215-	.801 ^a	.105	-.127-	.043	-.182-	.034	.103
.029	-.132-	.233	-.048-	.045	.195	-.063-	-.068-	.105	.436 ^a	.130	-.343-	-.035-	.110	.239
.168	.212	.171	-.048-	-.272-	-.230-	.078	.271	-.127-	.130	.369 ^a	-.111-	-.040-	.001	-.009-
-.297-	.020	-.145-	-.078-	-.141-	-.095-	.048	.022	.043	-.343-	-.111-	.758 ^a	-.173-	-.336-	-.170-
.169	.004	-.179-	-.185-	.096	-.047-	.177	-.093-	-.182-	-.035-	-.040-	-.173-	.811 ^a	-.542-	-.180-
.296	-.128-	.087	.086	.048	.096	-.271-	-.010-	.034	.110	.001	-.336-	-.542-	.763 ^a	-.182-
-.202-	-.047-	-.005-	.111	-.072-	.140	.085	.106	.103	.239	-.009-	-.170-	-.180-	-.182-	.751 ^a

Communalities

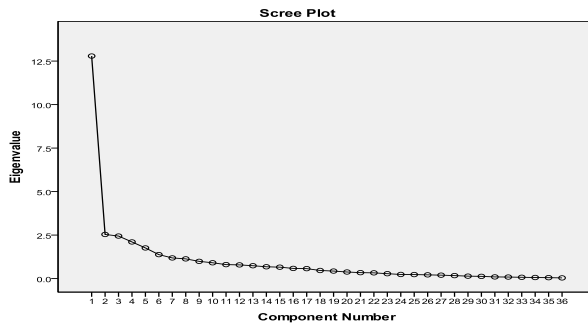
	Initial	Extraction
CD1	1.000	.717
CD2	1.000	.696
CD3	1.000	.833
CD4	1.000	.665
CD5	1.000	.811
CD6	1.000	.696
CD7	1.000	.746
CD8	1.000	.545
CIP1	1.000	.538
CIP2	1.000	.724
CIP3	1.000	.761
CIP4	1.000	.768
CIP5	1.000	.562
CIP6	1.000	.781
CIP7	1.000	.658
CIP8	1.000	.749
ICRM1	1.000	.751
ICRM2	1.000	.751
ICRM3	1.000	.789
ICRM4	1.000	.759
ICRM5	1.000	.804
ICRM6	1.000	.730
ICRM7	1.000	.769
ICRM8	1.000	.561
ICRM9	1.000	.676
ICRM10	1.000	.656
ICRM11	1.000	.663
ICRM12	1.000	.513
ICRM13	1.000	.620
ICRM14	1.000	.589
ICRM15	1.000	.782
ICRM16	1.000	.638
ICRM17	1.000	.715
ICRM18	1.000	.822
ICRM19	1.000	.795
ICRM20	1.000	.699

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	12.790	35.527	35.527	12.790	35.527	35.527	5.166	14.349
2	2.536	7.045	42.572	2.536	7.045	42.572	5.132	14.256	28.605
3	2.444	6.790	49.362	2.444	6.790	49.362	4.798	13.328	41.933
4	2.105	5.848	55.210	2.105	5.848	55.210	3.270	9.083	51.016
5	1.761	4.890	60.100	1.761	4.890	60.100	2.254	6.260	57.276
6	1.377	3.825	63.925	1.377	3.825	63.925	1.787	4.963	62.239
7	1.187	3.296	67.222	1.187	3.296	67.222	1.573	4.369	66.608
8	1.133	3.146	70.368	1.133	3.146	70.368	1.353	3.759	70.368
9	.990	2.749	73.117						
10	.908	2.523	75.640						
11	.803	2.231	77.870						
12	.786	2.184	80.054						
13	.739	2.052	82.106						
14	.679	1.885	83.991						
15	.655	1.821	85.812						
16	.584	1.623	87.435						
17	.572	1.588	89.022						
18	.465	1.292	90.314						
19	.432	1.199	91.514						
20	.378	1.049	92.563						
dimension0	21	.342	.949	93.512					
	22	.329	.914	94.427					
	23	.281	.782	95.208					
	24	.236	.657	95.865					
	25	.230	.640	96.505					
	26	.214	.594	97.098					
	27	.196	.545	97.643					
	28	.171	.475	98.118					
	29	.140	.388	98.506					
	30	.127	.353	98.859					
	31	.096	.266	99.124					
	32	.088	.244	99.368					
	33	.074	.206	99.574					
	34	.062	.171	99.746					
	35	.053	.146	99.892					
	36	.039	.108	100.000					

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
ICRM3	.760							
CD7	.759							
CIP4	.750							
CD1	.714							
CD5	.713							
ICRM1	.699							
CIP5	.695							
ICRM7	.690							
CIP8	.687							
ICRM9	.684							
CD3	.683							
ICRM2	.682							
CIP3	.663							
CIP7	.659							
CD2	.649							
CD6	.645							
ICRM4	.643							
ICRM10	.634							
ICRM6	.625							
CIP6	.610							
CIP1	.603							
ICRM18	.593			.568				
CD8	.592							
ICRM14								
ICRM17								
CD4								
CIP2		-.650						
ICRM5	.562		.589					
ICRM19				.578				
ICRM20								
ICRM13					.607			
ICRM12								
ICRM11								
ICRM15						.693		
ICRM16								
ICRM8								

Extraction Method: Principal Component Analysis.
a. 8 components extracted.

Rotated Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
CD5	.760							
CD3	.760							
CD2	.759							
CD1	.722							
CD6	.698							
CD7	.680							
CD4	.625							
CD8	.597							
CIP2		.806						
CIP6		.796						
CIP8		.767						
CIP7		.724						
CIP4		.674						
CIP1		.599						
CIP3		.598						
CIP5								
ICRM5			.874					
ICRM4			.749					
ICRM3			.676					
ICRM6			.673					
ICRM7			.602					
ICRM10			.602					
ICRM1			.590					
ICRM9			.590					
ICRM2								
ICRM18				.832				
ICRM19				.830				
ICRM17				.739				
ICRM20				.584				
ICRM11					.740			
ICRM13					.728			
ICRM12								
ICRM14								
ICRM16								
ICRM8							-.751-	
ICRM15							.580	.865

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

a. Rotation converged in 8 iterations.

Technology factors

Second stage

		CD1	CD2	CD3	CD4	CD5	CD6	CD7	CD8	CIP1	CIP2	CIP3	CIP4	CIP5	CIP6	CIP7	CIP8	ICRM1	ICRM2	ICRM3	ICRM4	ICRM5
Anti-image Correlation	CD1	.810 ^a	.068	-.437-	-.113-	.270	-.215-	-.406-	-.292-	-.159-	.042	-.298-	.147	.104	-.036-	-.149-	.306	-.187-	.083	.243	-.061-	-.095-
	CD2	.068	.858 ^a	-.331-	-.351-	.046	.154	-.214-	-.094-	-.134-	.159	-.007-	-.142-	.138	.033	-.023-	-.030-	-.040-	.077	-.002-	-.220-	-.024-
	CD3	-.437-	-.331-	.784 ^a	.004	-.655-	-.064-	.422	-.166-	.307	-.039-	.017	-.046-	-.183-	.025	-.151-	.191	.167	-.022-	.050	-.114-	.144
	CD4	-.113-	-.351-	.004	.741 ^a	.168	-.445-	-.044-	.068	.222	-.076-	.179	-.047-	.240	-.266-	.103	-.049-	.160	-.145-	-.207-	.215	-.188-
	CD5	.270	.046	-.655-	.168	.829 ^a	-.118-	-.546-	-.113-	-.205-	.055	-.086-	.102	.240	-.148-	.161	-.089-	-.152-	-.062-	-.008-	.122	-.101-
	CD6	-.215-	.154	-.064-	-.445-	-.118-	.844 ^a	-.150-	.195	-.109-	.162	.241	-.287-	-.083-	.202	-.017-	-.261-	.133	-.004-	-.076-	-.058-	.000
	CD7	-.406-	-.214-	.422	-.044-	-.546-	-.150-	.862 ^a	.038	.072	-.005-	.097	-.002-	-.242-	-.046-	-.041-	-.002-	.052	.060	-.144-	.015	.069
	CD8	-.292-	-.094-	-.166-	.068	-.113-	.195	.038	.802 ^a	-.022-	-.203-	.199	-.083-	-.124-	.252	.044	-.323-	.041	-.153-	-.256-	.176	.059
	CIP1	-.159-	-.134-	.307	.222	-.205-	-.109-	.072	-.022-	.844 ^a	-.378-	.134	-.214-	.050	-.083-	.116	-.004-	.144	-.061-	-.158-	.042	.133
	CIP2	.042	.159	-.039-	-.076-	.055	.162	-.005-	-.203-	-.378-	.801 ^a	-.340-	.150	-.003-	-.139-	-.173-	-.133-	-.239-	.092	.201	-.079-	-.195-
	CIP3	-.298-	-.007-	.017	.179	-.086-	.241	.097	.199	.134	-.340-	.715 ^a	-.556-	.064	-.184-	.248	-.214-	.633	-.322-	-.426-	.301	-.140-
	CIP4	.147	-.142-	-.046-	-.047-	.102	-.287-	-.002-	-.083-	-.214-	.150	-.556-	.826 ^a	-.266-	-.215-	.027	-.073-	-.547-	.076	.328	-.088-	.061
	CIP5	.104	.138	-.183-	.240	.240	-.083-	-.242-	-.124-	.050	-.003-	.064	-.266-	.875 ^a	-.213-	-.207-	.193	.080	-.001-	-.096-	-.098-	-.157-
	CIP6	-.036-	.033	.025	-.266-	-.148-	.202	-.046-	.252	-.083-	-.139-	-.184-	-.215-	-.213-	.780 ^a	-.213-	-.082-	-.119-	-.001-	.003	-.189-	.498
	CIP7	-.149-	-.023-	-.151-	.103	.161	-.017-	-.041-	.044	.116	-.173-	.248	.027	-.207-	-.213-	.843 ^a	-.566-	-.078-	.017	-.106-	.208	.122
	CIP8	.306	-.030-	.191	-.049-	-.089-	-.261-	-.002-	-.323-	-.004-	-.133-	-.214-	-.073-	.193	-.082-	-.566-	.811 ^a	.152	.055	.023	-.166-	-.110-
	ICRM1	-.187-	-.040-	.167	.160	-.152-	.133	.052	.041	.144	-.239-	.633	-.547-	.080	-.119-	-.078-	.152	.763 ^a	-.306-	-.531-	.295	-.241-
	ICRM2	.083	.077	-.022-	-.145-	-.062-	-.004-	.060	-.153-	-.061-	.092	-.322-	.076	-.001-	-.001-	.017	.055	-.306-	.920 ^a	.014	-.122-	-.117-
	ICRM3	.243	-.002-	.050	-.207-	-.008-	-.076-	-.144-	-.256-	-.158-	.201	-.426-	.328	-.096-	.003	-.106-	.023	-.531-	.014	.818 ^a	-.462-	-.021-
	ICRM4	-.061-	-.220-	-.114-	.215	.122	-.058-	.015	.176	.042	-.079-	.301	-.088-	-.098-	-.189-	.208	-.166-	.295	-.122-	-.462-	.833 ^a	-.329-
ICRM5	-.095-	-.024-	.144	-.188-	-.101-	.000	.069	.059	.133	-.195-	-.140-	.061	-.157-	.498	.122	-.110-	-.241-	-.117-	-.021-	-.329-	.809 ^a	
ICRM6	-.315-	.157	-.044-	.047	-.031-	.171	.169	.224	.126	.036	.243	-.129-	-.012-	-.095-	.035	-.253-	.059	-.063-	-.232-	.087	-.314-	
ICRM7	.258	-.062-	-.183-	.056	.257	-.217-	-.309-	-.024-	-.005-	-.165-	-.262-	.417	-.033-	-.164-	.137	-.011-	-.240-	.018	.188	-.165-	-.027-	
ICRM8	-.078-	.098	.196	-.199-	-.263-	.011	.081	-.013-	.034	.017	-.067-	-.079-	-.163-	.347	.050	-.128-	-.074-	.141	.095	-.098-	.288	
ICRM9	.224	.180	-.109-	-.210-	-.040-	-.063-	.046	-.163-	-.332-	.245	-.330-	.050	-.084-	.103	-.144-	.338	-.120-	.069	.041	-.178-	-.058-	
ICRM10	-.159-	.016	.009	-.118-	.029	.251	.039	.103	-.238-	.259	-.107-	.015	.094	.249	-.275-	-.197-	-.193-	.110	.153	-.144-	.021	
ICRM11	.059	.192	-.252-	.033	.143	.022	-.133-	.091	-.094-	.042	.033	-.030-	-.015-	.061	-.048-	-.069-	.165	-.146-	-.113-	.041	-.020-	
ICRM12	-.111-	-.269-	.186	.094	-.034-	.008	-.019-	.020	.036	-.079-	.061	.058	-.071-	-.055-	-.053-	-.020-	.107	-.197-	-.044-	.122	.067	

