TOWARD A SUCCESSFUL CRM IMPLEMENTATION: AN INTEGRATED MODEL

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ABSTRACT

In recent years, Customer Relationship Management (CRM) has been the favourable theme for numerous studies and reports. Yet, there is a lack of systematic empirical evidence regarding the critical success factors for the CRM implementation, the activities that are affected by the use of the CRM programs, and their consequent performance outcomes. In this article, we document the role of the CRM programs in the Egyptian banking sector and identify marketing activities that are affected by the CRM usage. Using a sample of 159 Egyptian banks that utilize a CRM system, we found a substantial positive effect of CRM usage on relationships effectiveness and success. The results of this study have major implications for marketing people, as they suggest the notion that the CRM critical success factors (CSFs) should be implemented holistically rather than piecemeal to get the full potential of the CRM. The findings also stress the central role of the customer service people in the successful implementation of the CRM programs within banks.

1. INTRODUCTION

Customer Relationship Management (CRM) is heralded by some as the new paradigm of marketing (see, for example, Avlonitis and Panagopoulos, 2005; Bhaskar, 2004; Chan, 2005; Chen and Popovich, 2003; Karakostasa *et al.*, 2004; Lenskold, 2004; McGovern and Panaro,

2004; Payne and Frow, 2004; Zablah *et al.*, 2004). The recent rush of publications in the area may give rise to the impression that CRM can be applied in any context, yet there is little empirical evidence to support this.

The idea of CRM is that it helps businesses use technology and human resources to gain insight into the behaviour of customers and the value of those customers. If it works as hoped, a business can provide better customer service, increase customer satisfaction and help sales staff close deals faster, to name a few of its benefits (Cho *et al.*, 2002; Gupta and Shukla, 2001; Heygate, 1999; Krueger, 2000). However, this doesn't happen by imply buying software and installing it. For CRM to be truly effective, an organization must first decide what kind of customer information it is looking for and it must decide what it intends to do with that information.

Undoubtedly, traditional marketing approaches have tended to utilise macro and micro segmentation techniques. However, given the unpredictability of customer buying behaviour, traditional marketing,

especially in information-rich sectors like banks, is fast giving way to one-to-one marketing; its aim is to individualise the marketing effort. CRM was invented because customers differ in their preferences and purchasing habits. If all customers were alike, there would be little need for CRM. Mass marketing and mass communications would work just fine (McKim and Hughes, 2000). CRM is becoming a priority due to very powerful economic, technological, and social forces that have effectively made the traditional business models irrelevant in the contemporary business and technological environment (Karkostas et al., 2004).

The focus of CRM increased companies' abilities to understand the customers' current needs, what they have done in the past, and what they plan to do in the future to meet their own objectives. The goal is to improve the customer's experience of how they interact, which hopefully, in turn, creates more satisfaction, which yields more loyalty, which, ideally, yields more sales of products and services. The central database within CRM is available for everybody in the enterprise. By accessing the central customer database, everybody in the enterprise can know each

individual customer, in order to achieve that "experience", so they will not get lost (Xu *et al.*, 2002).

However, although the positive impact of CRM on organizations has been addressed in many studies (Avlonitis and Panagopoulos, 2005; Hart et al., 2004; Kennedy and King, 2004;Tellefsen and Thomas, 2005; Xu et al., 2002) and there have been a number of attempts to identify the CSFs for CRM implementation (Abdullah *et al.*, 2000; Fjermestad *et al.*, 2003; Jutla *et al.*, 2001; Ocker. and Mudambi, 2003) few of them can provide strong theoretical or statistical support for the existence of these CSFs. This may be because of the exploratory nature of these studies. As such they deal more with the potential than the reality of Internet's impact. Palmer *et al.* (2005) state that researchers could seek to develop more knowledge on relationship quality and the relations between relationship quality and customer retention. Hence, Full-scale research conducted in a highly scientific manner must be undertaken.

To fill this gap various articles and empirical research on marketing and IT were studied. The findings of these studies identified three types of factors that have a direct impact on successful implementation of the

CRM. Model, definitions, techniques and discussion on these factors and how could they affect the relationship effectiveness and marketing objectives are described in the following sections. Further discussion on each category is also underpinned.

2. OBJECTIVES OF THE PAPER

The present paper pursues the following objectives:

- To identify the critical success factors for CRM implementation,
- To develop and clarify a conceptual model integrating CRM constructs, and its consequences on relationships effectiveness and relationships success and,
- To specify and test hypothesised relationships derived from the conceptual framework.

In the following sections, first the development of the conceptual model and the hypotheses of the study are presented. Next, the methodology of the study is discussed followed by the analysis and results. More specifically, the conceptual model is tested using path analysis, with the AMOS structural equation modeling package, and data collected by mail survey of 159 banks. Finally, the conclusions and their implications are discussed.

