

THE IMPACT OF CRM INFRASTRUCTURAL AND CULTURAL RESOURCES AND CAPABILITIES ON BUSINESS PERFORMANCE: AN APPLICATION OF THE RESOURCE-BASED VIEW IN THE MOBILE TELECOMMUNICATIONS INDUSTRY

Complete Research

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Abstract

Based on the Resource-Based View (RBV) literature, this study aims at developing and implementing a novel and comprehensive model so as to measure the effect of CRM resources on CRM capabilities and the effect of the latter on business performance. CRM resources are defined as infrastructural CRM resources (i.e. technological resources, human resources, and organizational resources), and cultural CRM resources (i.e. customer orientation, learning orientation, and result orientation). CRM capabilities are measured through an organization's customer interaction capability, customer relationship upgrading capability, and customer win-back capability. As for performance, this study measures business performance comprehensively from financial and marketing perspectives. Although the results indicate that CRM infrastructural resources has a positive and direct effect on CRM capabilities, the effect of customer orientation culture and learning orientation culture on CRM capabilities was significantly stronger. Further, the results indicate the CRM capabilities significantly and positively affect business performance from marketing and financial standpoints. However, the effect of CRM capabilities on marketing performance was found to be stronger than effect on financial performance and marketing performance was found to partially mediate the relationship between CRM capabilities and financial performance.

Keywords: Customer relationship management, CRM, capabilities, business performance, Resource-Based View, RBV.

1 Introduction

As organizations realize the importance of creating sustainable long-term relationships with customers to survive in the global competition, and as consumers' needs and purchase patterns are changing dramatically, organizations are recognizing the need to adopt customer-oriented marketing strategies to meet the various changing needs of their customers so as to gain competitive advantages and enhance business performance (Ko et al., 2008). Customer Relationship Management (CRM) is a strategy adopted by organizations to create and manage relationships with customers more effectively through a detailed and accurate analysis of consumer data using various information technologies. CRM implementation can bring many benefits to the organization, such as management efficiency, cost reduction, increased sales and profits, and most importantly improved customer services and relationships (Ko et al., 2008). This is significant as improved relationships with consumers can lead to greater customer loyalty, retention, and profitability (Wang and Feng, 2012).

Nonetheless, many companies that invest in CRM systems do not gain the desired benefits of implementing these systems. Hence, much effort was made in the literature to identify the effect of CRM

implementation on business performance. While some research has focused more on IT-related factors and their influences on business performance, others have emphasized organizational factors such as human resources, organizational structure, reward systems, and business process-related factors (Reinartz et al., 2004; Keramati et al., 2010). We argue that CRM systems need to be considered as information technology (IT)-enabled business strategies that require strategic and cultural change. Companies should be aware that they need to develop a culture that is customer-oriented, and they need to think across departmental boundaries so as to be able to add value to customers. Since CRM implementations need a strategic change, cultural resources may be a very important factor that needs to be taken into consideration while implementing CRMs. Most organizational performance problems are not technical but arise from an inappropriate organizational culture that may impede innovations being implemented and superior performance being achieved (van Bentum and Stone, 2005; Wang and Feng, 2012).

A lack of empirical investigations into Infrastructural and cultural CRM resources on various aspects of organizational performance is still reported. Despite the fact that the effect of infrastructural CRM resources represented by technological resources, human resources and organizational resources on CRM capabilities and business performance has been to some extent examined in previous studies (Payne and Frow, 2006; Akroush et al., 2011; Keramati et al., 2010), but few studies examining the effect of CRM resources and capabilities on business performance from the resource-based view in developing countries and especially the in Gulf Region including Kuwait. Furthermore, only a few studies have tackled some aspects of organizational culture's impact on organizational performance in recent years (Iglesias et al., 2011; Senge, 2014). Indeed, there is a lack of research examining the role of organizational culture as one of the most important CRM resources on business performance (Iglesias et al., 2011; Peltier et al., 2013). Further, it seems that a comprehensive understanding within related existing body of knowledge about how an organization adapts its customer information management processes once CRM technology is assimilated into the organization is somewhat lacking. Therefore, there is an urgent need to examine the role of CRM cultural resources in addition to infrastructural resources in building CRM capabilities and consequently enhancing business performance in terms of marketing performance and financial performance.

As such and based on the Resource-Based View (RBV), this study aims at examining the role CRM resources are playing in shaping CRM capabilities. It also aims at examining the impact of CRM capabilities on business performance from financial and marketing perspectives. In this study, CRM infrastructural resources are represented by technological resources, human resources, and organizational resources, whilst CRM cultural resources include customer orientation, learning orientation, and result orientation. Individuals working within the management team of the Mobile Network Operators (MNOs) in Kuwait represent the unit of analysis in this study. The rest of this paper is structured as follows. Next, the research model along which literature review concerning the development of the hypotheses is presented. Thereafter, the research methodology including the discussion concerning measurement items and sample is offered. Then, the data analysis and results are presented. Finally, the study provides a discussion of the results and presents its conclusions and recommendations.

2 Research Model and Hypotheses Development

The developed model (see Figure 1) in this research is mainly based on RBV (see Wernerfelt, 1984; Barney, 2001) which assumes that each organization is a bundle of resources. RBV highlights the strategic importance of resources along with their integration and configuration efforts to the development of capabilities that would consequently enhance the overall business performance and provide organizations with sustainable competitive advantages (Al-Debei, 2010). This research distinguishes between infrastructural CRM resources and cultural CRM resources and assumes that CRM capabilities in organizations are direct function of such resources. Infrastructural CRM resources includes technological resources, human resources, and organizational resources, whereas cultural CRM resources encompasses customer orientation, learning orientation, and result orientation. The study also postu-

lates that CRM capabilities as a construct is a direct predictor of business performance. In this study, business performance is examined from two different perspectives: financial performance, and marketing performance.

