

THE IMPACT OF CRM CAPABILITY DIMENSIONS ON ORGANIZATIONAL PERFORMANCE

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ABSTRACT

Customer relationship management is considered key to organizations' success in today's competitive environment. However, empirical evidence show mixed support to the impact of CRM initiatives on performance. Using the resource-based view RBV of the firm, CRM is hypothesized as a distinctive capability that can lead to superior business performance. The study proposes four dimensions of CRM capability: CRM technology, CRM processes, customer orientation, and CRM organization. Data used to validate the research model were collected through cross sectional survey of large Egyptian companies. SEM was used to test the research hypotheses. All CRM proposed dimensions showed significant link to performance. However, when all impacts were considered simultaneously, CRM organization emerged as the only significant predictor of performance. Implications for theory and practice are presented.

Keywords: Customer relationship management, CRM capability, RBV, Customer orientation, CRM Technology, CRM organization, organizational performance, Egypt.

1. Introduction

Relationship management is not a new concept, since the late 60s researchers acknowledged that attracting and retaining customers is the main purpose of any business (Mendoza, Marius, Peres, & Griman, 2007). The advent of CRM software tools enabled the tracking, capture, and analysis of customer activities across different contact points and led the shift from segment-centric marketing to customer-centric marketing making it possible for organizations to increase customer loyalty while keeping marketing cost low (Minami & Dawson, 2008; Sheth, Sisodia, & Sharma, 2000). CRM showed significant positive impact on customers' satisfaction, loyalty, and eventually on the company profitability (e.g., Akroush, Dahiyat, Gharaibeh, & Abu-Lail, 2011; Coltman, 2007a; Yim, Anderson, & Swaminathan, 2004). Yet, CRM initiatives still face high failure rates ranging between 50-70 percent (Awasthi & Sangle, 2012). One explanation of the reported high failure rates could be the high emphasis on CRM as an IT initiative and ignoring the other resources needed to establish a superior CRM capability (Coltman, 2007b; Wang & Feng, 2012). To help understand CRM impact on performance, one may turn to the information systems success models (e.g., Delone & Mclean, 1992, 2003; Davis, 1989), however this is not sufficient because those models view CRM from a narrow scope as an enterprise application or a technological innovation (Kim and Kim, 2009). Another research stream focused on the identification of CRM critical success factors CSFs (e.g., King & Burgess, 2008; Ngai, Xiu, & Chau, 2009; Da Silva & Rahimi, 2007; Mendoza et al., 2007; Corteau and Li, 2003; Lindgreen, Palmer, Vanhamme & Wouters, 2006). Although this work provides managerial implications in terms of key success antecedents, they fail to define the differentiating factors that enable some organizations to outperform others in managing their customers' relations. The resource-based view of the firm RBV has been applied in the IS and marketing literature to explain organizational capabilities and their impact on competitive advantage (e.g., Bhatt & Grover, 2005; Coltman, Devinney, & Midgley, 2011; Day, 1994, 2000; Melville, Kraemer, & Gurbaxani, 2004; Peppard & Ward, 2004; Ray, Muhhana, & Barney, 2005). The RBV suggests that sustainable competitive advantage results from the ability of the firm to integrate and organize valuable resources in such a way as to create distinctive capabilities that are heterogeneous, immobile, and difficult to imitate (Day, 1994; Grant, 1991; Barney, 1995).

Despite the vast research on CRM, it is still not well understood in Arab countries and especially Egypt (El-Gohary, Edwards, & Huang, 2013). Few studies were conducted in the Arab region during the last decade, such as El-Gohary et al. (2013) and Yacout (2011) who explored CRM adoption in Egyptian SMEs. Essawi and Azab (2012), Sadek, Youssef, & Ghoneim (2011), and Soliman (2011) studied the impact of CRM implementation in Egyptian banks. Khasawneh and Abu-Shanab (2012), Alsmadi and Alnawas (2011), and Akroush, Dahiyat, Gharaibeh, & Abu-Lail (2011) studied CRM implementation in Jordanian financial institutions. The objective of this research is to develop a model of CRM capability dimensions and test its effect on superior performance outcomes. CRM capability is hypothesized as an integration of four resources, namely, CRM technology, CRM processes, customer orientation, and CRM organization. The structure of those dimensions allows managers to measure, control, and eventually take the appropriate decisions and actions to enhance their different aspects, which leads to a competitive business performance. This paper adds to the debate on CRM success by providing insights on CRM performance in a developing Arab market such as Egypt. The following section provides a review of the literature on CRM conceptualization, prior models that studied CRM as a capability, and the link between each of the four CRM dimensions and organizational performance. This is followed by a description of the research methodology, data analysis and discussion of the research results. The paper concludes with implications for managers and directions for future research.

