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MEASURING THE EFFECT OF CUSTOMER RELATIONSHIP MANAGEMENT (CRM) COMPONENTS ON THE NON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS: EGYPT CASE

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Abstract

This paper presents customer relationship management (CRM) components as applied on the Egyptian Commercial Banks, examined from the bankers' point of view. Then, it intends to measure their effect on the level of customer satisfaction and loyalty from the customers' point of view as examples of the non financial performance measures. The paper is quantitative in nature and consists of two different structured questionnaires using convenience/quota sampling. The first involved 180 employees in order to measure CRM applicability, and the second involved 270 customers to measure the level of customer satisfaction and loyalty and their effect on the Egyptian Commercial Banks' financial performance The findings show that the selected banks apply CRM components but the level of application differs from one bank to another. The results showed a significant positive relationship between CRM and customer satisfaction in the Egyptian Commercial Banks, when applying them together and not separately. In addition, there is a strong positive effect between customer satisfaction and loyalty which was reflected on the Commercial Banks' financial performance. The findings confirm the importance of studying and implementing CRM to achieve customer loyalty and improve the Egyptian Commercial Banks financial performance. Banks wishing to improve their relationships with customers need to focus on the CRM components to develop relevant and effective marketing strategies and tactics. The paper measures the CRM as a multidimensional construct as applied on the Egyptian Commercial Banks and relate it to the achievement of the ultimate goal of retaining customers to gaining a sustainable competitive advantage and achieve more profits.

Keywords: CRM, customer satisfaction, customer loyalty, nonfinancial performance measures, Banking sector, Egypt

1 INTRODUCTION

In today's market place, the size of the service sector is increasing all over the world, in both developed and emerging countries (Lovelock and Wirtz, 2007, p.6). In Egypt, the service sector represents the largest and fastest growing economic sector and accounts for almost 51% of gross

domestic product (GDP). The Egyptian Banking Sector, particularly, constitutes one of the main sources of service sector revenue (Encyclopedia of the nations, Egypt-Economic sectors, 2009). Therefore, it should be financially stable and growing, as this sector is responsible for the savings of communities (Rootman *et al.*, 2008). Furthermore, the Banking Sector in Egypt represents a cornerstone of its financial architecture and plays a crucial role in the overall economic development and growth. Over the past years, it has witnessed important changes such as privatization, bank mergers and acquisitions; the largest number of mergers and acquisitions took place between 2004 and 2007. Thus, this came as a golden opportunity for the entry of more foreign banks that perceived Egypt as a lucrative market (AmCham Egypt BSAC, 2005 and 2008).

The appearance of new leading parties (such as bank mergers and acquisitions) and the globalization of international markets are both the result of technological developments and the loosening of administrative and monetary interventions that have led to the severe market competition and the risk of declining market shares for each banking institution (Kokkomelis, 1995, p.132-133). Owing to this competitive and global banking era, the customers are considered as one of the most important and valuable assets that a bank should maintain and continuously expand. As customers are of significant importance, it is crucial for the banks to satisfy their needs and wants (Mylonakis, 2009). These banking institutions need to focus on attracting and retaining customers because a lot of benefits result from customer relationships, including customer loyalty and higher profitability (Rootman *et al.*, 2008). Therefore, by focusing on managing customer relationships and in particular customer satisfaction, revenues will be maximized (Stefanou *et al.*, 2003).

Customer satisfaction depends on how products and services meet or surpass customer expectation (Kotler *et al.*, 2000). Customer satisfaction is the main core of Customer Relationship Management (CRM) and is one of the most important indexes within the frame of customer perspective in a Balanced Scorecard (BSC). The balanced scorecard concept, developed in 1992 (Kaplan & Norton, 1993) is a strategy-focused approach to performance management that includes performance measures derived from the organization's vision and strategy. According to the data of the Bain & Company research this approach is among the 10 most popular management tools in 2009 (Rigby, 2009). The balanced scorecard augments financial measures with objectives and metrics in three additional areas: customer relationships, internal processes, and learning and growth. Balanced scorecard for any company involves customer satisfaction and customer loyalty indexes as the customer measures.

On the other hand, CRM is recognized globally as one of the most innovative means to facilitate the creation of a customers' base in order to meet market competition requirements (Mylonakis, 2009). It appeared in the mid-1990s and was strongly promoted during the late 1990s – throughout this time period, the term CRM has obtained different meanings to different people (Goldberg, 2002, p.7). Evidently, the CRM is regarded as a multidisciplinary topic since it deals with marketing, information systems, management, etc. (Kevork and Vrechopoulos, 2009). The CRM is seeking to establish long term, committed, trusting and cooperative relationships with customers, characterized by openness, genuine concern for the delivery of high quality services, responsiveness to customer suggestions, fair dealing and the willingness to scarify short term advantage for long term gains (Bennett, 1996). In applying the CRM, the goal of the organizations is to identify their own customers and to provide personalized services, in order to enhance and increase both customer satisfaction and loyalty in the long run (Shani and Chalasani, 1992; Kalakota and Robinson, 2001; Gebert *et al.*, 2003).