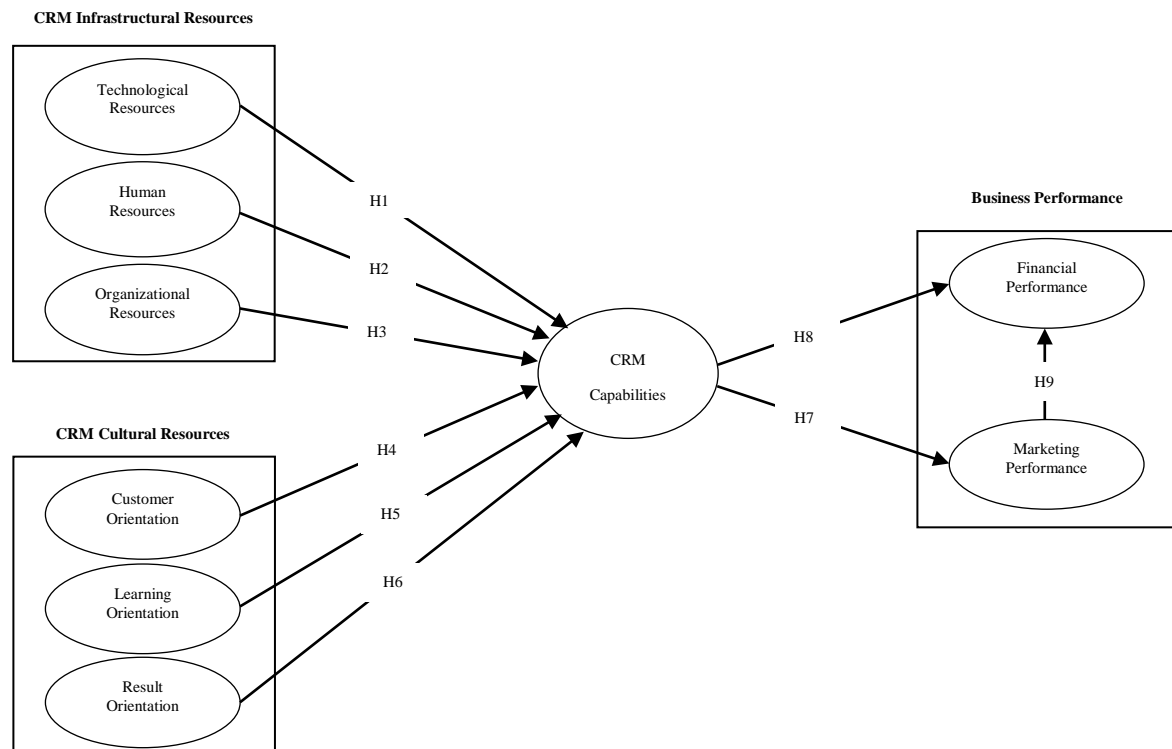


Figure 1. Research Model.

2.1 CRM Infrastructural Resources

2.1.1 Technological Resources

Information systems and technologies play an important and significant role in developing customer relationship management. In this modern world of digital business, information systems and technologies represent an essential technological infrastructure that is needed to support customer relationship management efforts primarily through managing customer data (Ngai, 2005). Technological CRM resources also help organizations in developing their customer relationship management practices through enabling them to provide more personalized and customized services (Payne and Frow, 2006). CRM Technologies can be classified as collaborative, operational, and analytical (Keramati et al., 2010). This classification was originally provided by Greenberg (2004) based on META group segmentation. Collaborative technologies refer to all technology-enabled channels (e.g. email, fax, website) the organization utilizes so as to communicate with customers and thus it enables a two-way communication between the organization and its customers (Payne and Frow, 2005), whereas operational technologies refer to all technologies the organization uses so as to automate and facilitate its business processes (e.g. order management, billing, customer service, online distribution) which are related to sales, marketing, and customer service. Analytical technologies, on the other hand, refer to all technologies the organization utilizes so as to analyse data and information and disseminate knowledge throughout the organizations, usually in the form of reports.

The aforementioned types of CRM technologies complement each other given that collaborative technologies are useful for developing external relationships with customers, whereas operational ones are essential and valuable in automating and facilitating marketing business processes which focus on providing customers with high quality products and services. The analytical technologies work above the aforementioned two technologies and integrate both internal and external data when analysis is done so as to provide decision makers with highly useful information and knowledge based on which decisions can be quickly and confidently made. Hence such technologies enable organizations to build CRM capabilities in terms of customer interaction management, customer relationship upgrading, and customer win-back. For example, collaborative technologies have the ability to enhance the customer experience, improve the scope and strength of customer relationships, and develop the organization's interaction with customers (Payne and Frow, 2004), whereas analytical technologies have the ability to enhance customer satisfaction, retention and loyalty by providing decision makers with valuable information and knowledge about customers along with their behaviours and needs (Keramati et al., 2010). Further, operational and analytical technologies have the ability to provide the right information to the right person at the right time (Massey et al., 2001). Therefore, we hypothesize that:

H1. *CRM technological resources directly and positively influence CRM capabilities.*

2.1.2 Human Resources

Human resources are essential in customer relationship management as customers usually communicate with people in organizations when they become customers (Reinartz et al., 2004). In this study, and following Keramati et al. (2010), human resources consist of two main aspects: technical skills, and attitude. The aspect of technical skills is about the ability of employees to work well with CRM applications and to perform required functions and procedures on the system confidently and easily (Melville et al., 2004). It also includes their ability to transform customer data and information into knowledge by using CRM applications (Coltman, 2007). This ability is usually a function of the offered training programs along with the employees' experiences and personal skills. The second aspect of human resources is about the attitude of employees with the organization's customers whether directly or indirectly. The attitude of employees has been highlighted as one of the key factors for fostering customer-oriented philosophy within organizations (Bell et al., 2002; Keramati et al., 2010). One option to optimize employees' attitude with customers is to establish an incentive system that takes into consideration the quality of employees' relationships with customers along with their attitude (Chen and Wang, 2006). When the employees of an organization can use CRM applications efficiently and effectively, they would be more able to comprehend the needs and preferences of customers and when this is accompanied by a positive attitude, the organization would enjoy a better capability in terms of managing the interactions with customers, strengthen the relationships with customers, and keeping customers satisfied and loyal (Reinartz et al., 2004; Keramati et al., 2010). Hence, we hypothesize that:

H2. *CRM human resources directly and positively influence CRM capabilities.*

2.1.3 Organizational Resources

Organizational resources can be described as all organizational and managerial infrastructural elements (such as top management commitment and support, organizational structure, business processes integration, training programs, incentive systems) that are made available by organizations to support customer relationship management efforts (Reinartz et al., 2004; Chen and Wang, 2006; Grabner-Kraeuter et al., 2007; Akroush et al., 2011). Organizational resources become influential when there is an organization-wide commitment to allocate time, effort, support, and all other types of resources needed to satisfy customers' needs and wants (Yim et al., 2004). Sometimes, change is needed at the organizational structure level aiming for a better utilization of resources and at strengthening the relationships and interactions the organization has with its customers. For example, Sin et al. (2005) argue that a team-based organizational structure is very significant when it comes to customer relationship

management as this structure enables cross-functional integrated processes that would provide customers with enhanced value. For successful management of customer relationship management efforts, organizations also need to have clear goals and objectives that reflect their customer-centric approach. The main aim of managing and organizing organizational resources in the context of CRM is to enable organizations to possess important CRM capabilities that would facilitate increments in their market shares, growth of their business, and sustainability of their competitive advantages (Massey et al., 2001; Rigby and Ledingham, 2002; Payne and Frow, 2004). Thus, we hypothesize that:

H3. CRM organizational resources directly and positively influence CRM capabilities.

2.2 CRM Cultural Resources

2.2.1 Customer Orientation

For CRM projects to be successfully implemented, organizations need to enjoy high levels of customer orientation (Jayachandran et al., 2005; Wang and Feng, 2012). Customer orientation is a cultural-based concept and can be viewed as a corporate culture as it reflects shared values and norms that enable organizations to put customer interests first on their list of priorities (Wang and Feng, 2012). Customer oriented organizations usually establish one-to-one relationships with their customers and adhere to customers' needs and wants through providing customized/personalized products and services (Akroush et al., 2011). Customer oriented organizations would also need to adopt cross-functional processes so as to facilitate customer transactions (Sin et al., 2005). When adopting customer-oriented approach, organizations usually try to innovate by creating better, quicker, and easier ways for managing customer transactions especially those related to fulfilling their needs and requests as this would enable organizations to serve customers better than their rivals and consequently get sustainable competitive advantages (Wilson et al., 2012). Customer-oriented organizations need also to utilize customer feedbacks in the form of complaints and/or suggestions in order to develop their operations, and enhance their business models and strategies (Uusitalo et al., 2011). Moreover, customer orientation philosophy leads organizations to place more emphasis on establishing and maintaining long-term relationships with customers. As such, a truly customer-oriented organization is more likely to have stronger CRM capabilities and consequently higher business performance (Wang and Feng, 2012). Thus, we hypothesize that:

H4. Customer orientation directly and positively influences CRM capabilities.

2.2.2 Learning Orientation

Learning orientation is a main cultural foundation of a learning organization (Slater and Narver, 1995) and customer relationship management (van Bentum and Stone, 2005). Learning orientation can be defined as an organization's ability to internalize learned behaviour and leverage it throughout the organization (Woodcock et al., 2003). Van Bentum and Stone (2005) argued that if CRM efforts are planned to make an organization a learning one, it should have mainly a network culture. Customer relationship management (CRM) system is crucial to create a learning organization since it is useful for firms in continuously monitoring external changes in the environment and in adapting its internal cultures and processes in response to external challenges (Senge, 2014). In other words, CRM helps in adaptive learning; that is extracting hidden predictive information from databases to identify key valuable customers, learn about their preferences, predict their future behavior, and respond to their needs and expectations (Sun et al., 2006). Learning-oriented organizations may have stronger CRM capabilities and consequently better business performance. Therefore, we hypothesize that:

H5. Learning orientation directly and positively influences CRM capabilities.

2.2.3 Result Orientation

Result orientation is the last cultural-based resource included within this study. Result orientation refers to shared standards and beliefs amongst employees within an organization and in regards to the achievement of objectives along with their implications and consequences. Iglesias et al. (2011) describe result orientation in the context of CRM as effective management of customer relationships and the ability to provide them with personalized services through having access to required data. Result orientation is not only about looking at achievement of objectives from economical standpoints, but it is also about evaluating the results from a customer service and customer relations perspective. Hence, result orientation may enable organizations to have stronger CRM capabilities and greater business performance. Thus, we hypothesize that:

H6. Result orientation directly and positively influences CRM capabilities.

2.3 CRM Capabilities and Business Performance

CRM Capabilities are embedded in CRM cross-functional processes, activities and routines (Wang and Feng, 2012). CRM capabilities reflect an organization's skills, experience, and accumulated knowledge related to identifying attractive customers, initiating and maintaining relationships with customers, and leveraging customer relationships (Morgan et al., 2009). As such, "CRM capabilities are usually reflected in major CRM activities such as customer interaction management (e.g. customer identification, customer acquisition and customer retention), customer relationship upgrading (e.g. cross-selling and up-selling), and customer relationship win-back (re-establishing relationships with lost but profitable customers) (Reinartz et al., 2004; Parvatiyar and Sheth, 2001)" (Wang and Feng, 2012: p. 117).

Literature related to RBV (Wernerfelt, 1984; Barney, 1991) and dynamic capability (Teece et al., 1997) have highlighted the important and significant role that resources play in developing capabilities and the role the latter play in improving business performance. In related literature, business performance is usually examined as a multidimensional construct. Business performance in the context of CRM can be measured from a financial perspective and also from a marketing standpoint. From a financial perspective, business performance can be measured using sales volume, profitability volume, return on investment, market share, efficiency in performing services, and also by perceptions of stakeholders concerning financial performance; whilst from a marketing perspective, business performance is usually measured using customer relationship quality, customer trust, customer satisfaction, and customer loyalty (Chang et al., 2010; Akroush et al., 2011). For example, Parvatiyar and Sheth et al. (2000) argue that CRM helps in improving the financial performance of an organization by increasing its customer retention rate. Similarly, Osarenkhoe and Bennani (2007) argue that CRM helps in lowering costs at organizations by keeping existing customers rather than acquiring new ones. On the other hand, related literature also shows that successful implementation of CRM has a positive impact on customer satisfaction and customer retention (Kim and Kim, 2009, Akroush et al., 2011).