2. Literature Review

2.1 Conceptualization of Customer Relationship Management

The review of the extant literature on CRM shows that "the field has begun to converge on one common definition" (Boulding et al., 2005 p. 157). Chen and Popovich (2003) presented CRM as a combination of three components: people, resources, and technology. A fourth component; strategy; is suggested by other researchers (Yim et al., 2004). Based on an extensive review of CRM definitions, Zablah, Bellenger, and Johnston (2004) concluded that CRM conceptualizations take one, or a combination of five complementary perspectives: CRM as a strategy, as a philosophy, as a process, as an information technology application, and as an organizational capability. CRM as a *philosophy* considers customer loyalty key to business profitability. To achieve loyalty, firm must shift their focus from getting customers to retaining customers (Reichheld, 2006). CRM as a philosophy directs organizations to build customer centric cultures and to organize around customers (Piccoli, O'Connor, Capaccioli, & Alvarez, 2003; Hasan, 2003). When CRM is seen as *strategy*, attention is directed to maximizing the use of organizational resources towards a favorable market position. Under this perspective, researchers emphasize that not all relationships are good, and that customers who contribute the highest value to the firm deserve more attention from managers (e.g., Ryals, 2005). Many researchers see CRM as a *process* or "a collection of tasks or activities that help organization achieve desired business outcomes" (Hammer, 2001). Some researchers emphasize customer facing processes (e.g., Chen & Popovich, 2003; Reinartz, Krafft, & Hoyer, 2004), others look at the customer knowledge management processes (e.g., Croteau and Li, 2003; Sin, Tse and Yim, 2005), and few studied information relational processes (e.g., Bin Ismail, Talukder, Panni, 2007; Jayachandran, Sharma, Kaufman, & Raman, 2005). CRM is also seen as an *information technology* solution or an enterprise application system that supports the building of profitable customer relationships (e.g., Torggle, 2008; Ang & Buttle, 2006; Stephaou, Sarmaniotis, & Stafyla, 2003; Teo, Devadoss, & Pan, 2006). Although the importance of technologies such as the internet, sales force automation, call centers, and data mining in CRM is well acknowledged, many researchers agree that CRM is more than a technology, especially with poor to moderate empirical evidence on a direct link between technology and organizational performance (Minami & Dawson, 2008; Day & Van den Butle, 2002; Reinartz et al., 2004). Recently more attention was directed to CRM as an organizational *capability* that contributes to the creation of a competitive advantage (e.g., Campbell, 2003; Day & Van den Bulte, 2002; Day, 2000). A capability is defined as the capacity of a team of resources bundled together to perform a task or an activity. While resources are the source of capabilities, capabilities are the main source of a firm's competitive advantage (Grant, 1991). Capabilities have four sources; employees' knowledge and skills, technical systems which include information systems and formal procedures for dealing with problems, the management system, and the unifying values and norms (Day, 1994). According to the capability view, firms need to acquire and integrate resources that increase their responsiveness to the changing needs of individual customers (Peppers, Rogers, & Dorf, 1999). One can argue that CRM as a capability is the most comprehensive view of CRM, because it combines CRM processes with other complementary tangible and intangible assets deemed necessary to carry out such processes. Therefore, this study defines CRM as "*an organizational capability that enables a firm to manage long term profitable relationships with its customers and to enhance its competitive position. This capability is based on the integration of four resources: CRM technology, CRM processes, customer orientation, and CRM organization*".

5. 2.2 Theoretical Framework for CRM Capability Dimensions

Recently, CRM researchers acknowledged the view of CRM as a capability, and have adopted the resource-based view as the most appropriate theoretical framework to assess its impact on organizational performance (Keramati, Mehrabi, & Mojir, 2010; Kim & Kim, 2009; Rapp, Trainor, & Agnihotri, 2010). For example, Wang and Feng (2012) proposed that customer orientation, customer centric management systems, and CRM technology influence organizational performance through three CRM capabilities (interaction management, relationship upgrading, and win-back). Coltman et al. (2011) posited that CRM capability consists of three components: (1) IT infrastructure (CRM technology and customer information); (2) human analytic-based resources (employees' skills to use the data effectively); and (3) business architecture and structural capabilities (incentives and management controls that support CRM). Kim and Kim (2009) suggest that the infrastructure factors (IT, organizational culture, human capital, and strategic alignment) influence CRM processes (customer acquisition, retention, and expansions), resulting in customer outcome factors (customer perceived value, customer satisfaction, and loyalty), which in turn leads to financial results. Day and Van den Bulte (2002) proposed that customer relating capability has three interrelated components: (1) the configuration component; including the organizational structure, incentives, and accountabilities, (2) the orientation component; comprising the mindset, values, and organizational priorities toward customer relationships, and (3) the information component, including databases and customer information systems. CRM organizational alignment is advocated by Greve and Albers (2006), who argue that CRM technology, the organization design, and the culture must be aligned to support the CRM relational processes. Also, Ocker and Mudambi (2003) suggested that CRM capability depends on the alignment of three underlying dimensions: (1) intellectual dimension which is manifested in planning, strategy, and structure, (2) social dimension that includes culture, parties' interactions, and domain knowledge, and (3) technological dimension represented by CRM applications, IT capabilities, and knowledge management systems. Consistent with the RBV line of research, Yim et al. (2004) and Sin et al. (2005) developed a model of CRM dimensions consisting of: key customer focus, CRM organization, knowledge management, and technology-based CRM. To conclude, most of the aforementioned models agree on the significance of four dimensions of CRM, namely; CRM technology, CRM processes, customer orientation, and CRM organization. Those variables are also among the most cited CSFs of CRM in the literature (e.g., Chen and Chen, 2004; Kim & Kim, 2009; King & Burgess, 2008; Mendoza et al., 2007). The following section provides review of the prior studies on the link between CRM capability dimensions and performance.