Many researchers discuss the relationships between customer satisfaction, customer loyalty, and profitability of a company (Reicheld & Sasser, 1990; Storbacka *et al.*, 1994; Hallowell, 1996; Jamal & Anastasiadou, 2009; Beerli *et al.*, 2004). In particular, Professor James Heskett in 1994 proposed a concept of Service-profit chain that establishes relationships between profitability, customer loyalty, and employee satisfaction, loyalty and productivity (Heskett *et al.*, 2008). The links in the chain were

as follows: Profit and growth are stimulated primarily by customer loyalty. Loyalty is a direct result of customer satisfaction. Satisfaction is largely influenced by the value of services provided to customers. Value is created by satisfied, loyal, and productive employees.

2 NONFINANCIAL PERFORMANCE MEASURES

Non-financial performance (NFP) measurement like quality, customer satisfaction and customer loyalty is more difficult in services (Smith, 1998) than in manufacturing firms (Silvestro *et al.*, 1992; Brignall, 1997). However, there are limited studies concerning PM practice in the financial services industry, such as Berg *et al.* (1992), Cobb *et al.* (1995), Scrace and McAulay (1997), Lee (1997). But there are rare researches available on non-financial performance measurement (NFPM) in banks/financial institutions (BFI). Therefore, considering the importance of the service sector in the emerging economies, the comparatively little evidence of research on Management Accounting (MA) practice in the service sector, the difficulty of measuring NFP in services, and the absence of research on NFPM particularly in BFI, thus, the current study is an attempt to add to the limited knowledge of NFPM practices in banks and the financial services industry as a whole.

Technological advantage creates a crucial need for BFI to offer a wider variety of customer services in a faster and timelier manner to fulfill the needs of customers and to achieve economies of scale. A service organisation, especially in the financial industry, employs the latest technologies such as wireless application protocol (WAP), financial services via mobile telephone and e-loan, which could impact on improving and measuring NFP. Thus, the above evidence supports investigation of the impact of IT and overall technological advancement on NFPM in BFI (Hussain and Gunasekaran, 2002).

In line with the research of Abu Kasim and Minai (2009), this paper will focus on CRM, which is regarded as a strategy that focuses on customers for the purpose of retaining them, increasing their loyalty and subsequently, improving profitability of the organization. To retain customers, the relationship with customers has to be managed in a long-term and trusting manner for mutual benefits. Thus, the adoption of CRM should enhance the banks' performance through increasing customer satisfaction and loyalty, declining customer acquisition costs and increasing profitability by customers who are willing to pay a premium for better services (Piccoli et al., 2003). Although CRM is imperative for organizational survival, its implementation has resulted in mixed outcomes (King and Burgess, 2008) and the following discussion will be focused on CRM in order to highlight its role in banks in Egypt.

3 CRM DEFINITIONS

CRM has different meanings to different people (Iriana and Buttle, 2006) and it has been defined and conceptualized in several ways, reflecting many viewpoints of different authors. CRM is considered to be an approach to maximize customer value trough differentiating the management of customer relationships (Xu *et al.*, 2002). Therefore, most CRM definitions are based around the collection and use of customer data for specific customer-focused activities (Xu and Walton, 2005). In addition, CRM is considered to be a way to maximize the value of the company through specific customer strategies. Thus, they suggest that CRM is a set of business practices designed to make an organization closer to its customers in order to be able to better understand each customer so that each one becomes more important and more valuable to the organization (Godsen, 2004, p.141).

In this line of thought, Jackson (1985) defines the CRM as a marketing orientation toward strong, lasting relationships with individual accounts. Hobby (1999) added that CRM is not only a marketing orientation but also a management approach that helps the organizations to identify, attract and increase retention of profitable customers by managing relationships with them. Payne (2000) asserts that CRM includes the creation, development and enhancement of individualized customer

relationships with carefully targeted customers and customer groups resulting in maximizing their total customer life-time value. Recently, Kotler and Armstrong (2004) define CRM as "The overall process of building and maintaining profitable customer relationships by delivering superior customer value and satisfaction". Furthermore, Payne and Frow (2005) explain that CRM is considered to unite the potential of relationship marketing strategies and Information Technology (IT) in order to create profitable, long-term relationships with customers and other key stakeholders. Thus, CRM provides opportunities to use data and information to understand customers and co create value with them.