Previous research, based upon the RBV literature, indicated that capabilities of organizations directly and positively affect their performance levels and are also main sources for gaining competitive advantages (Ruiz-Ortega and Garcia-Villaverde, 2008; Chang et al., 2010). In the field of marketing, there are also evidences on the role of marketing capabilities, such as customer relations capabilities, in enhancing business financial performance (Day, 2003). Indeed, marketing capabilities are key enablers for organizations to get timely and useful data about the needs and preferences of their customers (Wang and Feng, 2012). Previous studies provided empirical evidences and showed that CRM capabilities have a significant influence on customer satisfaction, customer loyalty, stock price, and business performance (Anderson et al., 2004; Fornell et al., 2006; Akroush et al., 2011). There are also strong evidences on the effect of CRM capabilities on business performance (Slotegraaf and Dickson, 2004; Vorhies and Morgan, 2005; Chang et al., 2010). The idea is that the stronger the CRM capabilities are, the higher is the business performance of an organization. Thus, we hypothesize that:

H7. CRM Capabilities directly and positively influences Marketing Performance.

H8. CRM Capabilities directly and positively influences Financial Performance.

H9. Marketing Performance directly and positively influences Financial Performance.

3 Research Methods

3.1 Data Collection and Measurement Scales

This is a quantitative study that utilizes the survey questionnaire as the main instrument for data collection. Hence, a self-completion, well-structured questionnaire was developed based on previous literature and was then distributed to a random sample where participation was completely voluntary. The defined population for this study includes individuals working in managerial positions (operational, tactical, or strategic) within the three Mobile Network operators (MNOs) in Kuwait. A total of 500 questionnaires were randomly distributed to individuals within the targeted population and 321 questionnaires were returned. Thus, the response rate was (64.2%). Amongst the 321 returned questionnaires, only fourteen questionnaires were excluded due to multiple skipped questions and missing values. In total, 307 responses (n = 307) were valid and usable for data analysis.

The questionnaire was originally constructed in English and then translated into Arabic based on the backward translation method and the guidelines provided by Brislin (1976). In fact, two bilingual PhD holders in business translated our questionnaire from English to Arabic. Thereafter, back translation was employed until the final version was produced in Arabic. Finally, a comparison between the two original language versions of the instrument was made to check the validity of the translation process. The versions contained no significant differences which suggested that the translation process is acceptable.

The constructs of interest in this study were “Technological Resources” (TECHR), “Human Resources” (HUMR), “Organizational Resources” (ORGR), “Customer Orientation” (CUSO), “Learning Orientation” (LERO), “Result Orientation” (RESO), “CRM Capabilities” (CAP), “Marketing Performance” (MPERF), and “Financial Performance” (FPERF). The developed questionnaire in this study adapts validated questionnaire items from previous literature with some modifications to fit the specific context of this research. Measurements for all constructs included within the study model are shown in Table 1. All items were reflective and were measured using a five-point Likert-type scale. The scale range was from "Strongly Agree" to "Strongly Disagree" to all constructs except Marketing Performance and Financial Performance as the scale range is for these two constructs was from “Very Poor” to “Excellent”. Table 1 lists the questionnaire items.

Construct	Items	Sources
Technological Resources	<ol style="list-style-type: none"> 1. We invest in technology to acquire and manage “real time” customer information and feedback 2. We have a dedicated CRM technology in place 3. We have technologies that allow for one-to-one communications with potential customers 4. Relative to our competitors the quality of our information technology resources is larger 	Reinartz et al. (2004)
Human Resources	<ol style="list-style-type: none"> 1. We have the sales and marketing expertise to succeed in CRM 2. We have the service and support expertise to succeed in CRM 3. Our employees are well trained in the use of customer relating technologies 4. We have skills and experience at converting data into customer knowledge 5. We have the right technical employees to provide technical support for the utilization of computer technology in building customer relationships 	Coltman (2007); Mendoza et al. (2007); Sin et al. (2005); Keramati et al. (2010)
Organizational	<ol style="list-style-type: none"> 1. We have a customer strategy and have defined its objectives 	

Construct	Items	Sources
Resources	<ol style="list-style-type: none"> 2. Our organizational structure is meticulously designed around our customers 3. We have a systematic procedure to improve skills of employees on CRM techniques 4. In our organization, there is good cooperation between marketing, sales, and customer service departments 5. We have shared resources across organizational units to create synergy 	Coltman (2007); Mendoza et al. (2007); Reinartz et al. (2004); Sin et al. (2005); Keramati et al. (2010)
Customer Orientation	<ol style="list-style-type: none"> 1. In our organization, retaining customers is considered to be a top priority 2. Our employees are encouraged to focus on customer relationships 3. In our organization, customer emphasizes the importance of customer relationships 4. Our senior management emphasizes the importance of customer relationships 	Jayachandran et al. (2005)
Learning Orientation	<ol style="list-style-type: none"> 1. Knowledge about our individual customers is well communicated to our systems and processes 2. Knowledge about successful and unsuccessful customer experience is frankly communicated 3. Management basically agree that the organization's ability to learn is key to our competitive advantage 4. The basic values of the organization include learning as a key to improvement and hence organizational survival 5. Employee learning is seen as an investment, not an expense 	Bentum and Stone (2005)
Result Orientation	<ol style="list-style-type: none"> 1. We have shared standards and objectives in serving customers 2. We have an employee Incentive System based on results' achievements 3. Performance is measured and rewarded is based on meeting customer needs and on successfully serving the customer. 4. The way in which we serve customer and satisfying their demands has a direct effect on our salaries. 	Iglesias et al. (2011)
CRM Capabilities	<ol style="list-style-type: none"> 1. We regularly meet customers to learn their current and potential needs for new products 2. We have a continual dialogue with each customer and use well developed methods to improve our relationships 3. We have formalized procedures for up-selling to valuable customers 4. We have formalized procedures for cross-selling to valuable customers 5. We have a systematic process/approach to re-establish relationships with valued lost customers and inactive customers 	Wang and Feng (2012)
Financial Performance	<ol style="list-style-type: none"> 1. the market share for your company can be described as 2. the sales growth for your company can be described as 3. Cost reduction in your company can be described as 4. your company profitability can be described as 5. your company financial performance can be described as 	Sin et al. (2005); Keramati et al. (2010); Akroush et al. (2011)
Marketing Performance	<ol style="list-style-type: none"> 1. the level of convenience and service quality you provide for your customers can be described as 2. overall customer satisfaction in your company can be described as 3. Customers' commitment to your company (based on relationship period, relationship intensity, number of referrals the customers make, etc.) can be described as 3. Customers' loyalty to your company (frequent purchases, up-selling, cross-selling) 3. Overall marketing performance 	Sin et al. (2005); Keramati et al. (2010); Akroush et al. (2011)

Table 1. Summary of Measurement Scales.