2.2.1 Performance Outcomes

CRM impact is defined as the benefits that organizations receive through the successful implementation of CRM (Croteau & Li, 2003). In this study, CRM impact on business performance focuses on three key aspects of customer relationship outcomes: customer satisfaction, customer retention or loyalty, and sales growth (e.g., Jayachandran et al., 2005; Yim et al., 2004). CRM provides managers with better means to build higher levels of customer satisfaction by allowing them to deliver product performance that exceeds the customer's expectations. CRM can also increase customer retention rates through the development of customized loyalty programs which can raise customer switching cost and create entry barriers for competitors. Additionally, CRM data analysis tools provide managers with accurate information on customer' profitability and CLV so as to target profitable customers through cross-selling and up-selling initiatives (Winer, 2001).

2.2.2 CRM Technology

According to this study, CRM technology includes all the information systems used to support front office functions (sales, customer service, and marketing) and back office applications that deal with data integration and analysis (Jayachandran et al., 2005). Usually companies start with isolated applications, and as the business scale grows, they face the challenge of integrating client information which drives the adoption of CRM software packages (Mithas, Krishnan, & Fornell, 2005). From an architectural view CRM can be classified into operational, analytical, and collaborative (Ngai et al., 2009; Torggler, 2008; Da Silva & Rahimi, 2007; Teo, Devadoss, & Pan, 2006). Operational CRM is concerned with the automation of business processes, analytical CRM provides the tools to analyze customers characteristics and behaviors to support the organization's customer management strategies, whereas collaborative CRM focus on enhancing the interactions with customers through all contact points (e.g., call centers, front office portals, and interactive voice response systems). CRM can also be classified according to the level of IT employment into: non-IT assisted CRM, IT-assisted CRM, IT-automated CRM, and integrated CRM (Stephaou, Sarmaniotis, & Stafyla, 2003).

The direct and indirect impact of CRM technology on performance was investigated in numerous studies. Abdul Alem et al. (2013), Akroush et al. (2011), Ata and Toker, (2012), and Kasim and Minai (2009) reported that CRM technology is a significant predictor of performance. Mithas et al. (2005) found that the use of CRM technology resulted in higher customer satisfaction. Also, ICT diffusion showed a positive effect on marketing and financial effectiveness (Papastathopoulou, Avlonitis, and Panagopoulos, 2007). Minami and Dawson (2008) found that CRM data warehousing and analytical data tools positively influence financial performance. They also reported a positive influence of CRM implementation on customization activities. Chen and Ching (2004) and Wu and Lu (2012) reported that CRM processes mediate the effects of IT on CRM performance. On the other hand, Day and Van den Bulte (2002) found that CRM database and customer IS has no effect on relational performance. Similarly, CRM technology infrastructure showed no direct influence on organizational performance (Garrido-Moreno & Padilla-Meléndez, 2011; Ray et al., 2005; Yim et al., 2004). Researchers reported mixed results concerning the moderating effect of CRM technology. Reinartz et al. (2004) reported that CRM technology had no moderating impact on the relationship between CRM processes and performance, while Zhu and Nakata (2007) found that IT capability moderates the influence of customer orientation on performance. Based on the previous discussion it is can be concluded that CRM technology is linked to performance. Hence, it can be hypothesized that:

H1: CRM technology positively influences organizational performance.

2.2.3 CRM Processes

CRM processes are often studied as the lifetime stages of customer relationship, namely; initiation, maintenance, retention, and termination (Ngai et al., 2009; Greve & Albers, 2006; Reinartz et al., 2004). Recently, more researchers shifted attention to CRM knowledge management KM processes (e.g., Abdul alem, Basri, & Tahir, 2013; Garrido-Moreno & Padilla-Meléndez, 2011; Croteau & Li, 2003). Fewer studies have investigated relational information processes in the context of customer relationship management (Jayachandran et al., 2005). Nonetheless, the literature on market orientation (Jaworski & Kohli, 1993; Narver & Slater, 1990; Slater & Narver, 2000) and marketing information use (Menon & Varadarajan, 1992; Moorman, 1995) have long acknowledged the importance of marketing information acquisition, dissemination, and use on marketing performance. According to this study, CRM processes refer to all the routines related to managing customer information so as to insure long term and effective customer relationships (Jayachandran et al., 2005). Three relational information processes are considered in this