Based on the above definitions, Kevork and Vrechopoulos (2009) note that CRM is a multidisciplinary topic since it deals with several domains, such as marketing (e.g. relationship marketing, consumer behavior, etc.), management and information systems (e.g. e-commerce, human computer interaction, etc.). However, there is a big amount of confusion regarding its domains and meanings (Parvatiyar and Sheth, 2001). Some have defined it as a process; others as a strategy, a philosophy, a capability, or as a technological tool (Zablah *et al.*, 2004). However, it has become clear that CRM is more than just technology. While technology is only a way in order to implement the CRM (Chan, 2005). Many authors consider the CRM as multiple-variant construct, a combination between strategy and IT (Chan, 2005; Payne and Frow, 2005), between process and IT (Plakoyiannaki and Tzokas, 2002), between strategy, process and IT (Buttle, 2004; Rigby *et al.*, 2002), and between process, strategy, philosophy, capability and IT (Zablah *et al.*, 2004).

In this paper, the CRM is defined as a multidimensional construct composed of four behavioral components: key customer focus, CRM organization, Knowledge management and technology-based CRM in order to implement the CRM in a successful way.

4 CRM COMPONENTS

Based on related literature (Crosby and Johnson, 2001; Day, 2003; Fox and Stead, 2001; Kalustian *et al.*, 2002; O'halloran and Wagner, 2001; Paracha and Bulusu, 2002; Ryals and Knox, 2001; Tiwana, 2001), CRM was hypothesized as a multi-dimensional construct consisting of four broad behavioral components: Key customer focus, CRM organization, Knowledge management, and technology-based CRM

Key customer focus: This involves an overall customer-centric focus (Shelth *et al.*, 2000; Vandermerwe, 2004), and continuously delivering superior and added value through customized offers to the key customers. Key elements of this dimension consist of customer-centric marketing, key customer lifetime value identification, personalization and interactive co creation marketing.

CRM organization: CRM means essential changes in the way that firms are organized (Ryals and Knox, 2001) and business processes are conducted (Hoffman and Kashmeri, 2000). Therefore, firms should take into consideration the organizational challenges inherent in any CRM initiative (Agarwal et al., 2004). The key considerations in order to successfully organize the whole company around CRM are as follows: organizational structure, organization-wide commitment of resources, and human resources management.

Knowledge management: According to the knowledge-based view of the organization, the creation, the transfer, and the application of knowledge is the primary rationale for a firm's existence. From a CRM perspective, knowledge can be learned from past experience or empirical study of consumer data. Key elements include knowledge learning and generation, knowledge dissemination and sharing, and knowledge responsiveness.

Technology-based CRM: Accurate customer data is necessary to successful CRM performance (Abbott et al., 2001). Consequently, the technology has an important role in CRM in adding to firm intelligence (Boyle, 2004). In reality, the advancement in Information Technology has the capability to collect, analyze, and share customer information which will lead to a customer satisfaction and thus retaining customers (Bulter, 2000). The CRM calls for "information-intensive strategies" which utilize computer technologies in building relationships (Harding et al., 2004) such as: computer-aided design/manufacturing, data warehouses, data mining and CRM software systems that enable the firms to provide greater customization with better quality at lower cost. In addition, it helps the staff at all contact points to serve the customers in a better way. Therefore, many customer-centric activities would be impossible without the use of an appropriate technology (Sin et al., 2005).

5 BENEFITS OF CRM

CRM focuses on keeping and maintaining long-term relationship with customers, leading to customer satisfaction and hence creating customer loyalty (Liyum *et al.*, 2008,).In this line of thought, Gebert *et al.*, (2003); Kalakota and Robinson, (2001); Shani and Chalasani, (1992) assert that the companies' objectives from using CRM is to know their own customers and to offer personalized services, in order to increase both customer satisfaction and customer loyalty in the long run. Nguyen *et al.* (2007), supported that the CRM if used properly, would enhance a company's ability to achieve the ultimate goal of retaining customers in order to gain a strategic advantage over its competitors.

Thus, the successful management of customer relationship can improve customers' satisfaction and loyalty, in order to give positive effect on upgrading business performance (Liyun *et al.*, 2008).

6 CURRENT RESEARCH NONFINANCIAL PERFORMANCE MEASURES

6.1 Customer satisfaction

Customer satisfaction is a major goal of business organizations, since it affects customer retention and companies' market share (Hansemark and Albinsson, 2004). Therefore, it is highly recognized for its crucial role (Jamal and Naser, 2002). Customer satisfaction is a complex construct which has been defined in various ways (Besterfield, 1994; Kanji and Moura, 2002; Fecikova, 2004). In this study, it is defined in a broad concept that involves both cognitive and affective components (Yu and Dean, 2001).