ICRM1 3	-.066-	-.127-	.155	.184	-.015-	-.197-	.092	-.108-	.203	-.206-	.217	-.092-	-.048-	-.213-	.186	.152	.155	-.040-	-.179-	.187	.028
ICRM1 4	.269	-.006-	-.142-	-.032-	.017	-.142-	-.190-	.056	-.110-	.137	-.367-	.221	-.119-	.105	-.055-	-.008-	-.264-	-.063-	.362	.006	.024
ICRM1 5	-.061-	.111	-.159-	-.037-	-.014-	.108	-.161-	.320	-.026-	-.101-	-.046-	.020	-.096-	.324	-.027-	-.151-	.094	-.075-	-.168-	.028	.215
ICRM1 7	.187	-.304-	.224	-.019-	-.069-	-.200-	.140	-.390-	.129	-.061-	.021	.059	-.036-	-.283-	-.023-	.310	.035	.068	.255	-.022-	-.069-
ICRM1 8	-.201-	-.036-	.013	.247	.025	.088	-.055-	.146	-.054-	-.010-	.249	-.237-	.385	-.092-	-.163-	-.027-	.177	.010	-.178-	-.047-	-.150-
ICRM1 9	-.134-	.268	-.258-	-.107-	.092	.118	.044	.087	-.036-	.169	-.076-	.146	-.246-	-.075-	.315	-.361-	-.160-	.081	.027	.071	-.113-
ICRM2 0	.172	-.134-	-.145-	.127	.086	-.082-	-.162-	.212	.008	-.145-	-.113-	-.067-	-.019-	.374	-.095-	.091	-.013-	-.214-	-.223-	.239	.279

a. Measures of Sampling Adequacy(MSA)

ICRM6	ICRM7	ICRM8	ICRM9	ICRM10	ICRM11	ICRM12	ICRM13	ICRM14	ICRM15	ICRM17	ICRM18	ICRM19	ICRM20
-.315-	.258	-.078-	.224	-.159-	.059	-.111-	-.066-	.269	-.061-	.187	-.201-	-.134-	.172
.157	-.062-	.098	.180	.016	.192	-.269-	-.127-	-.006-	.111	-.304-	-.036-	.268	-.134-
-.044-	-.183-	.196	-.109-	.009	-.252-	.186	.155	-.142-	-.159-	.224	.013	-.258-	-.145-
.047	.056	-.199-	-.210-	-.118-	.033	.094	.184	-.032-	-.037-	-.019-	.247	-.107-	.127
-.031-	.257	-.263-	-.040-	.029	.143	-.034-	-.015-	.017	-.014-	-.069-	.025	.092	.086
.171	-.217-	.011	-.063-	.251	.022	.008	-.197-	-.142-	.108	-.200-	.088	.118	-.082-
.169	-.309-	.081	.046	.039	-.133-	-.019-	.092	-.190-	-.161-	.140	-.055-	.044	-.162-
.224	-.024-	-.013-	-.163-	.103	.091	.020	-.108-	.056	.320	-.390-	.146	.087	.212
.126	-.005-	.034	-.332-	-.238-	-.094-	.036	.203	-.110-	-.026-	.129	-.054-	-.036-	.008
.036	-.165-	.017	.245	.259	.042	-.079-	-.206-	.137	-.101-	-.061-	-.010-	.169	-.145-
.243	-.262-	-.067-	-.330-	-.107-	.033	.061	.217	-.367-	-.046-	.021	.249	-.076-	-.113-
-.129-	.417	-.079-	.050	.015	-.030-	.058	-.092-	.221	.020	.059	-.237-	.146	-.067-
-.012-	-.033-	-.163-	-.084-	.094	-.015-	-.071-	-.048-	-.119-	-.096-	-.036-	.385	-.246-	-.019-
-.095-	-.164-	.347	.103	.249	.061	-.055-	-.213-	.105	.324	-.283-	-.092-	.374	.028
.035	.137	.050	-.144-	-.275-	-.048-	-.053-	.186	-.055-	-.027-	-.023-	-.163-	.315	-.095-
-.253-	-.011-	-.128-	.338	-.197-	-.069-	-.020-	.152	-.008-	-.151-	.310	-.027-	-.361-	.091
.059	-.240-	-.074-	-.120-	-.193-	.165	.107	.155	-.264-	.094	.035	.177	-.160-	-.013-
-.063-	.018	.141	.069	.110	-.146-	-.197-	-.040-	-.063-	-.075-	.068	.010	.081	-.214-
-.232-	.188	.095	.041	.153	-.113-	-.044-	-.179-	.362	-.168-	.255	-.178-	.027	-.223-
.087	-.165-	-.098-	-.178-	-.144-	.041	.122	.187	.006	.028	-.022-	-.047-	.071	.239
-.314-	-.027-	.288	-.058-	.021	-.020-	.067	.028	.024	.215	-.069-	-.150-	-.113-	.279
.826 ^a	-.246-	-.111-	-.128-	.076	-.114-	-.096-	-.115-	-.298-	.007	-.284-	.179	.300	-.203-
-.246-	.837 ^a	-.275-	.007	-.333-	.091	.177	-.057-	.133	-.165-	.045	.013	-.131-	-.046-
-.111-	-.275-	.692 ^a	-.088-	.168	.004	-.198-	-.091-	.064	.216	-.128-	-.175-	.088	-.003-
-.128-	.007	-.088-	.862 ^a	-.339-	.034	-.152-	-.074-	.080	-.042-	-.084-	-.188-	.086	.111

.076	-.333-	.168	-.339-	.845 ^a	-.116-	.010	-.203-	-.085-	.084	-.179-	.089	.050	-.077-
-.114-	.091	.004	.034	-.116-	.755 ^a	-.062-	-.284-	.041	.233	-.125-	-.058-	.099	.142
-.096-	.177	-.198-	-.152-	.010	-.062-	.794 ^a	-.063-	-.151-	-.074-	.058	.181	-.272-	.086
-.115-	-.057-	-.091-	-.074-	-.203-	-.284-	-.063-	.700 ^a	-.189-	-.108-	.055	-.085-	-.011-	.113
-.298-	.133	.064	.080	-.085-	.041	-.151-	-.189-	.807 ^a	.124	.029	-.189-	.034	.102
.007	-.165-	.216	-.042-	.084	.233	-.074-	-.108-	.124	.426 ^a	-.334-	-.030-	.111	.242
-.284-	.045	-.128-	-.084-	-.179-	-.125-	.058	.055	.029	-.334-	.756 ^a	-.179-	-.338-	-.172-
.179	.013	-.175-	-.188-	.089	-.058-	.181	-.085-	-.189-	-.030-	-.179-	.809 ^a	-.543-	-.181-
.300	-.131-	.088	.086	.050	.099	-.272-	-.011-	.034	.111	-.338-	-.543-	.760 ^a	-.182-
-.203-	-.046-	-.003-	.111	-.077-	.142	.086	.113	.102	.242	-.172-	-.181-	-.182-	.746 ^a

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
CD1	1.000	.733
CD2	1.000	.693
CD3	1.000	.858
CD4	1.000	.731
CD5	1.000	.810
CD6	1.000	.756
CD7	1.000	.761
CD8	1.000	.570
CIP1	1.000	.546
CIP2	1.000	.716
CIP3	1.000	.760
CIP4	1.000	.770
CIP5	1.000	.567
CIP6	1.000	.785
CIP7	1.000	.656
CIP8	1.000	.759
ICRM1	1.000	.742
ICRM2	1.000	.753
ICRM3	1.000	.789
ICRM4	1.000	.763
ICRM5	1.000	.806
ICRM6	1.000	.713
ICRM7	1.000	.769
ICRM8	1.000	.660
ICRM9	1.000	.670
ICRM10	1.000	.642
ICRM11	1.000	.621
ICRM12	1.000	.508
ICRM13	1.000	.629
ICRM14	1.000	.612
ICRM15	1.000	.779
ICRM17	1.000	.718
ICRM18	1.000	.837
ICRM19	1.000	.808
ICRM20	1.000	.683

