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Implementation of IT and Customer Relationship Management Capabilities on Marketing Performance in Banks

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ABSTRACT

This study aimed to measure the effect of information technology and customer relationship management capabilities on marketing performance - an empirical study on commercial banks in Isfahan. The sample consisted of general managers of branches working in Isfahan banks that used information technology in their performance (150 questionnaires were distributed to them, but (131) questionnaires were retrieved and only (117) questionnaires with a rate of (78%) were suitable for statistical analysis.. . The results of the study show that customer relationship management has a direct positive and significant effect on marketing performance and indirectly has a significant positive effect of information technology capabilities on marketing performance.

Introduction

Today, many businesses, such as banks, insurance companies, and other service providers, have realized the importance of customer relationship management (CRM[1]) and its potential to help them acquire new customers, retain existing customers, and maximize their lifetime value. At this stage, a close relationship with customers requires strong coordination between IT and marketing departments to retain selected customers for the long term. This study deals with the role of information technology capabilities and customer relationship management in the banking sector and the necessity of customer relationship management to increase customer value using the number of customer relationship management systems in general in the form of information technology, databases, and communication systems. These had grown to become a top priority for companies and had a huge impact on the performance of companies so that they could compete in today's highly changing economy and market. They have become a key strategic tool for all companies (Sirbel and Al-Rubaiee, 2012).

Despite this, there is little information about the factors behind successful CRM implementations and the role of IT in this area. Many companies have integrated customer relationship management (CRM) technology into their marketing processes to improve their performance by enabling users to extract relevant and timely information from it, leading to superior CRM performance . CRM technology integrates a company's marketing activities (such as segmentation, targeting, product development, sales, services, order management, market research, and analytics) and automates all aspects of a company's relationships with its customers to focus on acquisition, retention, and profitability (Rigby & Ledingham, 2004).

Banking has been a pioneer in adopting customer relationship management, but there is not much empirical data available on the benefits of IT capabilities and customer relationship management together and their impact on banks' marketing performance, which is why this study looks at this issue. According to the above discussion, this study aims to gain a better understanding of the benefits of customer relationship management and IT capabilities together and their impact on marketing performance in the banking industry. The main purpose of this study is to conceptualize and operationalize the aspects related to customer relationship management capabilities and information technology and their impact on the marketing performance of Isfahan commercial banks by achieving the following goals:

1. Determining the Impact of Information Technology Capabilities on Marketing Performance in Isfahan Commercial Banks
2. Investigating the Effect of Information Technology Capabilities on Customer Relationship Management in Isfahan Commercial Banks
3. Experimenting with the Effect of Customer Relationship Management on Marketing Performance in Isfahan Commercial Banks
4. Investigating the Mediating Effect of Customer Relationship Management on the Relationship between Information Technology Capabilities and Marketing Performance in Isfahan Commercial Banks

Based on the study problems, the following research hypotheses are examined:

1) There is a positive direct effect of information technology capabilities on marketing performance (sales growth, market share) in Isfahan commercial banks at the probability level of 5%.
2) The direct effect of information technology capabilities on customer relationship management in Isfahan commercial banks is significant at the level of 5%.
3) There is a positive direct effect of customer relationship management on marketing performance (sales growth, market share) in Isfahan commercial banks at the level of 5%.
4) There is a positive indirect effect of IT capabilities on marketing performance (sales growth; market share) through CRM as an intermediary at the level.

[1] customer relationship management

Based on what has been stated, the research model of the present study is presented in Figure 1.