3.2 Sample Profile

The descriptive statistics of the sample showed that about 69% of the respondents were male and 31% were female. Respondents aged between 30 and 50 years formed the largest age group and represented 91% of the sample. In terms of job position, the majority of respondents are holding positions within the middle management and that represented 62% of the sample. As for their educational background, the majority respondents (i.e. 85%) have bachelor degrees, whilst those having postgraduate degrees represented only 15% of the sample. Finally, the majority of respondents (i.e. 63%) have 10 to 15 years of experience. The details are shown in Table 2.

Measure	Item	Frequency	Percentage
Gender	Male	211	69%
	Female	96	31%
Age	Less than 30	12	4%
	≥ 30 and < 40	116	38%
	≥ 40 and < 50	162	53%
	≥ 50	17	5%
Job Position	Operational Management	61	20%
	Middle Management	191	62%
	Strategic Management	55	18%
Educational Background	Undergraduate	261	85%
	Postgraduate	46	15%
Experience	≥ 5 years and < 10 years	37	12%
	≥ 10 years and < 15 years	193	63%
	≥ 15 years	77	25%

Table 2. Summary of Sample Profile.

4 Data Analysis and Results

This study utilizes the Structural Equation Modelling (SEM) approach with Partial Least Square (PLS) as an analysis method. PLS has been widely used for theory testing and validation. PLS examines the psychometric properties and provides appropriate evidences on whether relationships might or might not exist (Fornell and Larcker, 1981). In this study, we performed data analysis in accordance with a two-stage methodology (Anderson and Gerbing, 1988) using SmartPLS 2.0 M3. The first step was to test the content, convergent, and discriminant validity of constructs using the measurement model, whilst the second step was to test the structural model and hypotheses.

4.1 Measurement Model

First, we assessed the reliability and validity of the measurement instrument using content, reliability, and convergent validity criteria. The content validity of our survey instrument was established in two ways. First, the constructs along with their measures which are used in this study were already validated in previous studies as they were all adopted from existing literature. Second, the results of the pre-test we undertook with subject-matter experts assured content validity of the survey instrument. For reliability of the scale, Cronbach's alpha, which is a common method used to measure the reliability and internal consistency of scales, was used. Hair et al. (2006) suggested that the reliability of the scale is generally accepted if the value of Cronbach's alpha for each construct is equal or greater than 0.70. The constructs included within the study's model exhibit a high degree of internal consistency as the values of Cronbach's alpha ranged from 0.776 (HUMR) to 0.911 (CAP) as shown in Table 1.

Measure	Item	Factor Loading	AVE	CR	Cronbach α
Technological Resources (TECHR)	TECHR1	0.879	0.763	0.928	0.897
	TECHR2	0.864			
	TECHR3	0.891			
	TECHR4	0.860			
Human Resources (HUMR)	HUMR1	0.825	0.589	0.858	0.776
	HUMR2	0.844			
	HUMR3	0.896			
	HUMR4	0.860			
	HUMR5	0.103 (Deleted)			
Organizational Resources (ORGR)	ORGR1	0.773	0.642	0.899	0.860
	ORGR2	0.712			
	ORGR3	0.837			
	ORGR4	0.857			
	ORGR5	0.819			
Customer Orientation (CUSO)	CUSO1	0.852	0.721	0.912	0.871
	CUSO2	0.813			
	CUSO3	0.860			
	CUSO4	0.870			
Learning Orientation (LERO)	LERO1	0.768	0.594	0.879	0.827
	LERO2	0.840			
	LERO3	0.677			
	LERO4	0.724			
	LERO5	0.832			
Result Orientation (RESO)	RESO1	0.846	0.651	0.882	0.823
	RESO2	0.784			
	RESO3	0.850			
	RESO4	0.744			
CRM Capabilities (CAP)	CAP1	0.842	0.738	0.934	0.911
	CAP2	0.842			
	CAP3	0.891			
	CAP4	0.862			
	CAP5	0.857			
Marketing Performance (MPERF)	MPERF1	0.897	0.692	0.918	0.888
	MPERF2	0.864			
	MPERF3	0.801			
	MPERF4	0.713			
	MPERF5	0.872			
Financial Performance (FPERF)	FPERF1	0.768	0.617	0.889	0.845
	FPERF2	0.740			
	FPERF3	0.810			
	FPERF4	0.775			
	FPERF5	0.830			

Table 3. Results of Reliability and Convergent Validity Tests.

A Composite Reliability (CR) and Average Variance Extracted (AVE) tests were conducted to measure convergent validity. Fornell and Larcker (1981) suggested that the value of CR for each construct must exceed 0.70 whilst the value of the AVE must exceed 0.50 for the convergent validity to be assured. The CR and AVE values for the constructs included in the study model are all above acceptable levels. Moreover, the standardized path loadings for all indicators were above 0.55 and thus they are all significant (Falk and Miller, 1992). As such, content validity, reliability, and convergent validity of

the measurement instrument are all satisfactorily met in this research. As for discriminant validity, it is actually established when the square root of the AVE from the construct is greater than the correlation shared between the construct and other constructs in the model (Chin,1998). The discriminant validity of the measurement instrument is confirmed in this study given that the square root of the AVE from each construct is larger than all other cross-correlations with other constructs (see Table 2).

	Mean	SD	TECHR	HUMR	ORGR	CUSO	LERO	RESO	CAP	MPERF
TECHR	3.71	0.92	1.00							
HUMR	3.68	0.75	0.61	1.00						
ORGR	3.70	0.84	0.63	0.59	1.00					
CUSO	3.66	0.81	0.61	0.58	0.66	1.00				
LERO	3.71	0.77	0.67	0.60	0.68	0.58	1.00			
RESO	2.83	0.89	-0.23	-0.17	-0.21	-0.17	-0.14	1.00		
CAP	3.15	0.80	0.64	0.59	0.66	0.70	0.63	-0.19	1.00	
MPERF	3.77	0.94	0.62	0.55	0.66	0.61	0.67	-0.16	0.70	1.00
FPERF	3.39	0.88	0.42	0.37	0.42	0.40	0.44	-0.11	0.51	0.46

Table 4. Descriptive Analysis and Discriminant Validity.