Communalities

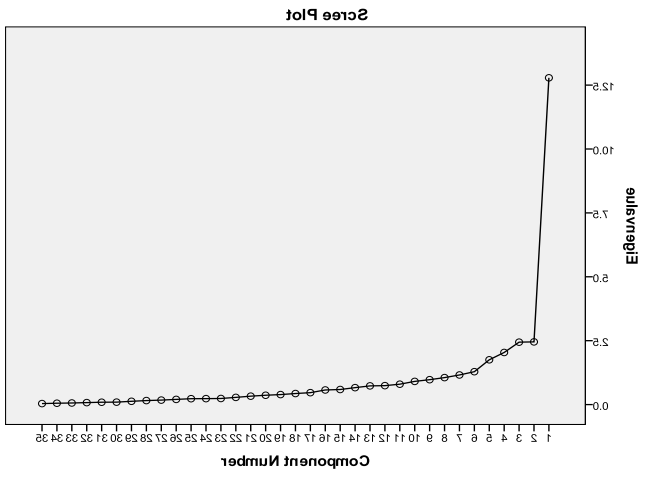
	Initial	Extraction
CD1	1.000	.733
CD2	1.000	.693
CD3	1.000	.858
CD4	1.000	.731
CD5	1.000	.810
CD6	1.000	.756
CD7	1.000	.761
CD8	1.000	.570
CIP1	1.000	.546
CIP2	1.000	.716
CIP3	1.000	.760
CIP4	1.000	.770
CIP5	1.000	.567
CIP6	1.000	.785
CIP7	1.000	.656
CIP8	1.000	.759
ICRM1	1.000	.742
ICRM2	1.000	.753
ICRM3	1.000	.789
ICRM4	1.000	.763
ICRM5	1.000	.806
ICRM6	1.000	.713
ICRM7	1.000	.769
ICRM8	1.000	.660
ICRM9	1.000	.670
ICRM10	1.000	.642
ICRM11	1.000	.621
ICRM12	1.000	.508
ICRM13	1.000	.629
ICRM14	1.000	.612
ICRM15	1.000	.779
ICRM17	1.000	.718
ICRM18	1.000	.837
ICRM19	1.000	.808
ICRM20	1.000	.683

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.785	36.530	36.530	12.785	36.530	36.530	5.093	14.552	14.552
2	2.453	7.008	43.538	2.453	7.008	43.538	5.054	14.440	28.992
3	2.443	6.979	50.517	2.443	6.979	50.517	4.839	13.826	42.818
4	2.039	5.826	56.343	2.039	5.826	56.343	3.162	9.034	51.853
5	1.752	5.006	61.348	1.752	5.006	61.348	2.195	6.271	58.124
6	1.287	3.677	65.025	1.287	3.677	65.025	1.758	5.022	63.146
7	1.159	3.310	68.336	1.159	3.310	68.336	1.526	4.361	67.507
8	1.056	3.016	71.351	1.056	3.016	71.351	1.346	3.844	71.351
9	.974	2.783	74.135						
10	.907	2.592	76.727						
11	.798	2.279	79.006						
12	.741	2.117	81.123						
13	.731	2.090	83.213						
14	.663	1.893	85.106						
15	.590	1.686	86.792						
16	.572	1.633	88.425						
17	.466	1.332	89.757						
18	.432	1.235	90.993						
19	.391	1.118	92.111						
20	.365	1.044	93.154						
21	.329	.941	94.096						
22	.282	.805	94.900						
23	.238	.681	95.581						
24	.233	.665	96.246						
25	.230	.658	96.904						
26	.203	.579	97.483						
27	.175	.501	97.984						
28	.157	.448	98.432						
29	.129	.367	98.800						
30	.096	.274	99.074						
31	.092	.264	99.338						
32	.077	.221	99.559						
33	.062	.178	99.736						
34	.053	.152	99.888						
35	.039	.112	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
ICRM3	.760							
CD7	.759							
CIP4	.750							
CD1	.714							
CD5	.713							
ICRM1	.699							
CIP5	.695							
ICRM7	.690							
CIP8	.687							
ICRM9	.684							
CD3	.684							
ICRM2	.682							
CIP3	.662							
CIP7	.659							
CD2	.650							
CD6	.646							
ICRM4	.643							
ICRM10	.634							
ICRM6	.626							
CIP6	.610							
CIP1	.602							
ICRM18	.592							
CD8	.592							
ICRM14								
ICRM17								
CIP2		-.598-						
ICRM5	.561		.614					
ICRM19				.553				
CD4								
ICRM20								
ICRM13					.613			
ICRM12								
ICRM11								
ICRM15						.793		
ICRM8								.559

Extraction Method: Principal Component Analysis.

a. 8 components extracted.

Rotated Component Matrix^a

	Component							
	1	2	3	4	5	6	7	8
CIP2	.809							
CIP6	.791							
CIP8	.768							
CIP7	.721							
CIP4	.673							
CIP1	.607							
CIP3	.606							
CIP5								
CD5		.763						
CD3		.760						
CD2		.754						
CD1		.717						
CD7		.677						
CD6		.677						
CD4		.600						
CD8		.598						
ICRM5			.878					
ICRM4			.754					
ICRM3			.680					
ICRM6			.669					
ICRM10			.605					
ICRM7			.595					
ICRM9			.594					
ICRM1			.591					
ICRM2								
ICRM18				.844				
ICRM19				.842				
ICRM17				.718				
ICRM20				.567				
ICRM13					.749			
ICRM11					.732			
ICRM12								
ICRM14								
ICRM8							.736	
ICRM15								.864

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Technology factors

Thirdstage

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.817
Bartlett's Test of Sphericity	Approx. Chi-Square
	2509.771
	df
	561
	Sig.
	.000

		CD1	CD2	CD3	CD4	CD5	CD6	CD7	CD8	CIP1	CIP2	CIP3	CIP4	CIP5	CIP6	CIP7	CIP8	ICRM1	ICRM2	ICRM3
Anti-image Correlation	CD 1	.808 ^a	.076	-.453-	-.115-	.270	-.210-	-.422-	-.288-	-.161-	.036	-.302-	.148	.099	-.018-	-.151-	.300	-.182-	.079	.237
	CD 2	.076	.862 ^a	-.319-	-.349-	.048	.143	-.199-	-.138-	-.132-	.172	-.002-	-.145-	.150	-.004-	-.020-	-.014-	-.051-	.087	.017
	CD 3	-.453-	-.319-	.786 ^a	-.002-	-.666-	-.047-	.407	-.123-	.307	-.056-	.010	-.043-	-.201-	.082	-.158-	.171	.185	-.034-	.024
	CD 4	-.115-	-.349-	-.002-	.739 ^a	.167	-.444-	-.051-	.084	.221	-.080-	.177	-.046-	.238	-.269-	.102	-.056-	.164	-.149-	-.217-
	CD 5	.270	.048	-.666-	.167	.825 ^a	-.117-	-.556-	-.114-	-.206-	.053	-.086-	.103	.240	-.151-	.161	-.092-	-.152-	-.063-	-.010-
	CD 6	-.210-	.143	-.047-	-.444-	-.117-	.852 ^a	-.135-	.171	-.106-	.175	.247	-.291-	-.074-	.178	-.015-	-.248-	.124	.004	-.059-
	CD 7	-.422-	-.199-	.407	-.051-	-.556-	-.135-	.860 ^a	.096	.069	-.022-	.091	.001	-.262-	.006	-.046-	-.027-	.068	.049	-.175-
	CD 8	-.288-	-.138-	-.123-	.084	-.114-	.171	.096	.847 ^a	-.014-	-.181-	.225	-.094-	-.098-	.166	.056	-.293-	.012	-.136-	-.216-
	CIP 1	-.161-	-.132-	.307	.221	-.206-	-.106-	.069	-.014-	.843 ^a	-.383-	.133	-.213-	.048	-.078-	.115	-.008-	.147	-.063-	-.165-
	CIP 2	.036	.172	-.056-	-.080-	.053	.175	-.022-	-.181-	-.383-	.797 ^a	-.347-	.152	-.013-	-.113-	-.177-	-.151-	-.232-	.085	.188
	CIP 3	-.302-	-.002-	.010	.177	-.086-	.247	.091	.225	.133	-.347-	.709 ^a	-.556-	.060	-.179-	.247	-.224-	.641	-.327-	-.440-
	CIP 4	.148	-.145-	-.043-	-.046-	.103	-.291-	.001	-.094-	-.213-	.152	-.556-	.822 ^a	-.266-	-.234-	.027	-.071-	-.551-	.078	.336

CIP 5	.099	.150	-.201-	.238	.240	-.074-	-.262-	-.098-	.048	-.013-	.060	-.266-	.877 ^a	-.193-	-.211-	.182	.090	-.008-	-.114-
CIP 6	-.018-	-.004-	.082	-.269-	-.151-	.178	.006	.166	-.078-	-.113-	-.179-	-.234-	-.193-	.821 ^a	-.216-	-.035-	-.158-	.025	.062
CIP 7	-.151-	-.020-	-.158-	.102	.161	-.015-	-.046-	.056	.115	-.177-	.247	.027	-.211-	-.216-	.839 ^a	-.577-	-.075-	.015	-.113-
CIP 8	.300	-.014-	.171	-.056-	-.092-	-.248-	-.027-	-.293-	-.008-	-.151-	-.224-	-.071-	.182	-.035-	-.577-	.820 ^a	.169	.044	-.002-
ICR M1	-.182-	-.051-	.185	.164	-.152-	.124	.068	.012	.147	-.232-	.641	-.551-	.090	-.158-	-.075-	.169	.758 ^a	-.301-	-.525-
ICR M2	.079	.087	-.034-	-.149-	-.063-	.004	.049	-.136-	-.063-	.085	-.327-	.078	-.008-	.025	.015	.044	-.301-	.922 ^a	.002
ICR M3	.237	.017	.024	-.217-	-.010-	-.059-	-.175-	-.216-	-.165-	.188	-.440-	.336	-.114-	.062	-.113-	-.002-	-.525-	.002	.819 ^a
ICR M4	-.060-	-.225-	-.111-	.217	.123	-.061-	.020	.176	.043	-.076-	.303	-.089-	-.096-	-.209-	.209	-.164-	.294	-.120-	-.464-
ICR M5	-.084-	-.049-	.185	-.184-	-.100-	-.024-	.108	-.010-	.142	-.178-	-.134-	.059	-.140-	.463	.131	-.080-	-.269-	-.104-	.015
ICR M6	-.316-	.157	-.044-	.048	-.031-	.171	.172	.234	.126	.037	.244	-.129-	-.011-	-.103-	.035	-.255-	.059	-.062-	-.234-
ICR M7	.252	-.044-	-.215-	.051	.258	-.203-	-.345-	.031	-.010-	-.185-	-.273-	.426	-.049-	-.119-	.134	-.037-	-.228-	.006	.165
ICR M8	-.067-	.077	.239	-.196-	-.266-	-.012-	.120	-.089-	.040	.040	-.059-	-.085-	-.146-	.300	.058	-.099-	-.097-	.161	.136
ICR M9	.222	.186	-.117-	-.212-	-.041-	-.059-	.040	-.158-	-.333-	.242	-.332-	.051	-.088-	.123	-.145-	.336	-.117-	.066	.034
ICR M10	-.154-	.007	.022	-.115-	.030	.244	.054	.080	-.236-	.270	-.103-	.014	.103	.236	-.274-	-.187-	-.202-	.117	.170
ICR M11	.075	.172	-.224-	.043	.150	-.003-	-.100-	.018	-.090-	.068	.045	-.036-	.008	-.016-	-.043-	-.035-	.147	-.132-	-.077-
ICR M12	-.116-	-.263-	.177	.091	-.035-	.016	-.031-	.046	.035	-.087-	.058	.059	-.079-	-.033-	-.055-	-.031-	.115	-.204-	-.057-
ICR M13	-.073-	-.117-	.140	.181	-.016-	-.187-	.076	-.078-	.202	-.219-	.213	-.090-	-.059-	-.189-	.184	.138	.167	-.048-	-.201-
ICR M14	.279	-.020-	-.125-	-.027-	.019	-.158-	-.174-	.017	-.108-	.151	-.364-	.220	-.109-	.070	-.052-	.011	-.279-	-.054-	.391