The cognitive component refers to a customer's evaluation of the perceived performance in terms of its adequacy in comparison to the customer's expectation standards (Oliver, 1980; Wirtz, 1993; Liljander and Strandvik, 1997). The affective component which is the emotional component consists of various emotions, such as happiness, surprise and disappointment (Oliver, 1993b, Liljander and Strandvik, 1997; Stauss and Neuhaus, 1997; Cronin et al., 2000).

Based on Levitt (1983), a number of surveys confirm the general economic benefit of customer satisfaction, which can be primarily attributed to the positive correlation between customer satisfaction and customer retention (Dawkins and Reichled, 1990). In addition, Fecikova, (2004) stated that loyalty of customer is considered to be a function of satisfaction and according to Bowen and Chen, (2001); Fecikova, (2004) the loyal customers contribute to company profitability by spending more on company products and services, via repeat purchasing and by recommending the organization to other customers.

6.2 Customer loyalty

Customer loyalty is critical to the success of business in today's competitive market place, and banks are no exception (Ehigie, 2006). Thus, a loyal customer to a bank is the one that will stay with the same service provider, is likely to take out new products with the bank and is likely to recommend the bank's services (Fisher, 2001). Therefore, Kish, (2002); Duncan and Elliot, (2002), show the link between customer loyalty and organization profitability, implying that any organization with loyal customers has considerable competitive advantage.

Furthermore, customers are more likely to be loyal if there is a customer-oriented climate (Clark, 1997). This climate consists of identifying genuine customers' needs and design products to meet those needs (Bridgewater, 2001). Especially, the valued customers that require truly personalized services, by knowing what they want and do not want and then ensuring that they get what they want (Szymigin and Carrigan, 2001).

Customer loyalty is difficult to be defined; generally there are three distinctive approaches in order to measure loyalty. First, the behavioral measurements which consider consistent and repetitious purchase behavior as an indicator of loyalty. However, repeat purchases are not always the result of a psychological commitment toward the brand (Tepici, 1999). Second, the attitudinal measurements which reflect the emotional and psychological attachments inherent in loyalty. Thus, the attitudinal measurements are concerned with the sense of loyalty, engagement and allegiance. Third, the composite measurements of loyalty include the first two dimensions (Pritchard and Howard, 1997; Hunter, 1998; Wong et al., 1999). Therefore, the use of both attitude and behavior in a loyalty definition increases the predictive power of loyalty (Pitchard and Howard, 1997).

This study, in order to measure customer loyalty, has combined the first two dimensions which represent the composite perspective that defines loyal customers as customers who hold favorable attitudes toward the company, commit to repurchase the product/service and recommend the product to others (Bowen and Chen, 2001).

7 RESEARCH METHODOLOGY

7.1 Research objectives

The research has three main objectives:

- Measuring the CRM in the banking sector in Egypt.
- Identifying the relationship between CRM and customer satisfaction.
- Measuring the effect of the cognitive and affective components in customer satisfaction on the customer loyalty from the composite perspective.

In addressing these objectives in the Egyptian Banking Sector, the perspective of bankers and customers will be taken into account.

7.2 Research hypotheses

To give effect to the research objectives, a number of hypotheses were formulated, as follows

H1: The CRM is associated with customer satisfaction

H1a: The key customer focus is associated with customer satisfaction

H1b: The CRM organization is associated with customer satisfaction

H1c: The technology- based CRM is associated with customer satisfaction

H1d: The knowledge management is associated with customer satisfaction

H2: customer satisfaction will have a direct positive effect on customer loyalty

H2a: The cognitive component will have a direct positive effect on customer loyalty

H2b: The affective component will have a direct positive effect on customer loyalty

7.3 Sampling and Data Collection

This research study is descriptive in nature aiming to measure the CRM in the Egyptian Banking sector. In addition, it will test hypotheses to provide an enhanced understanding of the relationship that may exist between (CRM and customer satisfaction) and also to measure the effect that may exist between (customer satisfaction and customer loyalty).

To cover the different segments in the Egyptian Banking Sector and to obtain accurate results, a stratified random sample was drawn. Three strata have been constituted from three different banking groups (Group 1: Egyptian banks, Group 2: Multinational and Regional banks and Group 3: Egyptian banks with special nature).

Group 1 includes National Bank of Egypt (NBE), Commercial International Bank (CIB) and Arab African International Bank (AAIB).

Group 2 includes National Société Générale Bank (NSGB), Hong Kong and Shanghai Banking Corporation (HSBC) and Ahli United Bank.