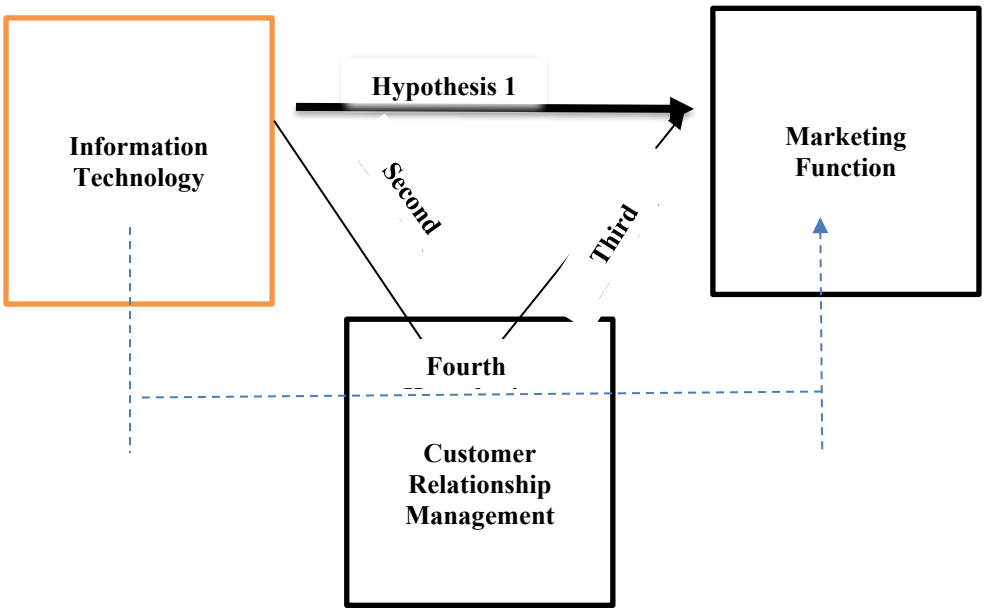

Figure 1-. Conceptual Model of Research

-Subject literature

IT capabilities

Advances in information technology have substantially strengthened the institutionalization of relationship marketing (Payne & Frow, 2005). The most visible and fruitful technological manifestation of this institutionalization is in customer relationship management (CRM) software programs. Information technology (IT) is a general term that describes any technology that helps to generate, manipulate, store, communicate, and/or disseminate information. William Sawyar, 2005).
Less attention has been paid to the use of information technology in the context of CRM (Jayachandran, et al, 2005). The use of technology is considered a key factor in organizational success (Devaraj and Kholi, 2003). The use of CRM technology only leads to functional effects when CRM systems are suitable for hypothetical work.
Shelley and Cashman (2004) say that information technology includes hardware, software, databases, networks, and other related components that are used to build information systems. At the organizational level, many researchers have defined capabilities in general, which refers to the range of skills, entrepreneurship, management, and technology required to establish and operate companies internally.
At the organizational level, many researchers have defined capabilities in general, which refers to the range of skills, entrepreneurship, management, and technology required to establish and operate companies internally. Bone and Saxon (2000) defined capability as "a combination of the right people with the right skills, the use of the right equipment and equipment through effective business processes, and thus the delivery of the company's strategic purpose".
The capabilities of one company usually cannot be replicated in another company because they cannot be explicitly defined and codified.
Specifically, organizational capabilities are a set of complementary skills, routines, and assets. They are somewhat implicit and informal, based on procedural knowledge, and are not easily transferable. A capability has several characteristics, namely speed. Process compatibility, agility, interoperability, and complement core competencies.
Capabilities include knowledge of all processes, meaning, and minimum procedures necessary to transform work into a productive process (Byrd, 2001). This routine is continuously improved through the learning process. Constant exchanges between the organization and its external environment bring new types of knowledge, product innovation, process, or management of the organization. This ability to create things in a different way can be understood as the company's internal capability to innovate, i.e., the technological capability of the organization. These internal capabilities are unique to each company. Therefore, they change according to the organization (Sirbel and Al-Rubaiee, 2012).
Relying on a resource-based perspective, Mata et al. (1995) explored the potential of multiple IT resources (access to capital for IT investments, proprietary technology, IT technical skills, and management IT skills) to create a sustainable competitive advantage. They only concluded that IT management skills can be a source of lasting competitive advantage because, unlike other IT resources, they are not easily imitated.
IT capabilities (hardware, software, execution systems, proprietary software, shared services, IT skills, and human processes) are integrated, interconnected capabilities with adaptive internal elements that are focused to fulfill an IT or business goal. Without such a focus on IT capability, the company may incur expenses sporadically
Focusing on IT capabilities and the impact they exert through business processes leads management to understand the need for investment focused on IT capabilities (Prahalad & Hamel, 1990). These IT capabilities can be extended and demonstrated as an IT competence for the customer. For

example, using Enterprise application software, IT can integrate core systems internally and then use this capability to integrate customers (with a company order management system).
The term "IT capability" describes various aspects of an organization's IT resources. These resources influence and determine an organization's ability to transform IT assets and services into strategic applications (Bharadwaj, 2000), and to mobilize and deploy IT-based resources with other resources and capabilities. There are five dimensions of IT capability.