ICRM17	.177	-.285-	.183	-.033-	-.078-	-.175-	.092	-.317-	.128	-.101-	.006	.069	-.072-	-.196-	-.034-	.279	.071	.045	.214
ICRM18	-.203-	-.033-	.008	.246	.024	.092	-.061-	.165	-.054-	-.013-	.248	-.237-	.384	-.086-	-.164-	-.032-	.181	.008	-.186-
ICRM19	-.129-	.259	-.245-	-.104-	.094	.108	.063	.055	-.033-	.183	-.072-	.145	-.238-	-.117-	.320	-.350-	-.172-	.090	.046
ICRM20	.193	-.167-	-.111-	.140	.092	-.112-	-.128-	.146	.015	-.125-	-.105-	-.074-	.004	.322	-.091-	.133	-.037-	-.202-	-.190-

a. Measures of Sampling Adequacy(MSA)

ICRM4	ICRM5	ICRM6	ICRM7	ICRM8	ICRM9	ICRM10	ICRM11	ICRM12	ICRM13	ICRM14	ICRM17	ICRM18	ICRM19	ICRM20
-.060-	-.084-	-.316-	.252	-.067-	.222	-.154-	.075	-.116-	-.073-	.279	.177	-.203-	-.129-	.193
-.225-	-.049-	.157	-.044-	.077	.186	.007	.172	-.263-	-.117-	-.020-	-.285-	-.033-	.259	-.167-
-.111-	.185	-.044-	-.215-	.239	-.117-	.022	-.224-	.177	.140	-.125-	.183	.008	-.245-	-.111-
.217	-.184-	.048	.051	-.196-	-.212-	-.115-	.043	.091	.181	-.027-	-.033-	.246	-.104-	.140
.123	-.100-	-.031-	.258	-.266-	-.041-	.030	.150	-.035-	-.016-	.019	-.078-	.024	.094	.092
-.061-	-.024-	.171	-.203-	-.012-	-.059-	.244	-.003-	.016	-.187-	-.158-	-.175-	.092	.108	-.112-
.020	.108	.172	-.345-	.120	.040	.054	-.100-	-.031-	.076	-.174-	.092	-.061-	.063	-.128-
.176	-.010-	.234	.031	-.089-	-.158-	.080	.018	.046	-.078-	.017	-.317-	.165	.055	.146
.043	.142	.126	-.010-	.040	-.333-	-.236-	-.090-	.035	.202	-.108-	.128	-.054-	-.033-	.015
-.076-	-.178-	.037	-.185-	.040	.242	.270	.068	-.087-	-.219-	.151	-.101-	-.013-	.183	-.125-
.303	-.134-	.244	-.273-	-.059-	-.332-	-.103-	.045	.058	.213	-.364-	.006	.248	-.072-	-.105-
-.089-	.059	-.129-	.426	-.085-	.051	.014	-.036-	.059	-.090-	.220	.069	-.237-	.145	-.074-
-.096-	-.140-	-.011-	-.049-	-.146-	-.088-	.103	.008	-.079-	-.059-	-.109-	-.072-	.384	-.238-	.004
-.209-	.463	-.103-	-.119-	.300	.123	.236	-.016-	-.033-	-.189-	.070	-.196-	-.086-	-.117-	.322
.209	.131	.035	.134	.058	-.145-	-.274-	-.043-	-.055-	.184	-.052-	-.034-	-.164-	.320	-.091-
-.164-	-.080-	-.255-	-.037-	-.099-	.336	-.187-	-.035-	-.031-	.138	.011	.279	-.032-	-.350-	.133
.294	-.269-	.059	-.228-	-.097-	-.117-	-.202-	.147	.115	.167	-.279-	.071	.181	-.172-	-.037-
-.120-	-.104-	-.062-	.006	.161	.066	.117	-.132-	-.204-	-.048-	-.054-	.045	.008	.090	-.202-

-.464-	.015	-.234-	.165	.136	.034	.170	-.077-	-.057-	-.201-	.391	.214	-.186-	.046	-.190-
.829 ^a	-.343-	.087	-.162-	-.107-	-.177-	-.147-	.035	.125	.191	.002	-.013-	-.047-	.069	.240
-.343-	.822 ^a	-.323-	.009	.253	-.050-	.003	-.074-	.085	.053	-.003-	.003	-.147-	-.141-	.240
.087	-.323-	.821 ^a	-.248-	-.116-	-.128-	.076	-.119-	-.095-	-.115-	-.301-	-.299-	.179	.301	-.211-
-.162-	.009	-.248-	.837 ^a	-.248-	7.071	-.325-	.135	.168	-.076-	.157	-.011-	.008	-.115-	-.006-
-.107-	.253	-.116-	-.248-	.719 ^a	-.081-	.154	-.049-	-.186-	-.070-	.039	-.061-	-.172-	.066	-.059-
-.177-	-.050-	-.128-	.071	-.081-	.861 ^a	-.337-	.046	-.156-	-.079-	.085	-.104-	-.189-	.091	.125
-.147-	.003	.076	-.325-	.154	-.337-	.847 ^a	-.140-	.016	-.196-	-.097-	-.160-	.092	.041	-.101-
.035	-.074-	-.119-	.135	-.049-	.046	-.140-	.807 ^a	-.046-	-.268-	.013	-.051-	-.052-	.076	.090
.125	.085	-.095-	.168	-.186-	-.156-	.016	-.046-	.796 ^a	-.072-	-.143-	.035	.179	-.266-	.107
.191	.053	-.115-	-.076-	-.070-	-.079-	-.196-	-.268-	-.072-	.710 ^a	-.178-	.020	-.089-	.001	.144
.002	-.003-	-.301-	.157	.039	.085	-.097-	.013	-.143-	-.178-	.807 ^a	.075	-.186-	.021	.075
-.013-	.003	-.299-	-.011-	-.061-	-.104-	-.160-	-.051-	.035	.020	.075	.813 ^a	-.200-	-.321-	-.099-
-.047-	-.147-	.179	.008	-.172-	-.189-	.092	-.052-	.179	-.089-	-.186-	-.200-	.806 ^a	-.543-	-.179-
.069	-.141-	.301	-.115-	.066	.091	.041	.076	-.266-	.001	.021	-.321-	-.543-	.763 ^a	-.217-
.240	.240	-.211-	-.006-	-.059-	.125	-.101-	.090	.107	.144	.075	-.099-	-.179-	-.217-	.779 ^a

Communalities

	Initial	Extraction
CD1	1.000	.723
CD2	1.000	.691
CD3	1.000	.815
CD4	1.000	.739
CD5	1.000	.803
CD6	1.000	.761
CD7	1.000	.741
CD8	1.000	.539
CIP1	1.000	.543
CIP2	1.000	.708
CIP3	1.000	.706
CIP4	1.000	.711
CIP5	1.000	.567
CIP6	1.000	.785
CIP7	1.000	.656
CIP8	1.000	.764
ICRM1	1.000	.599
ICRM2	1.000	.755
ICRM3	1.000	.782
ICRM4	1.000	.758
ICRM5	1.000	.803
ICRM6	1.000	.713
ICRM7	1.000	.693
ICRM8	1.000	.621
ICRM9	1.000	.669
ICRM10	1.000	.638
ICRM11	1.000	.601
ICRM12	1.000	.507
ICRM13	1.000	.641
ICRM14	1.000	.600
ICRM17	1.000	.712
ICRM18	1.000	.823
ICRM19	1.000	.810
ICRM20	1.000	.658