Group 3 includes Faisal Islamic Bank, Housing and development Bank and Export development bank. All these banks represent more than 50 % market share of total Egyptian Banking Sector customers' deposits. Since total Egyptian banking sector customer deposits amounted EGP 810 Bn (CBE report, 2009) and total samples customers deposits amounted EGP 434.2Bn. From each banking group, a random sample of employees and another random sample of customers were drawn.

The measurement instrument consisted of two different structured questionnaires, the first one "employee questionnaire" was structured and developed in English and translated into Arabic to measure CRM components as applied in their banks in order to verify areas where specific improvements are needed and to pinpoint aspects of the bank's CRM that necessitate enhancement. A pilot survey was conducted among forty five employees (5employees/bank) in the selected banks at different hierarchal levels to measure the reliability of scales and then the questionnaire was distributed among a sample of 200 employees that have been chosen at different hierarchical levels to fulfill the required questions. A satisfactory response rate of 90% was achieved, as 180 questionnaires were usable for analysis. Approximately 20 questionnaires / bank. At the same time, another structured questionnaire "customer questionnaire" was developed, translated and piloted among forty five banking customers (5customers/bank) to measure the reliability of scales. It was used to measure the level of customer satisfaction and the level of customer loyalty in order to improve the relationships between the banks and its customers in the Egyptian Banking Sector. The questionnaire was distributed among a sample of 300 banking customers that have been chosen from the selected nine banks in order to measure the level of customer satisfaction and loyalty towards their banks. The questionnaire has been distributed and collected among the banking customers. A satisfactory response rate of 90% was achieved, as 270 questionnaires were usable for analysis. Approximately 30 questionnaires / bank.

8 DATA ANALYSIS

The quantitative data analysis consists of the analysis of the questionnaires by using the SPSS (Statistical Package for Social Science), version eighteen. The statistical techniques include the

reliability analysis (Cronbach's alpha) to measure the stability and consistency with which the instrument measures the concept, the correlation analysis to measure the strength and direction of the relationship or association between CRM and customer satisfaction and finally the regression analysis to measure the cause and effect relationship between customer satisfaction and customer loyalty and also to indicate the significance of the model.

9 RESULTS

9.1 The reliability assessment

Reliability of the scales used in the research was calculated using Cronbach's alpha coefficient. All Cronbach alphas' values are higher than 0.7 indicating the stability and consistency with which the instrument measures the concept.

The employee questionnaire	# of items	Reliability (Cronbach's Alpha Coefficient)
Key customer focus	5	0.805
CRM organization	6	0.785
Technology-based CRM	7	0.843
Knowledge Management	10	0.935
Total	28	0.942

Table 1: Reliability of scales

The customer questionnaire	# of items	Reliability (Cronbach's Alpha Coefficient)	
Cognitive component	24	0.927	
Affective component	8	0.940	
Total	32	0.952	
Customer loyalty	17	0.944	

Table 2: Reliability of scales (continue)

10 TESTING HYPOTHESES

The first research hypothesis:

 H_1 : The CRM is associated with customer satisfaction.

To test this hypothesis, the Spearman correlation coefficient (r) was calculated, which measures the direction and strength of the linear relation between CRM and customer satisfaction. The value of Spearman was r=0.675 with significance level= 0.03 which supports the first hypothesis of a significant positive linear relation between the CRM and customer satisfaction.

To test the following 4 sub hypotheses:

 $H_{1_{\pi}}$: The key customer focus is associated with customer satisfaction

 $H_{1_{\infty}}$: CRM organization is associated with customer satisfaction

 H_{1} : Technology-based CRM is associated with customer satisfaction

 H_{1_d} : Knowledge management is associated with customer satisfaction

The Spearman coefficients were calculated and their significance levels are shown in Table 3.

Variables	Spearman coefficients	Sig.
Key customer focus with customer satisfaction	0.743	0.022
CRM organization with customer satisfaction	0.565	0.113
Technology-based CRM with customer satisfaction	0.201	0.603
Knowledge management with customer satisfaction	0.515	0.156

Table 3: The Spearman correlation coefficients and the corresponding significance levels between each CRM components and customer satisfaction

From the above table and the results of testing the main first hypothesis, it has been found that the CRM 4 components complete each other and work altogether in their relation with customer satisfaction. The following Table of CRM and customer satisfaction ranks can be shown as follows.

Banking groups	CRM	Customer satisfaction
Group 2	3.82	4.25
Group 1	3.54	4
Group 3	2.71	3.25

Table 4: Shows an ascending ranking for the banking groups according to their level of CRM and customer satisfaction

From the above table, it has been found that group 2 (Multinational and Regional banks) has the highest level of CRM and the highest level of customer satisfaction. While group 3 (Egyptian banks with special nature) has the lowest level of CRM and the lowest level of customer satisfaction.

Note:

When the data is ordinal, as it is in this study, it is better to use the median instead of the mean and Spearman correlation coefficient instead of Pearson correlation coefficient.