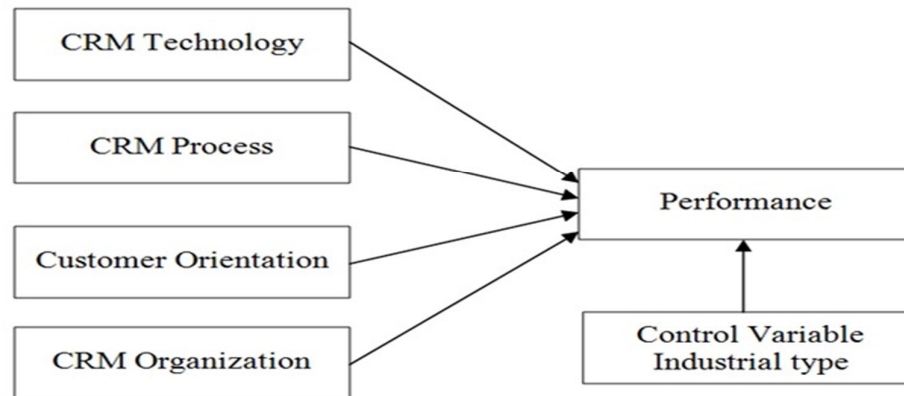
study: information reciprocity, information capture, and information use. Information reciprocity refers to interactive communications between the customers and the firm. Information capture refers to the acquisition of information from all contact points with customer. Information use processes include using the information to understand the needs of the customers and to develop appropriate responses to such needs, as well as to identify high value customers (Jayachandran et al., 2005). Bin Ismail et al. (2007) reported a positive relationship between CRM information flow (reciprocity), capture, and use on one hand and organizational profitability on the other hand. Jayachandran et al. (2005) found that CRM processes positively influence customer satisfactions and retention. According to Moorman (1995), information use processes are strong predictors of new product performance, timeliness, and creativity. Asikhia (2010) showed that customer analysis and customer responsiveness behaviors positively influence marketing competence. Croteau and Li (2003) and Yim et al. (2004) reported a positive relationship between KM processes and CRM impact. Kim and Kim (2009) noted that the effect of CRM process on financial performance is through its effect on customer equity, value and satisfaction. In a case study, Ryals (2005) found that CRM activities resulted in 250% increase in profitability. Srinivasan and Moorman (2005) found that market information acquisition, dissemination, and responsiveness processes have a strong positive influence on customer satisfaction with online retailers. Dutu and Halmajan (2011), Reinartz et al. (2004), and Shavazi, Moshabaki, Hoseini, and Naiej (2013) found that relationship initiation and maintenance processes positively influence organizational performance. Additionally, Wang and Feng (2012) show that CRM capabilities (defined similar to CRM processes) influences performance. The literature review provides support to the importance of CRM processes on organizational performance. Thus it is hypothesized that:

H2: CRM processes positively influence CRM performance

2.2.4 Customer Orientation

Customer orientation refers to "the set of beliefs that puts the customer's interests first...., in order to develop a long term profitable organization" (Deshpande, Farley, & Webster, 1993, p. 27). Customer orientation is the part of the organizational culture that provides implicit values and beliefs on which norms of accepted behavior are based (Bentum & Stone, 2005). According to Roberts, Liu & Hazard (2005) customer centricity is the first requirement for CRM readiness. Unlike transaction orientation, a relationship orientation dominates the organizations mind-set, values, and norms and thus influences all interactions with customers (Day, 2000). In this study, customer orientation is defined as "the cultural propensity of the organization to undertake customer relationship management" (Jayachandran et al., 2005 p. 182). Day and Van den Bulte (2002) found that orientation has a positive impact on performance and considered it as the discriminating factor of CRM capability leaders. Chen and Chen (2004) concluded that customer focused culture is key to e-CRM success. Essawy and Azab (2012) found that customer oriented organizational culture have a strong positive impact on e-CRM readiness. Results of Minami and Dawson (2008) and Yilmaz et al. (2005) demonstrated that stronger orientation have a positive impact on the organizations' performance. Zhu & Nakata (2007) found that CRM orientation enhances market performance which in turn influences financial performance. Also Wang and Feng (2012) reported that CRM orientation influences performance indirectly through CRM capabilities. Sin et al. (2005), Soliman (2011), and Yim et al. (2004) found key customer focus to positively influence performance. Jayachandran et al. (2005) found that customer centric culture influences performance indirectly through CRM processes. Also customer orientation showed strong influence on CRM organizing, which in turn influenced performance (Garrido-Moreno and Padilla-Meléndez, 2011). In accordance with the above discussion, it could be concluded that customer orientation is an essential dimension of the CRM capability and is thus expected to contribute to the firm's performance.

H3: Customer orientation positively influences organizational performance.