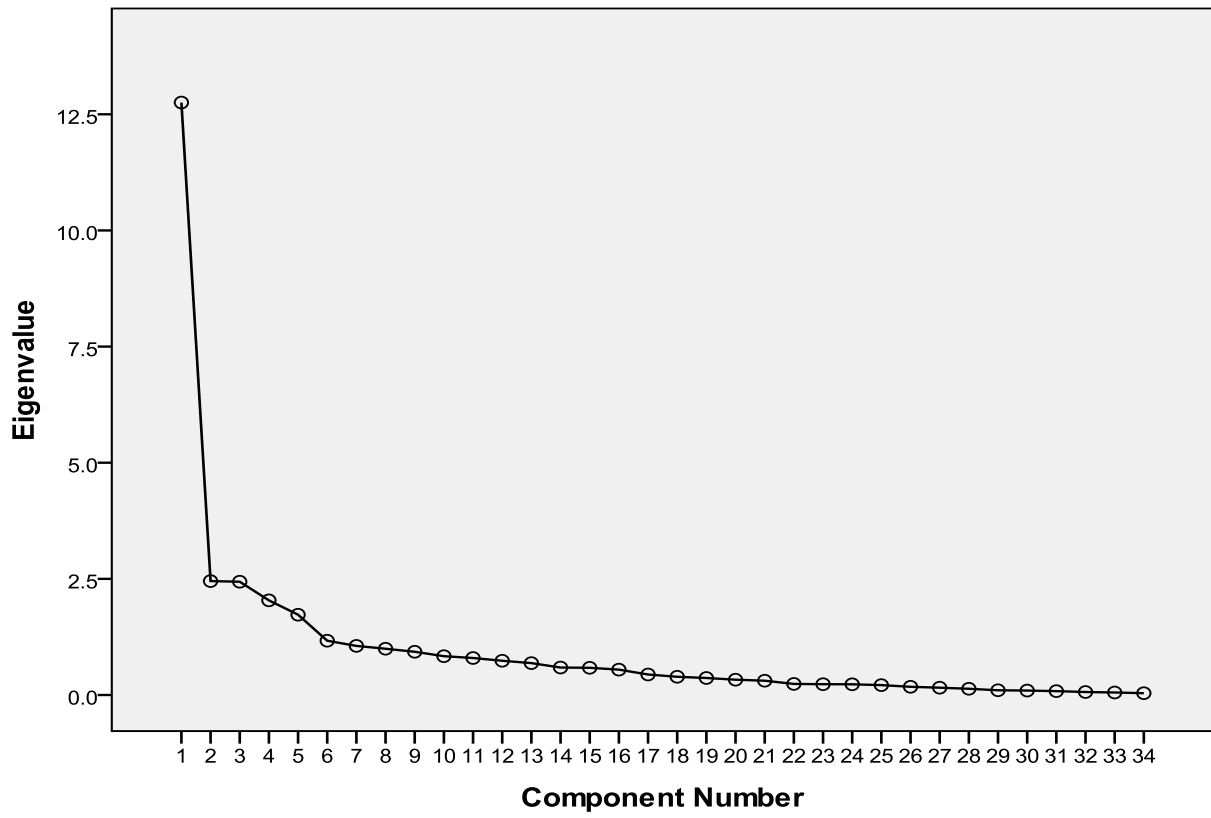
Extraction Method: Principal Component
Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.753	37.509	37.509	12.753	37.509	37.509	5.047	14.845	14.845
2	2.452	7.213	44.722	2.452	7.213	44.722	5.033	14.804	29.649
3	2.438	7.171	51.894	2.438	7.171	51.894	4.900	14.412	44.061
4	2.038	5.994	57.887	2.038	5.994	57.887	3.141	9.238	53.299
5	1.728	5.083	62.970	1.728	5.083	62.970	2.191	6.443	59.742
6	1.169	3.437	66.407	1.169	3.437	66.407	1.709	5.028	64.770
7	1.057	3.109	69.516	1.057	3.109	69.516	1.614	4.746	69.516
8	.996	2.929	72.445						
9	.931	2.738	75.183						
10	.836	2.458	77.641						
11	.796	2.342	79.983						
12	.737	2.168	82.151						
13	.687	2.019	84.171						
14	.591	1.739	85.910						
15	.586	1.723	87.633						
16	.546	1.607	89.239						
17	.441	1.298	90.537						
18	.392	1.154	91.692						
19	.366	1.077	92.769						
20	.330	.969	93.738						
21	.308	.905	94.643						
22	.239	.702	95.345						
23	.233	.685	96.029						
24	.230	.678	96.707						
25	.213	.626	97.333						
26	.177	.520	97.853						
27	.157	.463	98.315						
28	.134	.395	98.710						
29	.102	.300	99.010						
30	.096	.282	99.292						
31	.083	.245	99.537						
32	.064	.190	99.726						
33	.054	.159	99.885						
34	.039	.115	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix^a

	Component						
	1	2	3	4	5	6	7
ICRM3	.759						
CD7	.757						
CIP4	.752						
CD1	.714						
CD5	.712						
ICRM1	.702						
CIP5	.695						
ICRM7	.688						
CIP8	.686						
ICRM9	.684						
ICRM2	.682						
CD3	.682						
CIP3	.661						
CIP7	.659						
CD2	.650						
CD6	.646						
ICRM4	.643						
ICRM10	.634						
ICRM6	.626						
CIP6	.611						
CIP1	.603						
CD8	.594						
ICRM18	.592						
ICRM14							
ICRM17							
CIP2		-.627-					
ICRM5	.562		.617				
ICRM19				.555			
CD4							
ICRM20							
ICRM13					.629		
ICRM12							
ICRM11							
ICRM8							

Extraction Method: Principal Component Analysis.

a. 7 components extracted.

Rotated Component Matrix^a

	Component						
	1	2	3	4	5	6	7
CIP2	.810						
CIP6	.788						
CIP8	.772						
CIP7	.719						
CIP4	.664						
CIP3	.618						
CIP1	.607						
CIP5							
CD5		.765					
CD3		.761					
CD2		.751					
CD1		.717					
CD7		.670					
CD6		.661					
CD8		.613					
CD4		.581					
ICRM5			.878				
ICRM4			.761				
ICRM3			.680				
ICRM6			.670				
ICRM10			.610				
ICRM7			.609				
ICRM9			.597				
ICRM1			.581				
ICRM2							
ICRM19				.842			
ICRM18				.834			
ICRM17				.717			
ICRM20							
ICRM13					.760		
ICRM11					.724		
ICRM12							
ICRM14							
ICRM8							.718

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

Technology factors

Fourth stage

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.818
Bartlett's Test of Sphericity	Approx. Chi-Square	2472.510
	df	528
	Sig.	.000

		CD1	CD2	CD3	CD4	CD5	CD6	CD7	CD8	CIP1	CIP2	CIP3	CIP4	CIP5	CIP6	CIP7	CIP8	ICRM1	ICRM2	
Anti-image Correlation	CD1	.807 ^a	.047	-.443-	-.106-	.268	-.209-	-.428-	-.285-	-.158-	.026	-.297-	.156	.090	-.022-	-.159-	.299	-.171-	.057	
	CD2	.047	.887 ^a	-.287-	-.339-	.041	.153	-.215-	-.130-	-.128-	.155	.014	-.135-	.135	-.013-	-.036-	-	-.022-	.035	
		CD3	-.443-	-.287-	.788 ^a	-.018-	-.671-	-.051-	.419	-.134-	.306	-.041-	-.001-	-.055-	-.191-	.089	-.151-	.179	.169	.002
		CD4	-.106-	-.339-	-.018-	.746 ^a	.171	-.447-	-.048-	.081	.219	-.073-	.173	-.052-	.247	-.267-	.108	-	.156	-.133-
		CD5	.268	.041	-.671-	.171	.821 ^a	-.116-	-.558-	-.113-	-.205-	.051	-.085-	.105	.238	-.153-	.159	-	-.149-	-.071-
		CD6	-.209-	.153	-.051-	-.447-	-.116-	.849 ^a	-.135-	.170	-.107-	.177	.247	-.293-	-.073-	.179	-.014-	-	.123	.007
		CD7	-.428-	-.215-	.419	-.048-	-.558-	-.135-	.855 ^a	.098	.070	-.024-	.093	.003	-.265-	.005	-.047-	-	.073	.043
		CD8	-.285-	-.130-	-.134-	.081	-.113-	.170	.098	.846 ^a	-.016-	-.178-	.223	-.097-	-.095-	.168	.058	-	.007	-.129-
		CIP1	-.158-	-.128-	.306	.219	-.205-	-.107-	.070	-.016-	.843 ^a	-.381-	.131	-.216-	.051	-.077-	.117	-	.144	-.057-
		CIP2	.026	.155	-.041-	-.073-	.051	.177	-.024-	-.178-	-.381-	.803 ^a	-.344-	.158	-.020-	-.117-	-.183-	-	-.224-	.069
		CIP3	-.297-	.014	-.001-	.173	-.085-	.247	.093	.223	.131	-.344-	.708 ^a	-.561-	.065	-.177-	.251	-	.640	-.323-
		CIP4	.156	-.135-	-.055-	-.052-	.105	-.293-	.003	-.097-	-.216-	.158	-.561-	.816 ^a	-.262-	-.232-	.031	-	-.563-	.092
		CIP5	.090	.135	-.191-	.247	.238	-.073-	-.265-	-.095-	.051	-.020-	.065	-.262-	.869 ^a	-.197-	-.216-	.180	.100	-.024-
		CIP6	-.022-	-.013-	.089	-.267-	-.153-	.179	.005	.168	-.077-	-.117-	-.177-	-.232-	-.197-	.816 ^a	-.218-	-	-.156-	.018
		CIP7	-.159-	-.036-	-.151-	.108	.159	-.014-	-.047-	.058	.117	-.183-	.251	.031	-.216-	-.218-	.835 ^a	-	-.070-	.003
		CIP8	.299	-.023-	.179	-.053-	-.093-	-.248-	-.028-	-.292-	-.007-	-.154-	-.223-	-.069-	.180	-.036-	-.580-	.815 ^a	.174	.039
		ICRM1	-.171-	-.022-	.169	.156	-.149-	.123	.073	.007	.144	-.224-	.640	-.563-	.100	-.156-	-.070-	.174	.761 ^a	-.285-
		ICRM2	.057	.035	.002	-.133-	-.071-	.007	.043	-.129-	-.057-	.069	-.323-	.092	-.024-	.018	.003	.039	-.285-	.934 ^a
		ICRM3	.232	.002	.034	-.213-	-.012-	-.058-	-.178-	-.214-	-.163-	.184	-.438-	.341	-.119-	.060	-.116-	-	-.523-	-.010-
		ICRM4	-.046-	-.201-	-.137-	.208	.128	-.063-	.024	.172	.039	-.066-	.299	-.097-	-.087-	-.207-	.218	-	.284	-.097-
	ICRM5	-.075-	-.028-	.173	-.193-	-.098-	-.025-	.111	-.014-	.140	-.172-	-.139-	.054	-.134-	.468	.136	-	-.282-	-.088-	
	ICRM6	-.330-	.138	-.028-	.057	-.035-	.173	.170	.240	.130	.028	.251	-.124-	-.019-	-.107-	.030	-	.071	-.084-	
	ICRM7	.277	.000	-.252-	.036	.268	-.209-	-.344-	.023	-.016-	-.174-	-.288-	.423	-.037-	-.115-	.146	-	-.253-	.041	
	ICRM8	-.091-	.029	.281	-.183-	-.278-	-.010-	.116	-.082-	.048	.024	-.049-	-.076-	-.164-	.299	.048	-	-.078-	.128	
	ICRM9	.208	.152	-.092-	-.201-	-.047-	-.057-	.036	-.153-	-.332-	.232	-.328-	.061	-.102-	.120	-.156-	.335	-.101-	.036	
	ICRM10	-.154-	.011	.020	-.117-	.031	.244	.054	.080	-.237-	.272	-.104-	.013	.104	.236	-.274-	-	-.206-	.123	
	ICRM11	.070	.166	-.220-	.047	.149	-.003-	-.101-	.020	-.089-	.064	.048	-.033-	.004	-.018-	-.045-	-	.154	-.145-	
																	.036-			