The second research hypothesis:

 H_2 : Customer satisfaction will have a direct positive effect on customer loyalty.

To test this hypothesis, the regression analysis of the customer loyalty on the customer satisfaction was used. However, due to the strong effect of banking groups on the customer loyalty, we added it to the regression model after expressing it through the following two dummy variables:

$$Dum_G2 = \begin{cases} 1 & \textit{for group } 2 \\ 0 & \textit{for group } 1 \textit{ or group } 3 \end{cases}$$

$$Dum_G3 = \begin{cases} 1 & for group 3 \\ 0 & for group 1 or group 2 \end{cases}$$

The results are shown as follows:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.666(a)	.443	.437	.63627

a Predictors: (Constant), Dum_G3, SATISF, Dum_G2

Table 5: Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	85.798	3	28.599	70.643	.000(a)
	Residual	107.688	266	.405		
	Total	193.485	269			

a Predictors: (Constant), Dum_G3, SATISF, Dum_G2 b Dependent Variable: LOYALTY

Table 6: ANOVA(b)

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		В	Std. Error	Beta	В	Std. Error
1	(Constant)	.470	.214		2.193	.029
	SATISF	.721	.053	.623	13.566	.000
	Dum_G2	.282	.095	.157	2.971	.003
	Dum_G3	.594	.095	.331	6.248	.000

a Dependent Variable: LOYALTY

Table 7: Coefficients (a)

Loyalty=0.470+0.282 Dum G2+0.594 Dum G3+0.721 satisfaction (Equation 1)

Through this equation, the estimated regression equation for each bank group is as follows:

For the 1st group (Egyptian banks):

For the 2nd group (Multinational and Regional banks):

For the 3rd group (Egyptian banks with special nature):

- From the ANOVA Table, it has been found that the whole model is significant, where the sig. =0.000
- From the Coefficient Table, it has been found that each regression coefficient is significant, where the sig. =0.029, 0.000, 0.003 and 0.000 respectively.
- From the model summary, it has been found that R²=0.44, which means that 44% of the change in customer loyalty is explained by customer satisfaction and the other 56% is due to other independent variables not included in the model and the random error.
- The positivity of satisfaction regression coefficient (0.72) and its significance (0.000) supports the second hypothesis.
- -From Equation 1 and its sub equations, it has been found that customer satisfaction of those who deal with banks in group 3 has more effect on customer loyalty.

To test the following 2 sub hypotheses:

 $H_{2_{\overline{a}}}$: The cognitive component will have a direct positive effect on customer loyalty.

 $H_{2_{\overline{b}}}$: The affective component will have a direct positive effect on customer loyalty.

The regression analysis and the Dummy variables were used to test the sub hypotheses.

*For the cognitive component of customer satisfaction, the following results are shown as follows:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.601(a)	.361	.354	.68150

a Predictors: (Constant), COGNITIVE, Dum G2, Dum G3

Table 8: Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.943	3	23.314	50.198	.000(a)
	Residual	123.542	266	.464		
	Total	193.485	269			

a Predictors: (Constant), COGNITIVE, Dum_G2, Dum_G3

b Dependent Variable: LOYALTY

Table 9: ANOVA(b)

	-	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		В	Std. Error	Beta	В	Std. Error
1	(Constant)	.907	.219		4.139	.000
	Dum_G2	.305	.102	.170	3.000	.003
	Dum_G3	.635	.102	.354	6.210	.000
	COGNITIV E	.609	.054	.555	11.237	.000

a Dependent Variable: LOYALTY

Table 10: Coefficients(a)

Loyalty= 0.907 + 0.305Dum_G2 + 0.635 Dum_G3 + 0.609 cognitive (Equation 2)

Through this equation, the estimated regression equation for each bank group is shown as follows:

For the 1st group:

Loyalty=0.907 + 0.609 cognitive (Equation A)

For the 2nd group:

Loyalty=0.907 + 0.305 + 0.609 cognitive (Equation B)

For the 3rd group:

Loyalty=0.907 + 0.635 + 0.609 cognitive (Equation C)

- From the ANOVA Table, it has been found that the whole model is significant, where the sig. =0.000