Customer Relationship Management

Retaining existing customers is critical to the success of companies, because according to the results of studies, the cost of acquiring a new customer is approximately five times the cost of retaining an existing customer. Therefore, companies try to gain their satisfaction and loyalty by providing better services, increasing the quality and customization of products according to the opinions of customers. In particular, with the advancement of technology and innovation in industries, competition between companies has intensified day by day, and most companies have realized that their survival and success depend on having loyal customers (Yohans et al., 2013). Customer loyalty is one of the most important and strategic goals of companies, because loyal customers tend to make more purchases and are enthusiastic advocatesof the company (Asanlou and Khodami, 2016)..Customer loyalty is one of the most important and strategic goals of companies, because loyal customers typically tend to make more purchases and are enthusiastic advocates for the company. The principles of relationship marketing, as a developing field in modern marketing, are the basis for relationship management with customers. Customer relationship management is a term used to describe how to actively manage relationships with customers. Many of the organization's activities deal directly or indirectly with customers, so in the customer relationship management system, it is necessaryto provide the necessary ground for the participation of all areas in customer satisfaction.
The use of new technologies such as artificial intelligence, online response system, Internet of Things, augmented reality, and other new technologies based on information technology plays an important role in optimal and extensive communication with customers (Libai et al., 2020). Companies must carefully understand customer needs and provide customized information, services, and products to customers over the internet.

Research Methodology

This research is applied and descriptive-analytical in terms of purpose. The population of this study is all the general managers and branches of commercial banks that use information technology on CRM performance in Isfahan. A total of 150 samples were selected. Data collection was done based on two library and field sources. The data collection tool in this study was a researcher-made questionnaire. The questionnaire had two sections: demographic variables and cause and effect factors, the cause-and-effect factors section measures three variables (complete information technology capabilities (ITC) up to (15 items), customer relationship management (CRM) up to (19) items, and marketing performance through (6) criteria). All items are measured on the Likert scale. 150 questionnaires were distributed among the study participants, only (131) questionnaires were returned, which is (87%) of the total questionnaires distributed. Also, (14) were excluded from the returned questionnaires, statistical analysis was insufficient, so the number of questionnaires used for the analysis was equal to (117). Cronbach's alpha coefficient of the main variables of "IT capabilities" (including (15) propositions as a scale for it (88.34%) while for customer relationship management (2.92), which is the highest coefficient. The third variable of marketing performance had Cronbach's alpha (88.8%). Finally, Cronbach's overall alpha coefficient was equal to (93.39%). These results are the acceptable level suggested by (Sekaran, 2003).

SPSS software and AMOS package were used to analyze the data.
SPSS software was used to test the first three hypotheses and to test the fourth hypothesis, instantaneous structure analysis (AMOS) was used. Many statistical criteria are simple and multiple regression, F test for the significance of the estimated equations, t-test for the significant effect of the independent variable (ID) on the dependent variable (DV), and coefficient of determination (R2) to know how to perform the analysis.

Results

The descriptive study of the demographic characteristics of the subjects showed that 67.5% of the samples had a bachelor's degree, which made this class the highest demographic variable of the educational level, while the lowest class was the class with a percentage of "diploma or less" with a percentage (11.1%).
Descriptive statistics:
In Table 1, the recommended statistics of the research variables are given.

Table 1- Descriptive statistics of research variables

Level of Importance	Standard deviation	Average	
High	691/0	73/5	Crm
High	51/0	124/6	IT capabilities
High	84/0	48/5	Marketing Function

- Analysis of hypotheses

The first hypothesis: There is a positive effect of information technology capabilities on marketing performance in Isfahan commercial banks at the level of ($0.05 \leq \alpha$).
To test this hypothesis, simple regression has been used. The results are given in Table 2.

Table 2 - The Effect of ITC on Marketing Performance Using Simple Regression

Dv	R2	F	Sig	Regression coefficient				Decision
				ID	B	Se	t	
Marketing Function	26/0	012/3	085/0	LTC	160/0	133/0	736/1	Doesn't support

The simple regression to fit the relationship between the independent variable (IT) and the dependent variable (market share) based on the F test (3.012) was not significant. Compared to the level (sig = 0.085 > 0.05), the R2 coefficient of determination shows that corporate governance (2.6%) explains the differences in marketing performance. While increasing the degree in ITC increases the marketing performance up to (0.160). This is a positive effect of ITC on marketing performance, but not significant, as the t-test (1.736) shows that the result is not supported.

The second hypothesis: The direct effect of information technology capabilities on customer relationship management in Isfahan commercial banks is significant at the level of 5%.

The same method used in the first hypothesis was used to test this hypothesis, using simple regression, in which ITC is an independent variable and CRM is a dependent variable. The final results for testing these effects are given in Table 3.