ICRM1 3		-.082-	-.141-	.156	.189	-.019-	-.187-	.074	-.075-	.205	-.227-	.218	-.087-	-.065-	-.192-	.181	.137	.176	-.064-
ICRM1 4		.267	-.061-	-.103-	-.015-	.014	-.157-	-.180-	.024	-.104-	.141	-.360-	.232	-.122-	.066	-.060-	.007	-.267-	-.086-
ICRM1 7		.183	-.286-	.180	-.036-	-.077-	-.176-	.094	-.319-	.127	-.099-	.004	.068	-.070-	-.196-	-.032-	.280	.067	.054
ICRM1 8		-.186-	.015	-.024-	.234	.031	.091	-.056-	.160	-.062-	.003	.242	-.252-	.406	-.082-	-.157-	-	.164	.046
ICRM1 9		-.167-	.203	-.209-	-.083-	.088	.116	.057	.069	-.025-	.166	-.059-	.167	-.270-	-.131-	.317	-	-.148-	.038
ICRM2 0		.208	-.144-	-.133-	.131	.096	-.114-	-.126-	.142	.012	-.117-	-.112-	-.081-	.013	.327	-.086-	.137	-.050-	-.186-

a. Measures of Sampling Adequacy(MSA)

ICRM3	ICRM4	ICRM5	ICRM6	ICRM7	ICRM8	ICRM9	ICRM10	ICRM11	ICRM12	ICRM13	ICRM14	ICRM15	ICRM17	ICRM18
.232	-.046-	-.075-	-.330-	.277	-.091-	.208	-.154-	.070	-.082-	.267	.183	-.186-	-.167-	.208
.002	-.201-	-.028-	.138	.000	.029	.152	.011	.166	-.141-	-.061-	-.286-	.015	.203	-.144-
.034	-.137-	.173	-.028-	-.252-	.281	-.092-	.020	-.220-	.156	-.103-	.180	-.024-	-.209-	-.133-
-.213-	.208	-.193-	.057	.036	-.183-	-.201-	-.117-	.047	.189	-.015-	-.036-	.234	-.083-	.131
-.012-	.128	-.098-	-.035-	.268	-.278-	-.047-	.031	.149	-.019-	.014	-.077-	.031	.088	.096
-.058-	-.063-	-.025-	.173	-.209-	-.010-	-.057-	.244	-.003-	-.187-	-.157-	-.176-	.091	.116	-.114-
-.178-	.024	.111	.170	-.344-	.116	.036	.054	-.101-	.074	-.180-	.094	-.056-	.057	-.126-
-.214-	.172	-.014-	.240	.023	-.082-	-.153-	.080	.020	-.075-	.024	-.319-	.160	.069	.142
-.163-	.039	.140	.130	-.016-	.048	-.332-	-.237-	-.089-	.205	-.104-	.127	-.062-	-.025-	.012
.184	-.066-	-.172-	.028	-.174-	.024	.232	.272	.064	-.227-	.141	-.099-	.003	.166	-.117-
-.438-	.299	-.139-	.251	-.288-	-.049-	-.328-	-.104-	.048	.218	-.360-	.004	.242	-.059-	-.112-
.341	-.097-	.054	-.124-	.423	-.076-	.061	.013	-.033-	-.087-	.232	.068	-.252-	.167	-.081-
-.119-	-.087-	-.134-	-.019-	-.037-	-.164-	-.102-	.104	.004	-.065-	-.122-	-.070-	.406	-.270-	.013
.060	-.207-	.468	-.107-	-.115-	.299	.120	.236	-.018-	-.192-	.066	-.196-	-.082-	-.131-	.327
-.116-	.218	.136	.030	.146	.048	-.156-	-.274-	-.045-	.181	-.060-	-.032-	-.157-	.317	-.086-
-.004-	-.161-	-.078-	-.259-	-.032-	-.107-	.335	-.187-	-.036-	.137	.007	.280	-.026-	-.372-	.137
-.523-	.284	-.282-	.071	-.253-	-.078-	-.101-	-.206-	.154	.176	-.267-	.067	.164	-.148-	-.050-
-.010-	-.097-	-.088-	-.084-	.041	.128	.036	.123	-.145-	-.064-	-.086-	.054	.046	.038	-.186-
.819 ^a	-.461-	.020	-.241-	.178	.128	.026	.171	-.079-	-.206-	.388	.217	-.178-	.032	-.186-
-.461-	.831 ^a	-.358-	.100	-.187-	-.086-	-.161-	-.150-	.041	.202	.020	-.017-	-.071-	.106	.229
.020	-.358-	.820 ^a	-.318-	-.005-	.275	-.037-	.001	-.070-	.059	.009	.000	-.166-	-.123-	.233

-241-	.100	-318-	.816 ^a	-.237-	-.136-	-.145-	.078	-.124-	-.123-	-.319-	-.297-	.200	.287	-.203-
.178	-.187-	-.005-	-.237-	.833 ^a	-.224-	.027	-.332-	.145	-.065-	.186	-.017-	-.023-	-.074-	-.025-
.128	-.086-	.275	-.136-	-.224-	.721 ^a	-.113-	.159	-.058-	-.085-	.012	-.056-	-.144-	.017	-.040-
.026	-.161-	-.037-	-.145-	.027	-.113-	.868 ^a	-.339-	.039	-.092-	.065	-.100-	-.166-	.052	.144
.171	-.150-	.001	.078	-.332-	.159	-.339-	.844 ^a	-.140-	-.196-	-.096-	-.161-	.090	.047	-.103-
-.079-	.041	-.070-	-.124-	.145	-.058-	.039	-.140-	.801 ^a	-.272-	.006	-.050-	-.045-	.066	.096
-.206-	.202	.059	-.123-	-.065-	-.085-	-.092-	-.196-	-.272-	.685 ^a	-.191-	.023	-.078-	-.019-	.153
.388	.020	.009	-.319-	.186	.012	.065	-.096-	.006	-.191-	.803 ^a	.081	-.165-	-.018-	.092
.217	-.017-	.000	-.297-	-.017-	-.056-	-.100-	-.161-	-.050-	.023	.081	.810 ^a	-.210-	-.323-	-.104-
-.178-	-.071-	-.166-	.200	-.023-	-.144-	-.166-	.090	-.045-	-.078-	-.165-	-.210-	.814 ^a	-.522-	-.203-
.032	.106	-.123-	.287	-.074-	.017	.052	.047	.066	-.019-	-.018-	-.323-	-.522-	.782 ^a	-.196-
-.186-	.229	.233	-.203-	-.025-	-.040-	.144	-.103-	.096	.153	.092	-.104-	-.203-	-.196-	.781 ^a

Communalities

	Initial	Extraction
CD1	1.000	.713
CD2	1.000	.692
CD3	1.000	.803
CD4	1.000	.743
CD5	1.000	.813
CD6	1.000	.778
CD7	1.000	.746
CD8	1.000	.557
CIP1	1.000	.560
CIP2	1.000	.711
CIP3	1.000	.719
CIP4	1.000	.724
CIP5	1.000	.573
CIP6	1.000	.792
CIP7	1.000	.653
CIP8	1.000	.766
ICRM1	1.000	.603
ICRM2	1.000	.748
ICRM3	1.000	.795
ICRM4	1.000	.756
ICRM5	1.000	.832
ICRM6	1.000	.708
ICRM7	1.000	.691
ICRM8	1.000	.573
ICRM9	1.000	.678
ICRM10	1.000	.644
ICRM11	1.000	.595
ICRM13	1.000	.668
ICRM14	1.000	.629
ICRM17	1.000	.722
ICRM18	1.000	.823
ICRM19	1.000	.838
ICRM20	1.000	.642

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Initial Eigenvalues			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.614	38.224	38.224	12.614	38.224	38.224	4.969	15.059	15.059
2	2.452	7.431	45.656	2.452	7.431	45.656	4.964	15.042	30.101
3	2.431	7.366	53.022	2.431	7.366	53.022	4.744	14.376	44.477
4	2.032	6.156	59.178	2.032	6.156	59.178	3.082	9.338	53.815
5	1.549	4.693	63.871	1.549	4.693	63.871	2.071	6.277	60.092
6	1.165	3.532	67.403	1.165	3.532	67.403	1.783	5.402	65.494
7	1.043	3.160	70.563	1.043	3.160	70.563	1.673	5.068	70.563
8	.983	2.978	73.540						
9	.931	2.820	76.360						
10	.832	2.521	78.882						
11	.795	2.409	81.291						
12	.700	2.121	83.412						
13	.614	1.860	85.272						
14	.587	1.778	87.050						
15	.561	1.699	88.750						
16	.443	1.343	90.092						
17	.393	1.190	91.282						
18	.367	1.113	92.395						
19	.331	1.002	93.397						
20	.309	.936	94.333						
21	.252	.763	95.096						
22	.238	.722	95.818						
23	.233	.705	96.523						
24	.214	.648	97.171						
25	.190	.575	97.746						
26	.158	.478	98.224						
27	.135	.409	98.634						
28	.106	.320	98.953						
29	.102	.309	99.262						
30	.084	.255	99.518						
31	.065	.198	99.715						
32	.054	.165	99.880						
33	.040	.120	100.000						

Extraction Method: Principal Component Analysis.