- From the Coefficient Table, it has been found that each regression coefficient is significant, where the sig. =0.000, 0.003, 0.000 and 0.000 respectively.
- From the model summary Table, it has been found that R²=0.36, which means that 36% of the change in customer loyalty is explained by the cognitive component of customer satisfaction and the other 64% is due to other independent variables not included in the model and the random error.
- The positivity of cognitive regression coefficient (0.609) and its significance (0.000) supports this sub hypothesis.
- -From Equation 2 and its sub equations, it has been found that the cognitive component of customer satisfaction of those who deal with banks in group 3 has more effect on customer loyalty.
- * For the affective component of customer satisfaction, the following results are shown as follows:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.731(a)	.535	.529	.58177

a Predictors: (Constant), AFFECTIVE, Dum_G2, Dum_G3

Table 11: Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.455	3	34.485	101.888	.000(a)
	Residual	90.030	266	.338		
	Total	193.485	269			

a Predictors: (Constant), AFFECTIVE, Dum_G2, Dum_G3

b Dependent Variable: LOYALTY

Table 12: ANOVA(b)

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		В	Std. Error	Beta	В	Std. Error
1	(Constant)	.369	.184		2.007	.046
	Dum_G2	.195	.087	.109	2.248	.025
	Dum_G3	.393	.087	.219	4.515	.000
	AFFECTIV E	.743	.045	.692	16.501	.000

a Dependent Variable: LOYALTY

Table 13: Coefficients(a)

Loyalty= 0.369 + 0.195Dum_G2 + 0.393 Dum_G3 + 0.743 affective (Equation 3)

Through this equation, the estimated regression equation for each bank group is shown as follows:

For the 1st group:

Loyalty=0.369 + 0.743 affective

(Equation A)

For the 2nd group:

Loyalty=
$$0.369 + 0.195 + 0.743$$
 affective (Equation B)

For the 3rd group:

Loyalty=
$$0.369 + 0.393 + 0.743$$
 affective (Equation C)

- From the ANOVA Table, it has been found that the whole model is significant, where the sig. =0.000
- From the Coefficient Table, it has been found that each regression coefficient is significant, where the sig. =0.046, 0.025, 0.000 and 0.000 respectively.
- From the model summary Table, it has been found that R²=0.53, which means that 53% of the change in customer loyalty is explained by the affective component of customer satisfaction and the other 47% is due to other independent variables not included in the model and the random error.
- The positivity of affective regression coefficient (0.743) and its significance (0.000) supports this sub hypothesis.
- From Equation 3 and its sub equations, it has been found that the affective component of customer satisfaction of those who deal with banks in group 3 has more effect on customer loyalty.
- Finally, it has been concluded that the affective component has more effect than the cognitive component where $R^2=0.53$ for the affective component and the $R^2=0.36$ for the cognitive component.

11 DISCUSSION

11.1 Implications of the study

This study has confirmed the importance of studying and understanding the CRM, for the purpose of improving it in the Egyptian Banking Sector in order to satisfy customers and to obtain their loyalty. Thus, the results of the present study have a number of meaningful implications that could help. First, the implementation of the CRM components may serve training needs by assisting human resource managers to develop appropriate training programs that can improve the staff's understanding of the activities involved in implementing CRM. Second, top management may use this framework to develop relevant and effective marketing strategies and tactics. Third, Functional managers can also use the framework to set clear policies that develop CRM as a necessary and essential business process rather than a burden on the staff. Fourth, Changing the corporate culture and reward system accordingly reinforce behavior that creates strong CRM. Fifth, the non financial performance measures appear to have a crucial role in any organization's success that could be done by gaining customer loyalty. Also, bank management ought to satisfy their customers and based on the results of this study, this can be done by focusing more on the effective component of customer satisfaction that serves as a better predictor of customer loyalty than the cognitive component.

11.2 Recommendations for banks

The analysis of the questionnaires indicated the vital role of CRM in the Egyptian Banking Sector. As a result, banks can improve the effectiveness of their CRM by identifying the most profitable customers by ranking them according to their value and then differentiating them based on what they need from the bank. After identifying the customers' needs, the bank has to develop unique strategies to focus on one to one marketing because it adds unique function of acquiring, increasing and retaining valuable customers.

In the bank structure, each employee should work effectively as a team member to support each other in order to serve the customers in a better way and to enhance the CRM. In addition, the employees

have to be well educated and well trained about the bank's products, policies, procedures, rules and regulations.

In the knowledge management, it is crucial to set up an ongoing dialogue between the customers and the employees to learn more about the customers' interests, needs and priorities. By acting on what the employee has learned about individual customers and by sharing the information among departments, the bank will be able to offer customized products/services in response to a particular customer desires.

In the technology which facilitates the decision making process, the bank should establish a central data warehouse for new and old data. In implementing the CRM, it is better to use specialized CRM software to help the bank's employees in segmenting customers and in cross-selling bank's products/services.

Finally, in order to achieve customer loyalty in the Banking Sector in Egypt. The employees should treat customers like royalty such as: address customers by name and title, maintain eye contact, listen attentively to customers, be punctual and be ready to serve customers on time, make achievable promises and always keep smiling.