Table 3 - The Impact of ITC on CRM Using Simple Regression

Dv	R2	F	Sig	Regression coefficient				Decision
				ID	B	Se	t	
Crm	321/0	326/54	000/0	LTC	566/0	089/0	*371/7	Supports

From the results of Table 3, simple regression is a suitable fit for the relationship between the independent variable ITC and the dependent variable of CRM according to the F test (54.326), which is a significant coefficient compared to the level of (sig=0.000 > 0.05).The determination shows that ITC (0.32%) explains the differences in CRM, while increasing the degree in ITC increases CRM by (0.566). This positive yet significant effect of ITC on CRM is measured by t-test and is equal to (371/7). Therefore, the second hypothesis is plausible.

Hypothesis 3: There is a positive direct effect of customer relationship management on marketing performance (sales growth, market share) in Isfahan commercial banks at the level of 5%.

Again, simple regression was used to test this hypothesis, the independent variable of customer relationship management (CRM) and marketing performance as the dependent variable. The test result of the third hypothesis is shown in Table 5.

Table 4Effects of CRM on Marketing Performance

Dv	R2	F	Sig	Regression coefficient				Decision
				ID	B	Se	t	
Marketing Function	115/0	926/14	000/0	Crm	339/0	110/0	84/3	Supports

From the results of Table 4, simple regression is a suitable fit for the relationship between the independent variable of CRM and the dependent variable of marketing performance according to the F test (14.926), which is significant compared to the level of (sig=0.000 > 0.05). The coefficient of determination shows that CRM (0.115) explains the differences in marketing performance, while increasing the degree in CRM increases CRM by (0.339). This is the positive effect of CRM on marketing performance and at the same time it is significant as measured by the t-test and is equal to (3.84). Therefore, the third hypothesis is plausible.

Hypothesis 4: There is a positive indirect effect of IT capabilities on marketing performance (sales growth; market share) through CRM as an intermediary at the level.
It is clear that "IT capabilities" and the intermediate variable "CRM" are independent variables, while "marketing performance" is a dependent variable. In this study, stepwise regression was used. The results are shown in Table 5.

Table 5- The Impact of IT and CRM Capabilities on Marketing Performance

Dv	R2	F	Sig	Regression coefficient	Sig**

				ID	B	Se	t	
Marketing Function	117/0	51/7	002/0	LTC	047/0-	155/0	444/0-	61/0
				Mcr	366/0	134/0	424/3	001/0

The first step to testing the f-hypothesis is to confirm whether there is no "multiline" hypothesis, which implies a higher lack of correlation between independent variables and intermediate variables, before starting with path analysis as a tool to test this hypothesis. First of all, multiple regression is a good fit for the relationship between the three variables of the study, as the F test (510/7), which represents a meaningful model to show the relationship (sig = 0.05 > 0.001) Both IT capabilities and customer CRM (11.6%) explain the differences in marketing performance values.
An increase of one degree in ITC reduces marketing performance by (-0.444), which is a direct negative effect of IT capabilities on marketing performance, but it doesn't matter because the t-test associated with it is equal (-0.444). And its comparison value is (0.658<0.658 sig), while an increase of one degree in CRM increases marketing performance by (0.366). This is a significant positive direct effect of CMR on marketing performance, in which the t-test is (3.424) and is associated with (sig=0.001 > 0.05).
For the multiline problem, the tolerance of the indicator is equal to (0.679) which has failed in the range (greater than 0.1 and less than 1). The values between independent variables do not pose a problem in multiple regression analysis.
After satisfying the path analysis hypothesis, the researcher used Amos 7 software to test the fourth hypothesis. Figure 2 shows the study paths of the model.