Figure 1: CRM Capability Dimensions Impact on Performance

2.2.5 CRM Organization

As firms align their structure and management processes with their market goals, they become more successful in responding to their customers, which eventually leads to superior performance (Reinartz et al., 2004). CRM organizing is defined as the supporting organization structure, incentives, resources allocation, and management controls that enables building and sustaining customer relationships (Day and Vanden Bulte 2002; Jayachandran et al., 2005; Sin et al., 2005). Organizational structures that support cross functional communication and coordination, as well as rewards and training programs designed around customers needs resulted in higher relationship quality, which in turn positively influenced organizational performance (Chang, 2007). Greve and Albers (2006) found that organizational alignment positively influence CRM performance. Day and Van den Bulte (2002) found that CRM configuration component is the most important predictor of performance. Several studies reported a strong positive influence of CRM organization on different aspects of business performance. For example, Yim et al. (2004) reported that CRM organizing increases customer retention, which in turn results in higher sales growth. Abdu Alem et al. (2013) and Akroush et al. (2011) reported that CRM organization is a key determinant of financial and marketing performance, in addition to improving internal processes and learning and growth according to Abdul Alem et al. (2013). Garrido-Moreno and Padilla-Meléndez (2011) found that CRM organizational factors arise as the strongest predictor of marketing and financial performance to the extent that it completely mediated the impact of the other determinants (CRM technology, CRM process, customer orientation) on performance. The above review provides strong support to the impact of CRM organization on performance. Therefore, it can be hypothesized that:

H4: CRM organization positively influences organizational performance.

To sum up the literature review and study hypotheses, this study tests the model presented in Figure1.

2.2.6 Control Variable

Facilitators such as industry sector may affect the gains in organizational relational performance. Accordingly, this study controls for the possible influence of industry sector difference (service vs. manufacturing industries) (Mithas et al., 2005; Wang and Feng, 2012).

3. Methodology

3.1 Sample and data collection

To increase the generalizability of results, the sample included both goods and service firms in business to business B2B and business to consumer B2C markets. Data was collected from 15 large firms with employees ranging from 400 to 10 000 with median 5 000 employees, 53.2% service firms and 46.8% goods firms. Respondents came from six financial institutions (38.8%), four pharmaceutical companies (31.7%), three manufacturing companies (15.1%), two telecommunications operators (11.5%), and three business services (2.9%). A total of 500 questionnaires were distributed through a contact person in each company, 146 completed questionnaires were returned giving a response rate of 29%, while seven surveys were eliminated from the analysis because of missing data leaving 139 valid responses. Respondents held positions of senior marketing (12.2%), sales (21.6%), and customer service (18%), CRM managers (4.3%), brand managers (19.4%), general managers (21.6%), and information systems managers (2.9%). Of the firms that provided data, 63.3% were B2C, 16.5 % B2B, 20.1% serve both markets. 67.6% have integrated CRM packages, and 32.4% still use legacy systems to support CRM activities.

3.2 Measures

All constructs were based on existing scales developed in prior studies. The questionnaire was translated to Arabic by the researcher and back to English by an academic expert in the field. The phrasing of the questions was then refined using comments from five marketing managers. All constructs were measured from the perspective of a specific business unit (Appendix A).

Performance was assessed using three indicators of customer relationship outcomes: customer satisfaction (Jayachandran et al., 2005; Sin et al., 2005; Yim et al., 2004), customer retention (Day & Van den Bulte, 2002; Jayachandran et al., 2005; Yim et al., 2004), and sales growth (Garrido-Moreno & Padilla-Meléndez, 2011; Wang & Feng, 2012; Yim et al., 2004). In accordance with studies that adopt a RBV, the measurement of the dependent variable must use a competitive assessment element and address the notion of performance over time (Bhatt & Grover, 2005). Thus, respondents were asked to assess each indicator relative to competition in the last two years using a five point scale ranging from much better (5) to much worse (1) than competitors.

CRM technology was measured using the scale developed by Jayachandran et al. (2005) and adapted by Chang, Park, & Chaui (2010). Respondents were asked to indicate the extent to which their CRM system provides four groups of functionalities: sales support (4 items), customer service support (3 items), data analysis support (5 items), and data integration and access support (3 items). Indicators under each group were averaged to form four CRM technology dimensions.

CRM processes were measured using a three dimension scale: information reciprocity (3 items), information capture (5 items), and information use (10 items). The scale is based on Jayachandran et al. (2005) with three items adapted from Bin Ismail et al. (2007), Ngai et al. (2009), and (Greve & Albers, 2006). The items under each dimension were averaged to form three CRM sub-processes.

Customer orientated culture was measured using the four items scale developed by Jayachandran et al. (2005). Finally, CRM organization was assessed using the scale developed by Yim et al. (2004), which consists of seven items. CRM processes, CRM orientation, and CRM organization were measured using a 5 point Likert-type scale ranging from extremely disagree (1) to extremely agree (5).