4.2 Structural Model

The results of the PLS-SEM analysis are shown in Table 3 and Table 4 which demonstrate the structural model estimation and evaluation of the effects of Infrastructural CRM Resources (i.e. Technological Resources, Human Resources, and Organizational Resources) as well as Cultural CRM Resources (i.e. Customer Orientation, Learning Orientation, and Result Orientation) on CRM Capabilities, and the effects of CRM Capabilities on both, Marketing Performance and Financial Performance. Overall, the results validate the structural model and all hypotheses are supported, except H6 (see Table 3). Concerning Infrastructural CRM Resources, our results indicate that the direct effect of Technological Resources on CRM Capabilities has a significant value ($p \leq 0.05$) of 0.161; the effect of Human Resources on CRM Capabilities has a significant value ($p \leq 0.05$) of 0.109; and the effect of Organizational Resources on CRM Capabilities also has a significant value ($p \leq 0.05$) of 0.178. Thus, hypotheses 1, 2, and 3 have been empirically substantiated. On the other hand and concerning Cultural CRM Resources, our results also indicate that Customer Orientation and Learning Orientation are two major determinants of CRM Capabilities ($\beta = 0.338$, $p \leq 0.01$; $\beta = 0.133$, $p \leq 0.05$, respectively). Hence, hypotheses 4 and 5 are also supported. Nonetheless, there is no significant support, according to our results for the effect of Result Orientation on CRM Capabilities and thus H6 is rejected. Furthermore, the results also indicate that CRM Capabilities is a major predictor of Marketing Performance ($\beta = 0.703$, $p \leq 0.01$) and Financial Performance ($\beta = 0.363$, $p \leq 0.01$) and that Marketing Performance has a positive effect of Financial Performance ($\beta = 0.204$, $p \leq 0.05$).

Hypotheses	Paths	β	T-Value**
H1	Technological Resources → CRM Capabilities	0.161	2.474*
H2	Human Resources → CRM Capabilities	0.109	2.140*
H3	Organizational Resources → CRM Capabilities	0.178	2.581**
H4	Customer Orientation → CRM Capabilities	0.338	4.626**
H5	Learning Orientation → CRM Capabilities	0.133	2.273*
H6	Result Orientation → CRM Capabilities	-0.022	0.711
H7	CRM Capabilities → Marketing Performance	0.703	19.720**
H8	CRM Capabilities → Financial Performance	0.363	4.266**
H9	Marketing Performance → Financial Performance	0.204	2.174*

β : Standardized Beta Coefficients **Significant at $P \leq 0.01$ *Significant at $P \leq 0.05$

Table 5. Summary of Structural Path Model Results.

As shown in Table 4, the R^2 value for each endogenous construct (i.e. CRM Capabilities, Marketing Performance, and Financial Performance) was above 25% which demonstrate a highly acceptable prediction level in empirical research (Arlinghaus, 1995; Gaur and Gaur, 2006). The coefficient of determination R^2 , which is the central criterion for the structural model's assessment (Klarner et al., 2013), has a high value of 0.61 for CRM Capabilities and values of 0.494 and 0.278 for Marketing Performance and Financial Performance, respectively. Indeed, the high R^2 proves the model's predictive validity (Hair et al., 2012).

Construct	R^2	Q^2
CRM Capabilities (CAP)	61%	0.44
Marketing Performance (MPERF)	49.4%	0.18
Financial Performance (FPERF)	27.8%	0.32

Table 6. Summary of Model's Explanatory Power and its Predictive Relevancy.

We support the prior finding through the use of Q^2 predictive relevancy measure (Stone, 1974). The obtained Q^2 values, after running the blindfolding procedure (Chin, 1988) with an omission distance $D=7$, were 0.44 for CRM Capabilities, 0.18 for Marketing Performance, and 0.32 for Financial Performance. All of the Q^2 values are well above zero; indicating the predictive relevance of the PLS path model. The bootstrapping procedure was used and we selected 307 cases, 500 samples, and the no sign changes option to evaluate the significance of the path coefficients (Hair et al., 2012).

5 Discussion and Conclusions

This study examines the antecedents and consequences of CRM capabilities in the mobile telecommunications industry using the resource-based view. The antecedents of CRM capabilities considered in this study are CRM infrastructural and cultural resources. CRM infrastructural resources are represented in this study by technological resources, human resources, and organizational resources, whilst CRM cultural resources are represented by customer orientation, learning orientation and result orientation. On the other hand, the consequences of CRM capabilities considered in this study are financial performance and marketing performance of mobile network operators.

In this study, individuals within the managerial levels (operational, tactical, and strategic) and working for MNOs in Kuwait represent the unit of analysis. Thus, the data analysis in this study is based on the responses of individuals rather than the responses at the MNO level. The overall research findings firmly support the validity of the developed model, accounting for 61% of the variance in CRM capabilities, 49.4% of the variance in marketing performance, and 27.8% of the variance in financial performance of MNOs. Specifically, all included resources with an exception of Result Orientation were found to be predictors of CRM capabilities. Marketing performance in addition to financial performance were shown to be a direct function of CRM capabilities. These findings support the significance of the developed model in explaining and predicting the antecedents and consequences of CRM capabilities in general and more specifically in the mobile telecommunications industry. The results show that CRM capabilities are partially determined by technological, human, and organizational resources. These findings are consistent with previous studies on the relationship between infrastructural CRM resources and CRM capabilities (Payne and Frow, 2005; Coltman, 2007; Keramati et al., 2010; Akroush et al., 2011). These results suggest that for building CRM capabilities in the mobile telecommunications industry, MNOs need to invest and acquire effective technological resources for managing customer data and their relationships with customers. Technological CRM resources would help organizations in enabling and supporting their CRM processes by technologies for efficiency and effectiveness reasons. Technological CRM resources would also help MNOs in improving their business intelligence especially when such technologies include business analytics, data warehouses, and decision support systems. Not only technological CRM resources, but also human resources play a great role in shaping MNOs' CRM capabilities. Indeed, human resources are very critical in customer relationship management as they are in direct contact with customers and thus represent the organization

in the eyes of customers. This implies that employees of MNOs need to be qualified in terms of certification, experience, and domain knowledge to be able to fulfil customer requirements and fully answer their queries. Employees should also do that in a pleasant manner as their attitude and behaviour are important for customer satisfaction. Therefore, MNOs should place attention on capacity building and on developing human resources technical and behavioural skills and capabilities and on continuous manner.