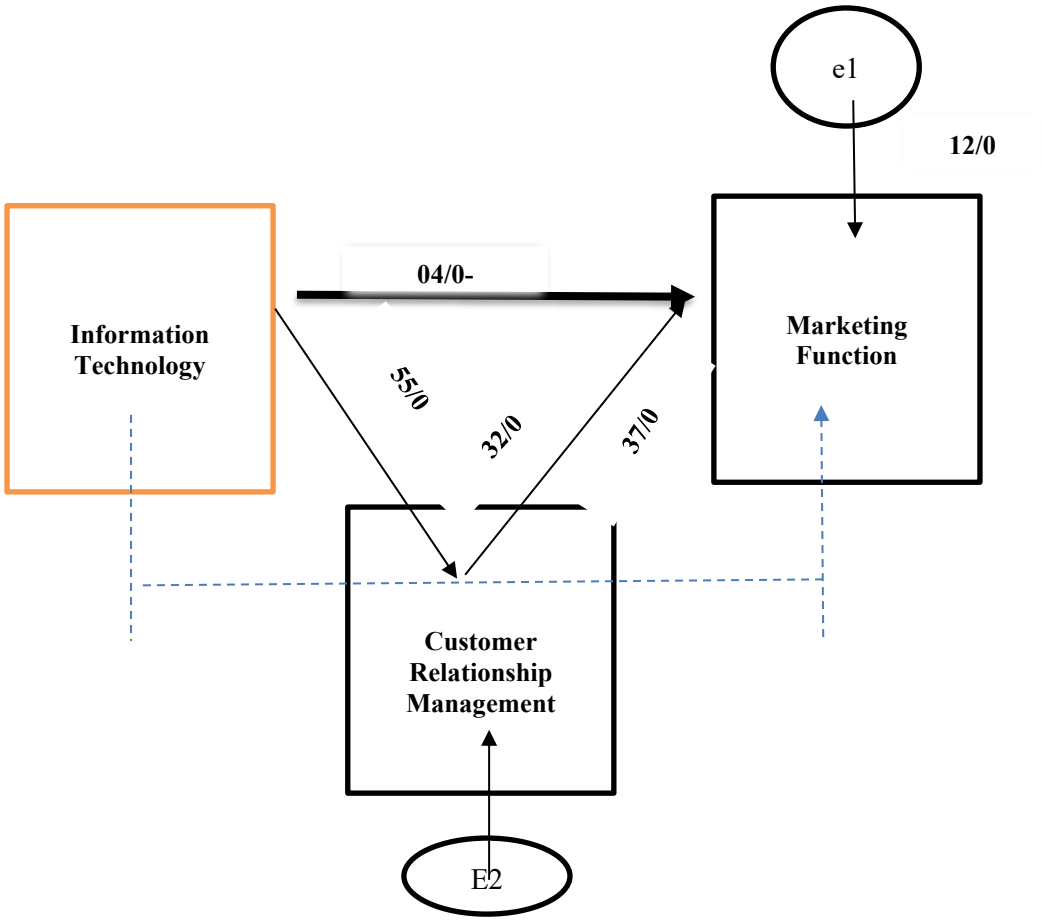

Figure 2 – Model path

The numbers on the path arrow are the direct effect of independent variables on the dependent variable (in italic font), while the numbers above the rectangle are the coefficient of variation (in

bold font), so the direct effect of information technology capabilities (ITC) on performance marketing is equal to (0.05).
The direct impact of customer relationship management (CRM) on marketing performance is equal to (0.37) and the direct effect of information technology capabilities (ITC) on customer relationship management (CRM) is equal to (0.57), all of which have direct effects except for the first case as we found in the previous discussions. Information Technology (ITC) capabilities explain the differences (32%) in the value of customer relationship management (CRM), while (12%) of the differences in marketing performance are explained by the independent variable of IT capabilities (ITC) and the mediating variable of customer relationship management.

Discussion & Conclusion

The main results of this research are:

1) The level of importance of information technology capabilities in commercial banks in Isfahan was high.
2) The level of importance of customer relationship management in commercial banks in Isfahan was high.
3) The level of importance of marketing performance in commercial banks in Isfahan was high.
4) There was a positive effect of IT capabilities on marketing performance in commercial banks in Jordan, but it was not significant at the 5% probability level.
5) Information technology capabilities on customer relationship management in commercial banks in Isfahan were significant at the 5% probability level.
6) There was a positive and significant effect of customer relationship management on marketing performance in commercial banks in Isfahan at 5% probability level.
7) The Positive Direct Effect of Customer Relationship Management on Marketing Performance in Commercial Banks in Isfahan at the Level of 5% with the Direct Negative Effect of IT Capabilities on Marketing Performance in Commercial Banks in Isfahan, but No Significant at the Level of 5% When IT Capabilities and Customer Relationship Management are Studied Together

According to the results, the researcher makes some recommendations:

1) Commercial banks should take care of their IT capabilities by developing advertisements to further impact marketing performance: Commercial banks in Isfahan should integrate business IT (CRM) applications and business processes to improve the efficiency of individual departments.
2) Commercial banks in Isfahan need to train their employees and IT leaders, such as CIOs , as this is a key factor in creating change, innovation, and improving services, and controlling and reducing costs.
3) Commercial banks in Isfahan should put strategies and plans into the CRM system to improve customer satisfaction.
4) 4. Commercial banks in Isfahan must adopt web-based infrastructure in the CRM system.

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