3.3 Method Bias

Harman's one-factor test was used to examine the existence of a common-method bias that may result from collecting both dependent and independent data from the same source (Podsakoff & Organ, 1986). The principle component analysis resulted in 13 factors with Eigen values greater than one, explaining 73% of the total variance and the first factor accounted for only 33% of the variance. Thus, common-method bias is not expected to pose a problem.

Table 1: Results of Reliability and Factor Analysis

Factors and scale items	Item loadings	Eigen Value	% of Variance Extracted	Cronbach's Alpha
CRM organization		4.346	20.697%	0.908
Org1	0.601			
Org2	0.648			
Org3	0.742			
Org4	0.673			
Org5	0.726			
Org6	0.711			
Org7	0.718			
Customer orientation		3.109	14.804%	0.858
Orient1	0.712			
Orient2	0.808			
Orient3	0.718			
Orient4	0.595			
.1111.11111		2.870	13.668%	0.842
CRM technology	0.705			
Sales support	0.807			
Customer service support	0.710			
Data analysis support	0.770			
Data integration and access support		2.470	11.763%	0.812
Performance	0.815			
Customer satisfaction	0.832			
Customer retention `	0.705			
Sales growth		2.148	10.231%	0.829
CRM process	0.671			
Information reciprocity	0.787			
Information capture	0.678			
Information use				

Kaiser-Meyer-Olkin MKO measure of sampling adequacy = 0.905

3.4 Reliability and Validity

Internal consistency reliability of the scales was assessed using Cronbach's alpha. As shown by Table 1, coefficient alpha ranges between 0.80-0.90 as indication of good levels of reliability (Hair, Anderson, Tatham, & Black, 1998). Dimensions of all constructs were factored together to assess their construct validity. As depicted in table 1, all items loaded on their corresponding constructs, providing evidence of convergent validity (Hair et al, 1998). To exhibit discriminant validity, the average variance estimates (AVE) of any two constructs should be greater than the shared variance (squared correlation) estimates (Fornell and Larcker, 1981). When the AVE values of the constructs are compared to the squared correlations estimates (Table 2), it appears that the AVE estimates of all constructs are of higher value. Hence, the discriminant validity of the constructs is confirmed. Means, standard deviations, and Pearson correlation for the constructs are also reported in Table 2. As can be seen all constructs are positively correlated with no coefficients above 0.90 thus reducing the chances of multicollinearity (Hair et al., 1998). Accordingly, the items of each constructs could be averaged to create summated scales that are used for hypotheses testing.

Table 2: Descriptive statistics and correlations among constructs

Construct	Mean	S.D.	Correlations				
			1	2	3	4	5
1. CRM technology	3.366	0.704	0.680	0.348	0.284	0.308	0.110
2. CRM processes	3.773	0.634	0.590**	0.747	0.375	0.366	0.150
3.Customer orientation	4.295	0.711	0.533**	0.612**	0.703	0.457	0.174
4. CRM organization	3.818	0.814	0.555**	0.605**	0.676**	0.645	0.406
5. Performance	3.881	0.638	0.331**	0.387**	0.417**	0.637**	0.729

**Correlation is significant at the 0.01 level (1-tailed).

Diagonal items are constructs AVE's, above diagonal are squared correlations.

4. Analysis and Results

To provide evidence on the efficacy of the proposed model presented in Figure 1, five structured equation models were tested using AMOS 18. The first four equations tested each of the proposed hypotheses separately. The fifth equation tested the proposed research model (Figure 1) with the four CRM dimensions as independent variables and performance as the dependent variable. The influence of industry sector on performance was controlled for in the five equations. The independent variables were entered as observed variables, while the dependent variable was entered as a latent variable reflecting its three observed indicators: customer satisfaction, customer retention, and sales growth. Table 3 provides evidence on the models goodness of fit and Table 4 presents the standardized regression weight for the relationship paths.

The first equation tests for the impact of CRM technology on performance. CRM technology showed a significant positive impact on performance with a path coefficient 0.253 significant at the 0.01 level. Service industry sector also showed a positive influence on performance with a path coefficient of 0.32 significant at the 0.001 level. Both variables explained 21% of the variance in performance. The path model linking CRM to technology exhibited good fit levels as shown in Table 3.

The second path model illustrates that CRM processes have a positive influence on performance with a path coefficient of 0.38 significant at the 0.001 level. Service industry also showed a positive impact on performance with a coefficient of 0.30 significant at the 0.001 level. Both variables explained 28% variance in performance. Table 3 shows that the model fits the data well.

The third equation, linking CRM orientation to performance, indicates a significant positive influence of customer orientation on performance with a path coefficient of 0.39 significant at the 0.001 level. The results also confirm the positive influence of service industry sector on performance with a path coefficient of 0.25 significant at the 0.01 level. Both variables explain 28% of performance. The model shows reasonable fit with the data.

The fourth equation measures the impact of CRM organization on performance. It shows that CRM organization positively influences performance with a path coefficient of 0.57 significant at the 0.001 level. However, the effect of the service industry on performance appeared insignificant. CRM organizing alone explains 41% of the variance in performance. As seen in Table 3, the fit indices are good.