Appendix (C)

Reliability

Organizational performance

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded ^a	16	14.0
	Total	114	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.938	4

CRM performance

Reliability Statistics

Cronbach's Alpha	N of Items
.880	8

Training Orientation

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.892	6

Top Management

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.918	5

Customer Orientation

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Customer Data

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.906	8

Reliability Statistics

Cronbach's Alpha	N of Items
.899	6

Customer Information

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.898	7

CRM functionality

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.913	9

Integration Data

Case Processing Summary

		N	%
Cases	Valid	98	86.0
	Excluded(a)	16	14.0
	Total	114	100.0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.867	3

Appendix (D)
Hotels Profile

Annual income

Descriptive

mean_CRMperformance

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					1000-19999	37		
20000-59999	18	4.0229	.55591	.13103	3.7464	4.2993	2.94	4.94
60000-100000	27	3.7190	.52824	.10166	3.5100	3.9279	2.71	4.76
> 100000	16	3.1728	.61111	.15278	2.8472	3.4984	2.12	4.41
Total	98	3.6182	.65034	.06569	3.4879	3.7486	2.12	4.94

ANOVA

mean_CRMperformance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.619	3	2.206	6.028	.001
Within Groups	34.407	94	.366		
Total	41.026	97			

Multiple Comparisons

Dependent Variable: mean_CRMperformance
Tukey HSD

(I) mean_annuel	(J) mean_annuel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1000-19999	20000-59999	-.48234(*)	.17386	.033	-.9371	-.0276
	60000-100000	-.17841	.15313	.650	-.5789	.2221
	> 100000	.36775	.18102	.184	-.1057	.8412
20000-59999	1000-19999	.48234(*)	.17386	.033	.0276	.9371
	60000-100000	.30392	.18410	.356	-.1776	.7854
	> 100000	.85008(*)	.20787	.001	.3064	1.3938
60000-100000	1000-19999	.17841	.15313	.650	-.2221	.5789

	20000-59999	-.30392	.18410	.356	-.7854	.1776
	> 100000	.54616(*)	.19088	.026	.0469	1.0454
> 100000	1000-19999	-.36775	.18102	.184	-.8412	.1057
	20000-59999	-.85008(*)	.20787	.001	-1.3938	-.3064
	60000-100000	-.54616(*)	.19088	.026	-1.0454	-.0469

* The mean difference is significant at the .05 level.

Hotels categories

Descriptive

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
one star	27	3.6819	.59078	.11370	3.4482	3.9156	2.47	4.88
tow stare	26	3.6787	.78379	.15371	3.3622	3.9953	2.35	4.94
three star	24	3.7157	.51389	.10490	3.4987	3.9327	2.71	4.76
four star	10	3.4412	.69449	.21962	2.9444	3.9380	2.35	4.71
five star	11	3.2674	.63864	.19256	2.8383	3.6964	2.12	4.41
Total	98	3.6182	.65034	.06569	3.4879	3.7486	2.12	4.94

mean_CRMperformance

ANOVA

mean_CRMperformance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.100	4	.525	1.254	.294
Within Groups	38.926	93	.419		
Total	41.026	97			

Multiple Comparisons

Dependent Variable: mean_CRMperformance
 Tukey HSD

(I) mean_hotel	(J) mean_hotel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
one star	tow stare	.00318	.17777	1.000	-.4914	.4977
	three star	-.03377	.18150	1.000	-.5387	.4712
	four star	.24074	.23949	.852	-.4255	.9070
	five star	.41454	.23141	.385	-.2293	1.0583
tow stare	one star	-.00318	.17777	1.000	-.4977	.4914
	three star	-.03695	.18313	1.000	-.5464	.4725
	four star	.23756	.24074	.861	-.4322	.9073
	five star	.41135	.23270	.398	-.2360	1.0587
three star	one star	.03377	.18150	1.000	-.4712	.5387
	tow stare	.03695	.18313	1.000	-.4725	.5464
	four star	.27451	.24351	.792	-.4029	.9520
	five star	.44831	.23556	.323	-.2070	1.1037
four star	one star	-.24074	.23949	.852	-.9070	.4255
	tow stare	-.23756	.24074	.861	-.9073	.4322
	three star	-.27451	.24351	.792	-.9520	.4029
	five star	.17380	.28268	.972	-.6126	.9602
five star	one star	-.41454	.23141	.385	-1.0583	.2293
	tow stare	-.41135	.23270	.398	-1.0587	.2360
	three star	-.44831	.23556	.323	-1.1037	.2070
	four star	-.17380	.28268	.972	-.9602	.6126

Employees

Descriptive

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					1-19	48		

20-99	35	3.7193	.55514	.09384	3.5286	3.9100	2.71	4.76
100-500	11	2.9358	.49107	.14806	2.6059	3.2657	2.12	3.76
> 500	4	3.7059	.63899	.31949	2.6891	4.7227	2.94	4.41
Total	98	3.6182	.65034	.06569	3.4879	3.7486	2.12	4.94

mean_CRMperformance

ANOVA

mean_CRMperformance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.784	3	1.928	5.142	.002
Within Groups	35.242	94	.375		
Total	41.026	97			

Multiple Comparisons

Dependent Variable: mean_CRMperformance

Tukey HSD

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
mean_employee	mean_employee					

1-19	20-99	-.02570	.13610	.998	-.3817	.3303
	100-500	.75780(*)	.20468	.002	.2224	1.2932
	> 500	-.01225	.31865	1.000	-.8457	.8212
20-99	1-19	.02570	.13610	.998	-.3303	.3817
	100-500	.78350(*)	.21165	.002	.2299	1.3371
	> 500	.01345	.32317	1.000	-.8318	.8587
100-500	1-19	-.75780(*)	.20468	.002	-1.2932	-.2224
	20-99	-.78350(*)	.21165	.002	-1.3371	-.2299
	> 500	-.77005	.35751	.144	-1.7052	.1650
> 500	1-19	.01225	.31865	1.000	-.8212	.8457
	20-99	-.01345	.32317	1.000	-.8587	.8318
	100-500	.77005	.35751	.144	-.1650	1.7052

* The mean difference is significant at the .05 level.

Operation years

Descriptive

mean_CRMperformance

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					1-10	21		
11-20	41	3.7991	.59277	.09258	3.6120	3.9862	2.76	4.94
21-30	14	3.3277	.63090	.16862	2.9635	3.6920	2.35	4.12
31-40	18	3.5229	.52841	.12455	3.2601	3.7856	2.47	4.29
> 40	4	3.0441	.26471	.13235	2.6229	3.4653	2.82	3.41
Total	98	3.6182	.65034	.06569	3.4879	3.7486	2.12	4.94

ANOVA

mean_CRMperformance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.026	4	1.007	2.530	.046
Within Groups	37.000	93	.398		
Total	41.026	97			

Multiple Comparisons

Dependent Variable: mean_CRMperformance
 Tukey HSD

(I) mene_operati on	(J) mene_operatio n	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1-10	11-20	-.14928	.16926	.903	-.6202	.3216
	21-30	.32213	.21763	.578	-.2833	.9276
	31-40	.12698	.20260	.970	-.4367	.6906
	> 40	.60574	.34410	.403	-.3516	1.5630
11-20	1-10	.14928	.16926	.903	-.3216	.6202
	21-30	.47141	.19525	.121	-.0718	1.0146
	31-40	.27626	.17834	.534	-.2199	.7724
	> 40	.75502	.33040	.159	-.1642	1.6742
21-30	1-10	-.32213	.21763	.578	-.9276	.2833
	11-20	-.47141	.19525	.121	-1.0146	.0718
	31-40	-.19514	.22477	.908	-.8204	.4302
	> 40	.28361	.35760	.932	-.7112	1.2785
31-40	1-10	-.12698	.20260	.970	-.6906	.4367
	11-20	-.27626	.17834	.534	-.7724	.2199
	21-30	.19514	.22477	.908	-.4302	.8204
	> 40	.47876	.34866	.646	-.4912	1.4487
> 40	1-10	-.60574	.34410	.403	-1.5630	.3516
	11-20	-.75502	.33040	.159	-1.6742	.1642
	21-30	-.28361	.35760	.932	-1.2785	.7112
	31-40	-.47876	.34866	.646	-1.4487	.4912

Appendix (E)
Regression Analysis

Regression analysis customer relationship management CRM and Organizational performance

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.389 ^a	.151	.142	.74699	1.391

a. Predictors: (Constant), mean_CRMperformance

b. Dependent Variable: Mean_ Organizational performance

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.532	1	9.532	17.083	.000 ^a
	Residual	53.568	96	.558		
	Total	63.100	97			

a. Predictors: (Constant), mean_CRMperformance

b. Dependent Variable: Mean_ Organizational performance

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	1.447	.429		3.376	.001			
	mean_CRM performance	.482	.117	.389	4.133	.000	.389	.389	.389

a. Dependent Variable: Mean_ Organizational performance

Regression analysis antecedent's customer relationship management performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848 ^a	.717	.690	.34229

b. Dependent Variable: mean_ CRM performance

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.005	7	3.715	31.707	.000 ^a
	Residual	10.193	87	.117		
	Total	36.198	94			

a. Predictors: (Constant), Means_ integration data, customer information, customer data, customer orientation.

CRM functionality, top management, training orientation,

b. Dependent Variable: mean_ CRM performance

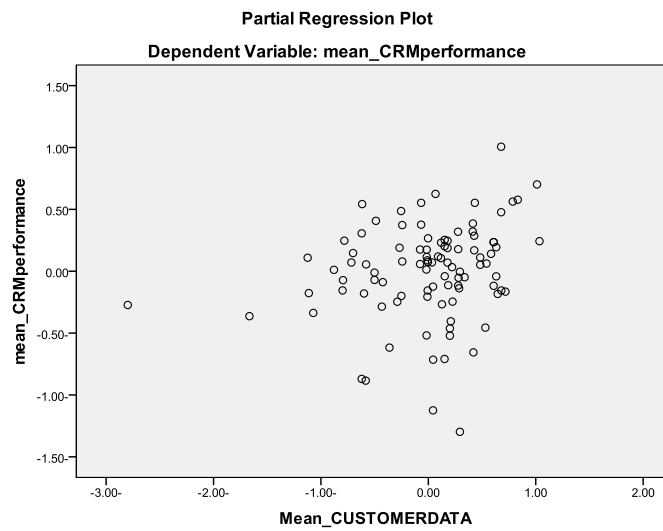
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (constant)	275	304		905	.368		
Customer Data	.160	.060	.211	2.682	.009	.521	1.920
Customer Information	.396	.094	.434	4.234	.000	.307	3.252
integration Data	.047	.098	.045	.481	.632	.371	2.694
Customer-oriented	.159	.092	.146	1.717	.090	.450	2.222
Top management	.328	.080	.392	4.091	.000	.352	2.842
Training orientation	-.082	.110	-.087	-.749	.456	.238	4.199
CRM functionality	.178	.056	.243	3.167	.002	.549	1.823