The results also show that organizational resources, as the third main element of infrastructural CRM resources covered in this study, are critical in developing CRM capabilities of MNOs. This element and according to the results of this study is the most important infrastructural resource affecting CRM capabilities. This implies that the management of an MNO needs to provide an adequate support and commitment along with any other organizational resource such as time and budget to satisfy the needs and wants of customers. The absence of such support will adversely affect CRM capabilities needed to improve marketing and financial performance of mobile network operators. Despite the importance of infrastructural CRM resources in shaping CRM capabilities, the results reveal that cultural CRM resources are more significant. It was found that the main predictor of CRM capabilities amongst all resources is customer orientation culture. This result is consistent with existing literature concerning the impact of customer orientation culture on CRM capabilities (van Bentum and Stone, 2005). In fact, customer orientation culture is about the shared values and norms that enable organizations to put customer interests first on their list of priorities (Wang and Feng, 2012). To foster customer orientation culture, MNOs need to adopt cross-functional processes and also they need to practice one-to-one relationships with their customers. This also implies that customization and personalization of services should be a priority in the mobile telecommunications industry. Adopting open innovation principles would also help in developing quicker, easier, and more effective ways and means for serving and satisfying customers.

As a second factor included within cultural CRM resources, learning orientation culture was also found to have a positive and direct influence on CRM capabilities but to a lesser extent than customer orientation culture. This result provides additional support for previous studies with consistent findings (van Bentum and Stone, 2005). This implies that an MNO needs to adopt a network culture that enjoys a high level of continuous learning attitude. For an MNO to be learning oriented, its culture should be very adaptive to changes happening at the external environment. This is particularly challenging for MNOs given that the mobile telecommunications industry enjoys a high level of dynamism. However, and according to the results of this study, result orientation culture was not found to have a significant impact on shaping CRM capabilities. Result orientation culture is in fact about having shared standards and beliefs amongst employees concerning the achievement of objectives as well as their implications and consequences.

On the other hand, it is evident in this study that CRM capabilities are a direct predictor of marketing and financial performance. This result is consistent with related previous studies (Morgan et al., 2009; Akroush et al., 2011; Wang and Feng, 2012). CRM capabilities are defined in this study as an organization's customer interaction capability, customer relationship upgrading capability, and customer win-back capability. Interestingly, the results indicate that the effect of CRM capabilities on marketing performance is stronger than its effect on financial performance. The results also highlight that marketing performance partially mediates the relationship between CRM capabilities and financial performance given that CRM capabilities has a direct significant effect on financial performance and also an indirect effect through marketing performance. This sounds logical as the higher customer interaction, upgrading, and win-back capabilities for a MNO, the better is its marketing performance in terms of customer satisfaction, commitment, and loyalty. In turn, the higher the level of customer satisfaction, commitment, and loyalty, the higher is the performance of a MNO in terms of profitability and return on investment. This implies that for improving profitability, MNOs need to focus on enhancing their marketing performance through building strong CRM capabilities that utilize various and effective infrastructural and cultural CRM resources.

References

- Akroush, M.N., Dahiyat, S.E., Gharaibeh, H.S., and Abu-Lail, B.N. (2011) 'Customer relationship management implementation: an investigation of a scale's generalizability and its relationship with business performance in a developing country context'. *International Journal of Commerce and Management*, 21(2), 158-190.
- Al-Debei, M. M. (2010). The design and engineering of innovative mobile data services: An ontological Framework founded on business model thinking. School of Information Systems, Computing and Mathematics. PhD Thesis, Brunel University London.
- Anderson, E. W., Fornell, C., & Mazvancheryl, S. K. (2004). Customer satisfaction and shareholder value. *Journal of Marketing*, 68(4), 172-185.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Arlinghaus, S. (Ed.). (1995). *Practical handbook of spatial statistics*. CRC press.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of management*, 27(6), 643-650.
- Bell, D., Deighton, J., Reinartz, W. J., Rust, R. T., & Swartz, G. (2002). Seven barriers to customer equity management. *Journal of Service Research*, 5(1), 77-85.
- Brislin, R.W. (1976). Comparative research methodology: cross-cultural studies. *International journal of psychology*, 11(3), 215-229.
- Butler, S. (2000). Customer Relationships: Changing the Game: CRM in the e-World. *Journal of Business Strategy*, 21(2), 13-14.
- Chang, W., Park, J. E., & Chaui, S. (2010). How does CRM technology transform into organizational performance? A mediating role of marketing capability. *Journal of Business Research*, 63(8), 849-855.
- Chen, J. H. F., & Wang, E. T. G. (2006). Internalization in technology innovation: A case of CRM adoption. *Proceedings of the 39th Hawaii International Conference on System Sciences*, Hawaii, USA
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Coltman, T. (2007). Why build a customer relationship management capability?. *The Journal of Strategic Information Systems*, 16(3), 301-320.
- Day, G. S. (2003). Creating a superior customer-relating capability. *MIT Sloan Management Review*, 44(3), 77-82.
- Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. University of Akron Press.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 39-50.
- Fornell, C., Mithas, S., Morgeson III, F. V., & Krishnan, M. S. (2006). Customer satisfaction and stock prices: High returns, low risk. *Journal of marketing*, 70(1), 3-14.
- Gaur, A. S., & Gaur, S. S. (2006). *Statistical methods for practice and research: A guide to data analysis using SPSS*. Sage.
- Grabner-Kraeuter, S., Moedritscher, G., Waiguny, M., & Mussnig, W. (2007). Performance monitoring of CRM initiatives. In System Sciences, 2007. *HICSS 2007. 40th Annual Hawaii International Conference on* (pp. 150a-150a). IEEE.
- Greenberg, P. (2004). *CRM at the speed of light: Essential customer strategies for the 21st century*, 3rd ed.: McGraw Hill.
- Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. (2006). *Multivariate data analysis* (Version 6). Upper Saddle River, NJ: Pearson Prentice Hall.

- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.
- Iglesias, O., Sauquet, A., andMontaña, J. (2011)'The role of corporate culture in relationship marketing'. *European Journal of Marketing*, 45(4), pp. 631-650.
- Jayachandran, S., Sharma, S., Kaufman, P., & Raman, P. (2005).The role of relational information processes and technology use in customer relationship management. *Journal of Marketing*, 69(4), 177-192.
- Keramati, A., Mehrabi, H., andMojir, N. (2010)'A process-oriented perspective on customer relationship management and organizational performance: An empirical investigation'. *Industrial Marketing Management*, 39(7), pp. 1170-1185.
- Klarner, P., Sarstedt, M., Hoeck, M., &Ringle, C. M. (2013).Disentangling the effects of team competences, team adaptability, and client communication on the performance of management consulting teams. *Long Range Planning*, 46(3), 258-286.
- Kim, H. S., & Kim, Y. G. (2009). A CRM performance measurement framework: Its development process and application. *Industrial Marketing Management*, 38(4), 477-489.
- Ko, E., Kim, S., Kim, M, and Woo, J. (2008) 'Organizational characteristics and the CRM adoption process'. *Journal of Business Research*, 61(1), pp. 65-74
- Massey, A. P., Montoya-Weiss, M. M., & Holcom, K. (2001).Re-engineering the customer relationship: leveraging knowledge assets at IBM. *Decision Support Systems*, 32(2), 155-170.
- Melville, N., Kraemer, K., &Gurbaxzni, V. (2004). Review: Information technology and organizational performance: An integrative model of IT business value. *MIS Quarterly*, 28(2), 283-322.
- Morgan, N. A., Slotegraaf, R. J., &Vorhies, D. W. (2009). Linking marketing capabilities with profit growth. *International Journal of Research in Marketing*, 26(4), 284-293.
- Ngai, E. W. T. (2005). Customer relationship management research (1992-2002): an academic literature review and classification. *Marketing Intelligence & Planning*, 23(6), 582-605.
- Osarenkhoe, A., &Bennani, A. E. (2007). An exploratory study of implementation of customer relationship management strategy. *Business Process Management Journal*, 13(1), 139-164.
- Parvatiyar, A. and Sheth, J.N. (2001), Conceptual framework of customer relationship management, in Sheth, J.N., Parvatiyar, A. and Shainesh, G. (Eds), *Customer Relationship Management – Emerging Concepts, Tools and Applications*, Tata/McGraw-Hill, New Delhi,pp. 3-25.
- Payne, A., and Frow, P. (2004). The role of multichannel integration in customer relationship management'. *Industrial Marketing Management*, 33(6), 527-538.
- Payne, A., &Frow, P. (2005).A strategic framework for customer relationship management. *Journal of marketing*, 69(4), 167-176.
- Payne, A., &Frow, P. (2006). Customer relationship management: from strategy to implementation. *Journal of Marketing Management*, 22(1-2), 135-168.
- Peltier, J. W., Zahay, D., & Lehmann, D. R. (2013). Organizational learning and CRM success: a model for linking organizational practices, customer data quality, and performance. *Journal of Interactive Marketing*, 27(1), 1-13.
- Reinartz, W., Krafft, M., & Hoyer, W. D. (2004). The customer relationship management process: its measurement and impact on performance. *Journal of marketing research*, 41(3), 293-305.
- Rigby, D. K., &Ledingham, D. (2004). CRM done right. *Harvard Business Review*, 82(11), 118-130.
- Ruiz-Ortega, M. J., &García-Villaverde, P. M. (2008). Capabilities and competitive tactics influences on performance: Implications of the moment of entry. *Journal of Business Research*, 61(4), 332-345.
- Senge, P. M. (2014). *The dance of change: The challenges to sustaining momentum in a learning organization*. Random House LLC.
- Sheth, J. N., Sisodia, R. S., & Sharma, A. (2000).The antecedents and consequences of customer-centric marketing. *Journal of the Academy of Marketing Science*, 28(1), 55-66.

- Sin, L.Y., Alan, C.B., and Yim, F.H. (2005) 'CRM: conceptualization and scale development'. *European Journal of Marketing*, 39(11/12), 1264-1290.
- Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. *The Journal of Marketing*, 63-74.
- Slotegraaf, R. J., & Dickson, P. R. (2004). The paradox of a marketing planning capability. *Journal of the Academy of Marketing Science*, 32(4), 371-385.
- Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society. Series B (Methodological)*, 111-147.
- Sun, B., Li, S., & Zhou, C. (2006). "Adaptive" learning and "proactive" customer relationship management. *Journal of Interactive Marketing*, 20(3/4), 82-96.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), pp. 509-533.
- Uusitalo, K., Hakala, H., & Kautonen, T. (2011). Customer complaints as a source of customer-focused process improvement: A constructive case study. *Operations Management: A Modern Approach*, 29(2), pp. 107-133.
- Van Bentum, R., and Stone, M. (2005) 'Customer relationship management and the impact of corporate culture A European study'. *The Journal of Database Marketing & Customer Strategy Management*, 13(1), pp. 28-54.
- Vorhies, D. W., & Morgan, N. A. (2005). Benchmarking marketing capabilities for sustainable competitive advantage. *Journal of Marketing*, 69(1), 80-94.
- Wang, Y., and Feng, H. (2012) 'Customer relationship management capabilities: Measurement, antecedents and consequences'. *Management Decision*, 50(1), 115-129.
- Wernerfelt, B. (1984) 'A resource-based view of the firm'. *Strategic Management Journal*, 5(2), 171-180.
- Wilson, A., Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2012). *Services marketing: Integrating customer focus across the firm* (No. 2nd Eu). McGraw Hill.
- Woodcock, N., Stone, M., & Foss, B. (2003). *The customer management scorecard: Managing CRM for profit*. London: Kogan Page.
- Yim, F. H. K., Anderson, R. E., & Swaminathan, S. (2004). Customer relationship management: its dimensions and effect on customer outcomes. *Journal of Personal Selling and Sales Management*, 24(4), 263-278.