Table 3. Fitness indices of tested models

Fit Indices	Guidelines	Eq. 1 Tech.	Eq. 2 Proc.	Eq. 3 Orient.	Eq. 4 Org.	Eq. 5 All four
Chi-square significance	p>0.05	p= 0.25	p= 0.30	P= 0.08	p=0.30	P = 0.131
Chi-square/Degrees of Freedom CMIN/DF	< 2 - 5	1.345	1.21	2.1	1.21	1.504
Root mean square error of approximation RMSEA	< 0.08	0.05	0.04	0.088	0.04	0.06
Root mean square residual RMR	< 0.1	0.02	0.02	0.02	0.02	0.02
Goodness of Fit GFI	> 0.90	0.99	0.98	0.98	0.98	0.98
Adjusted Goodness of Fit AGFI	> 0.90	0.94	0.95	0.91	0.95	0.91
Comparative Fit Index CFI	> 0.90	0.99	0.995	0.98	0.99	0.97
Tucker-Lewis coefficient TLI	> 0.90	0.98	0.99	0.95	0.99	0.97

The fifth SEM equation includes the four CRM capability dimensions as independent variables on performance as a dependent variable. The results show that CRM organization is the only significant predictor of performance with a path coefficient of 0.51 significant at the level of 0.001 and explaining 42% of the variance in performance. On the other hand, CRM technology, CRM processes, and CRM orientation, as well as the control variable; service industry; showed no significant impact on performance. The information in Table 3 shows that the overall model fit was good.

Table 4. Results of Path Analysis

Relationship Paths	Standardized Regression Weights				
	Eq.1	Eq.2	Eq.3	Eq.4	Eq.5
CRM Technology → Performance	0.25*				-0.07
CRM Processes → Performance		0.38**			0.11
CRM Orientation → Performance			0.39**		0.04
CRM Organization → Performance				0.57**	0.51**
Control Variable					
Service Industry → Performance	0.32**	0.30*	0.25*	0.15	0.15
R Square	21%	28%	28%	41%	42%

**p< .01, *p< .001 (two tailed)

5. Discussion

In general terms, the four CRM dimensions and the service industry sector exhibited a positive link to performance. Yet, when the simultaneous impact of all the variables on performance was measured, CRM organization stood out as the key determinant, accounting for all the explained variance in performance. Therefore, hypotheses H4 is accepted, while hypotheses H1, H2, and H3 are rejected. However, the insignificant impact of these variables on performance when studied in a multivariate context does not mean they are not important, for relationships among the independent variables may mask relationships that are not needed for predictive purpose but, nonetheless, present key findings (Hair, et al., 1998, p. 161).

Many other studies provide evidence on the importance of CRM organization (Yim et al., 2004; Sin et al., 2005; Abdul Alleem et al., 2013). Specifically relevant is the study by Garrido-Moreno and Padilla-Meléndez (2011) who found CRM organizing the only direct antecedent to performance acting as a full mediator to all other determinants. According to the resource based view (RBV) a firm's competitive advantage potential depends on its ability to exploit the full potential of its valuable resources (Barney, 1995). Hence, with the best CRM technologies, a strong customer oriented culture, and well established CRM processes, a CRM capability that is difficult to imitate will not develop until the firm aligns its CRM organization to realize the full potential of these resources.

6. Practical Implications

Results of the present study provide evidence on the strong influence of CRM organization on performance. Yet, those findings do not undermine the importance of having a strong CRM technology infrastructure; rather, they direct the attention of IT managers to aligning the technology with CRM objectives and strategy. The findings also direct top management to the importance of communicating customer orientated values and norms to their employees, and of building a CRM mindset throughout the organization. For such culture to be effective in must be incorporated into the organizations' strategy, structure, and actions. Also, marketing managers need to establish effective CRM routines for customer information communication, capture, and effective use. Those routines must be linked to clear CRM objectives, and their execution facilitated by the formal organization structure, and reinforced by the organization's rewarding system.

The 42% variance in performance explained by CRM organization confirms that this factor is critical for superior relational performance. CRM organization concept defines the actions needed to realize concrete performance results. As such, organizations need to be restructured and job descriptions adapted to facilitate collaboration and communication across all customer serving functions. Managers need to set strategies and coin clear performance targets for customer acquisition, development, and retention. They are also advised to design management control systems that allow them to closely monitor the execution of customer relationship targets across all customer contact points. Human resource managers need to incorporate a CRM component in all the firm's HR policies and plans. This includes building marketing and customer relationship training programs directed to the support of effective CRM behaviors. It is crucial to train front line sales and customer service employees on skills needed to build strong links with customers. Also, crucial to the success of CRM is the development of reward and incentive schemes that openly reinforce employees' behaviors consistent with CRM orientation.