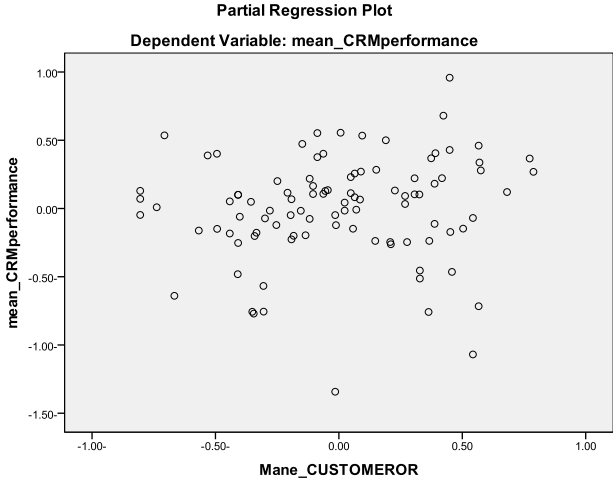
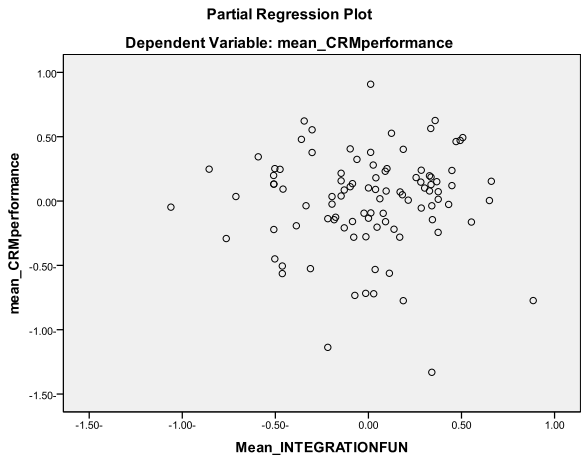
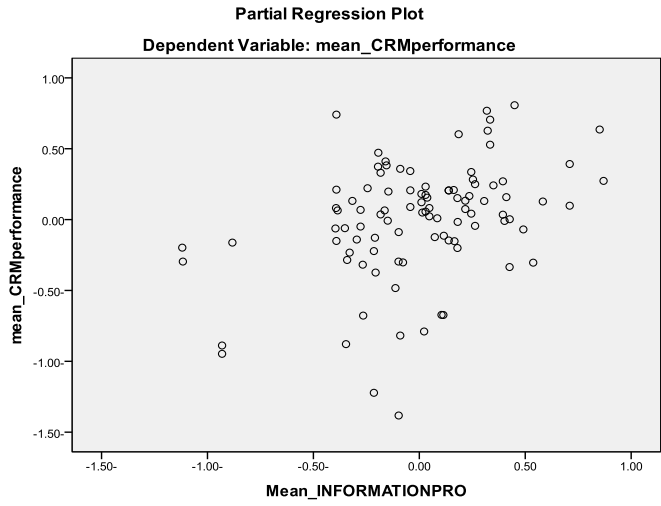
- a. Dependent variable: mean CRM performance

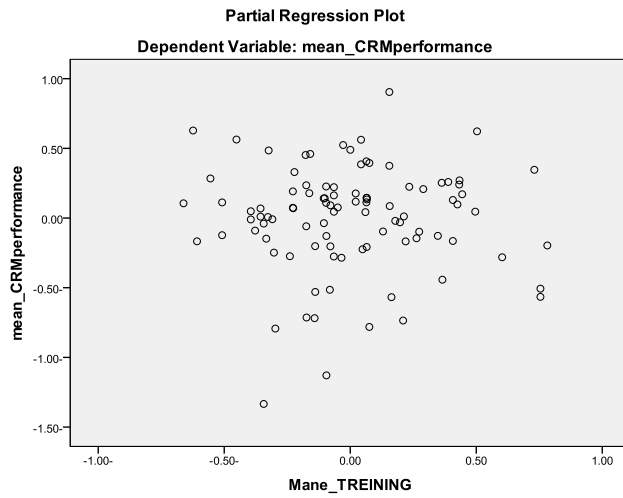
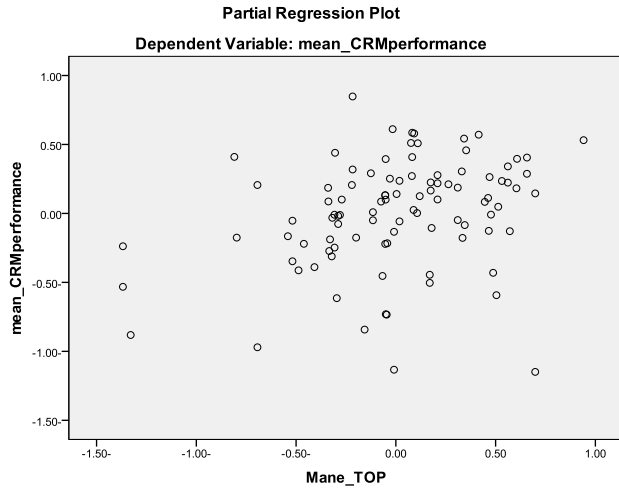
Appendix (F)

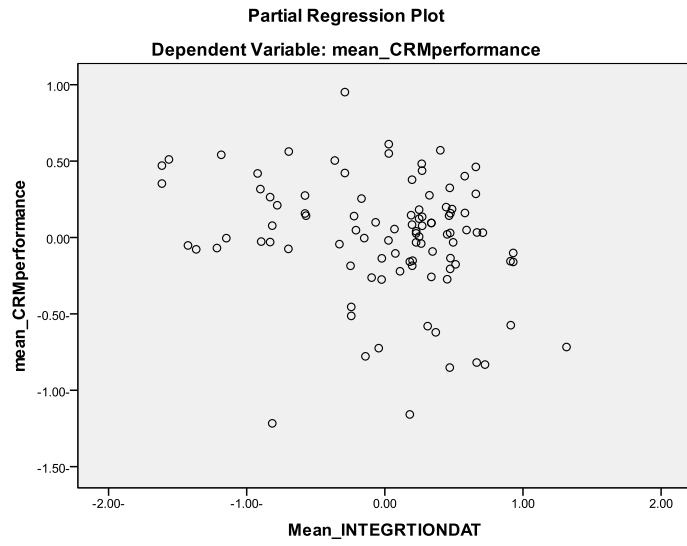
Partial Plots

Relationship between customer relationship management performance and success factors variables





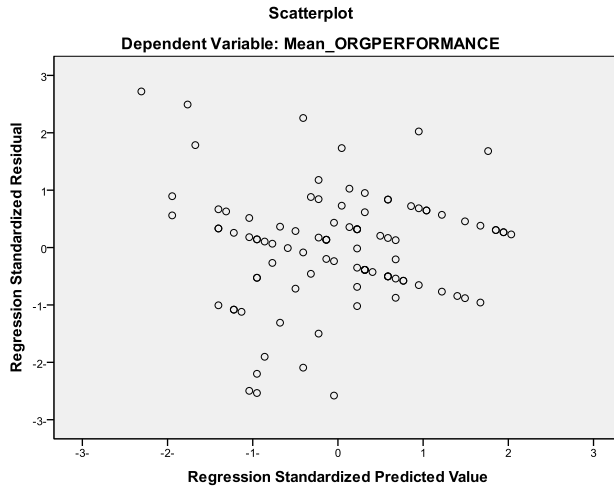




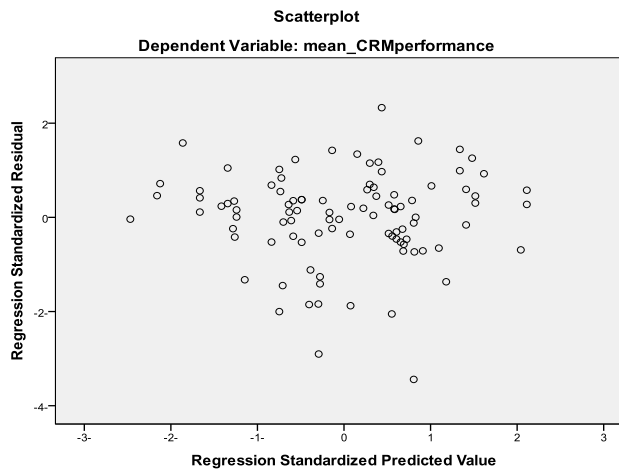
Appendix (G)

Scatter Plots

Relationship between Organizational Performance and Customer Relationship Management Performance

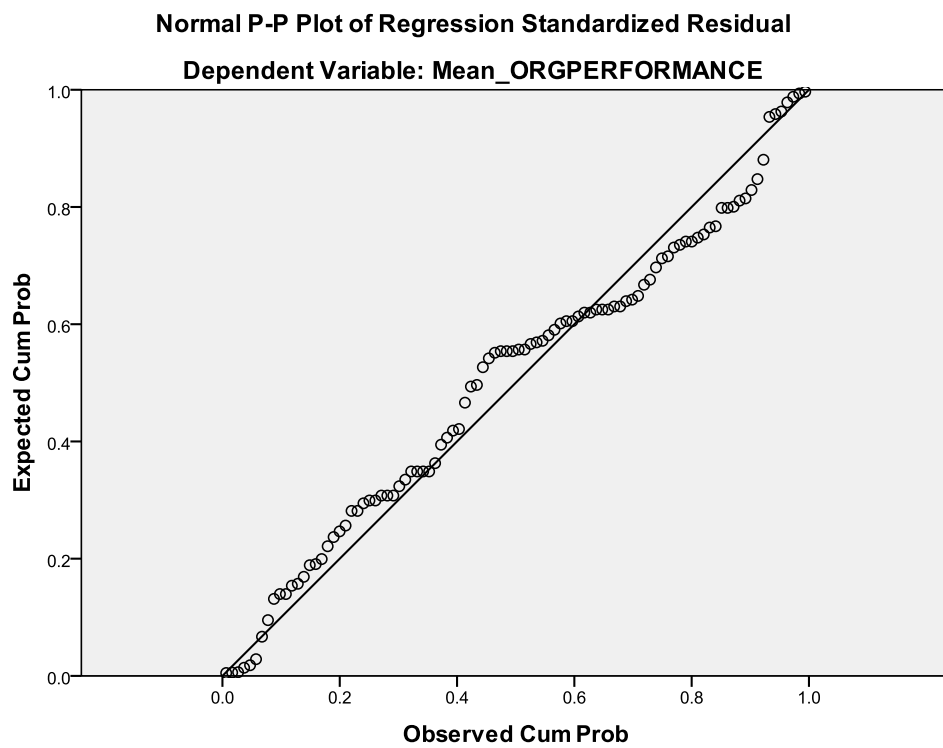


Relationship between Customer Relationship Management Performance and Antecedent factors



Appendix (H)
Normal Probability Plot

Relationship between Organizational Performance (DV) and Customer Relationship Management Performance (IV)



Relationship between Customer Relationship Management Performance (DV) and Antecedents (IV)

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: mean_CRMperformance