11.3 Limitations and future direction

Since this study was conducted in the Egyptian Banking Sector, the replication of this study could be done within other services (e.g., insurance company, hospitals, airlines, hotels and universities) because the applicability of the CRM may vary from one service to another.

Moreover, cross-sectional data were used in this study. Future studies should collect time-series data for testing the relationship between CRM and customer satisfaction and measures the effect of customer satisfaction on customer loyalty.

Furthermore, in this study data were collected by the key informant approach in order to measure the applicability of the CRM in the Egyptian Banking Sector. This approach consists of managers as key informants that provide adequate sources for reliable and valid data (Tan and Litschert, 1994). However, the information by a firm is not the only source of information about the level of CRM. Clearly, it is important to contrast a firm's degree of CRM as assessed by internal information (e.g. managers' responses to questionnaire as it is done in this study) with the firm's level of CRM as perceived by its customers, competitors and distributors. This is possibly another challenging area of future research in CRM.

12 CONCLUSION

In recent decades we are being witnesses of an important transition from an industrial society to an information one. According to many authors, this transformation, fostered by information revolution, is comparable to previous revolutions because of the important economic and social effects derived from it. This revolution involves the reformulation of the key resources for the companies. If in the Industrial Revolution the emphasis was on the tangible assets such as equipment, raw materials, human resources, energy, etc., in the Digital Revolution intangible resources such as brand image, customer satisfaction, customer loyalty, market knowledge, know-how, etc. are the stars. Nowadays, it is clear that the core of the resources on which the management lies in and whose efficient combination is translated into benefits, has broadened including another kind of issues under the

umbrella of "intangible", "intellectual" or "invisible". These assets can provide the company with an important competitive advantage, guiding its success.

This change in the focus regarding to the importance of productive resources has been followed by an evolution in the business performance measurement orientation. Traditionally marketing performance measurement was based on the information provided by Accounting Department, derived from balance sheet and income statement. Those measurement systems only had into account tangible measures such as sales, gross margin, percent value from new products and services (Crosby and Johnson, 2001). In the 80s market share gained great popularity as a strong predictor of cash flow and profitability (e.g. Buzzel and Gale, 1987).

During the 90s and the era after, customers are viewed as assets (Rust *et al.*, 2000) or equity of the firm (Blattberg and Deighton, 1996; Blattberg and Thomas, 2001; Rust *et al.*, 2000). This customer-centered viewpoint is reflected in the concepts and metrics that drive marketing management, so a measurement literature arises (Berger and Nasr, 1998; Gupta *et al.*, 2002; Jain and Singh, 2002; Mulhern, 1999; Reinartz and Kumar, 2000; Rust *et al.*, 2003). Furthermore, the relationship between non-financial measures such as customer satisfaction (e.g. Anderson *et al.*, 1994; Ittner and Larcker, 1998; Szymaski and Henard, 2001), customer loyalty (Dick and Basu, 1994), brand equity (Keller, 1998), employee equity (Amir and Lev, 1996; Srivastava *et al.*, 1999) and profitability was proved, and subsequently this type of measures started to have a great deployment.

Thus, in today's market, customers are the key to maintain a competitive advantage. Banking institutions should be aware of who their customers are, which customer group produce higher profits and what factors keep them happy and influence their loyalty. Customers affect a bank's success; therefore the winners will be those institutions that succeed in managing their relationship with customers in an effective manner and in quick time (Mylonakis, 2009). Thus, the best weapons of banking institutions within a strongly competitive environment is the establishment of a customer-centered attitude with the implementation of CRM and the recognition of customers' strategic role in all banking activities. The importance of using CRM lies as personalized customer approach, and the understanding in advance of customer needs constitute the main criteria for achieving a competitive advantage in the banking market. The Egyptian Banking Sector has adopted the CRM, as banks have realized the need to maintain their customers' base and to better use their resources in order to promote their products and services.

This study focus on the importance of CRM as a multidimensional construct and its effect on customer loyalty through customer satisfaction. This multidimensional construct consists of key customer focus, CRM organization, knowledge management and technology based-CRM because the failure of CRM implementations is a problem of incompleteness. As a result, the level of CRM implementation and the applicability of its components differ from one bank to another. Concerning the results of the employee questionnaire, it indicated that the CRM components were positively associated with customer satisfaction and that all the four CRM components should work altogether not separately. In addition, it has been found that group 2 which is the Multinational and Regional banks have the highest level of CRM and customer satisfaction. For the customer questionnaire, it was found that the customer satisfaction has a positive effect on customer loyalty, specially the affective component of customer satisfaction which serves as a better predictor of customer loyalty rather than the cognitive component.

Finally, any bank committed to CRM must continuously invest in its relationship with its customers because this is the main competitive advantage remaining to any bank.

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