7. Limitations and Future Research

The study suggests some future research directions that are derived from the work done in this paper. The use of cross-sectional method in itself presents a limitation on the interpretation of the results because it does not provide proof of causality unlike the longitudinal research design. Also, the size of the sample used here limited the researcher's ability to explore the efficacy of the model in each specific industry. Hence the replication of this study using a larger sample is recommended. Though CRM organization emerged as the only predictor of performance, future studies need to investigate the interactions among the CRM dimensions. To increase the predictive power of this model, researchers need to consider additional dimensions of CRM capability. In conjunction with internal CRM dimensions, other studies need to explore the impact of external environment factors, such as the intensity of competition, on performance (Jayachandran et al., 2005). Researchers in other countries; especially in the Arab region; are called upon to evaluate the generalization of the proposed model. It is also recommended to assess the value of CRM in other contexts such as electronic markets, social networks, and with CRM as a service SAAS. This study focused on marketing indicators; customer satisfaction, retention, and sales growth; to measure performance. The use of a balanced score card approach to measure performance will provide richer insights on the role of CRM capability in creating a competitive advantage for the firm (Abdul Alem et al., 2013; Wu & Lu, 2012). Also the use of objective rather than perceptual measures of financial performance can give a bottom line indication of the impact of CRM (Reinartz et al., 2004). This study assessed CRM performance using data collected from single informant managers. It is recommended to contrast those findings with data that reflect the customers perspective, especially that the customers are the main target of CRM practices (e.g., Kim, Park, Dubinsky and Chaik, 2012; Deshpande, et al., 1993).

8. Conclusion

This study provided a clear conceptualization of CRM as a distinctive capability, and proposed a model of CRM dimensions that is anchored in the marketing, IS, and strategic management literature. The proposed dimensions can be acted upon by decision makers to help companies attain a superior performance. It is expected that the proposed model will serve as a useful foundation for future CRM studies.

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Appendix A. Scale items

CRM technology (Jayachandran et al., 2005; Chang et al., 2010)

Sales Support SS (4 items)

SS1 provides sales force with customer information

SS2 provides sales force with competitor information

SS3 provides sales force with leads for cross sell/up sell opportunities

SS4 tracks product availability

Customers service support (3 items)

CSS1 Allows customer support personnel to access data on customer Interactions

CSS2 Provides customers access to a knowledge base of solutions to FAQ

CSS3 Tracks service delivery

Analysis support (5 items)

AS1 forecasts customer preferences

AS2 measures customer loyalty

AS3 calculates customer life time value

AS4 Calculates customer retention rates

AS5 Assesses product profitability

Data integration and access support (3 items)

DBS1 Combines customer transaction data with external source data

DBS1 Integrates customer information from different contact points (e.g., mail, telephone, web, and fax)

DBS2 Allows relevant employees access to unified consumer data

CRM Process (Jayachandran et al., 2005)

Information Reciprocity

InfRec1 We enable our customers to have interactive communications with us.

InfRec2 We provide our customers with multiple ways to contact the organization.

InfRec3 We focus on communicating periodically with our customers.

Information Capture

InfCap1 We collect customer information on an ongoing basis.

InfCap2 We capture customer information from internal sources within the organization.

InfCap3 We collect customer information using external sources (such as market research agencies, commercial databases, and consultants).

InfCap4 The information collected from customers is updated in a timely fashion.

InfCap5 We use customer interactions to collect information.

Information Use

InfUse1 We use customer information to develop customer profiles.

InfUse2 We use customer information to segment markets.

InfUse3 We use customer information to assess customer retention behavior.

InfUse4 We use customer information to identify appropriate channels to reach customers.

InfUse5 We use customer information to customize our offers.

InfUse6 We use customer information to identify our best customers.

InfUse7 We use customer information to assess the lifetime value of our customers.

InfUse8 We use customer information to cross/up sell our products (Bin Ismail et al., 2007).

InfUse9 We use customer information to develop loyalty programs (Ngai et al., 2009)

InfUse10 We use customer information to avoid unprofitable relationships (Greve and Albers, 2006)

Customer orientation (Jayachandran et al., 2005)

Orient1 Customer Retention as a top priority

Orient2 Customer relationships viewed as an asset

Orient3 Employees encouraged to focus on customer relationships

Orient4 Senior management emphasizes customer relationships

CRM Organization (Yim et al., 2004)

Org1 Customer-centric performance standards are established and monitored at all customer touch points.

Org2 My organization has clear business goals related to customer acquisition, development, and retention.

Org3 My organization has the sales and marketing expertise and resources to succeed in CRM.

Org4 Our employee training programs are designed to develop the skills required for acquiring and deepening customer relationships.

Org5 Employee performance is measured and rewarded based on meeting customer needs and on successfully serving the customer.

Org6 Our organizational structure allows us to succeed in serving our customers.

Org7 My organization commits time and resources in managing customer relationships.

Performance (Yim et al, 2004; Day & Vanden Bulte, 2002).

Customer satisfaction

Customer retention

Sales growth