3. Literature review, conceptual model and hypothesized relationships

The conceptual model of this study is drawn from two streams of research: IT literature, and current relationship marketing theory. Figure 1 shows the conceptual model with the hypothesized linkages between the constructs. These linkages deal with three sets of hypotheses:

1. The effect of the CRM critical success factors as expressed by the *strategic factors, the tactical factors* and the *operational factors,* on relationship effectiveness, *as* expressed by *customer relationships quality* and *transactions quality*..
2. The relationships between the *CRM critical success factors and customer retention.*
3. The effect of the relationship *effectiveness* on *customer retention*

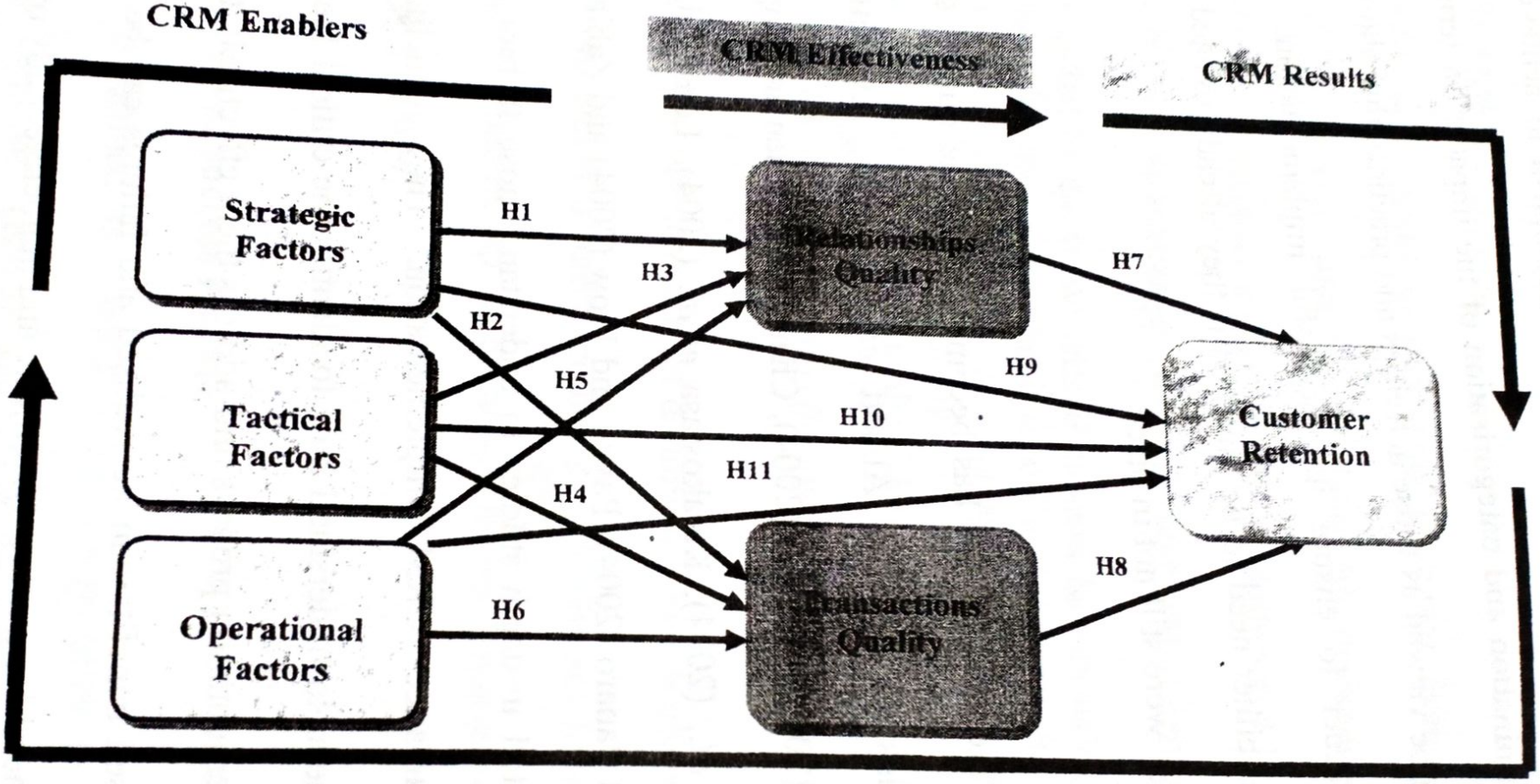
The next section provides a brief definition for each construct, followed by the development of the hypotheses. The relevant literature for each hypothesized relationship is discussed in the appropriate hypotheses development section.

3.1 CRM Critical Success Factors

CSFs can be defined as " areas where things must go right for the business to flourish" (Butler and Fitzgerald, 1999; Digman, 1990; Guynes and Vanecek, 1996). Oakland (1995) viewed them as those

critical areas which the organisation must accomplish to achieve the mission by examination and categorisation of the impacts. In terms of CRM, they can be viewed as those activities and practices that should be addressed in order to ensure its successful implementation. These practices would either need to be nurtured if they already existed or be developed if they were still not in place.

Based on the literature, CRM has become one of the critical driving forces for business success. Abbott *et al.*, 2001, Avlonitis and Panagopoulos (2005), Bhaskar (2004), Chan (2005), Chen and Popovich, 2003, Hart *et al.*, (2004), Karakostasa *et al.* (2004), Lenskold, 2004, McGovern and Panaro (2004), Payne and Frow (2004) and Zablah *et al.* (2004) conducted in-depth studies to understand those factors that are needed to enhance CRM implementation. They conclude that organisations need to understand how to identify the critical factors that affect the implementation process and address them effectively to ensure that the promised benefits can be realised and failures can be avoided. Therefore, the need for a more systematic and deliberate study on



Proposed Generic Model for CRM Implementation

the critical success factors (CSFs) for implementing CRM is crucial. Ignorance and oversight of the necessary important factors will likely hinder an organisation's effort to realise its full benefit.

In fact, successful CRM system implementation is complex and difficult. Implementing a CRM package system cause vast change that needs to be managed carefully to get the full advantage of CRM software. It is really mistake to view CRM project implementation as an IT project (Chen and Popovich, 2003; Davenport and Short, 1990; Johnson, 2004; McKenzie 2001; Porter, 1987).

However, the literature review undertaken revealed a lack of research with regard to some critical factors of CRM implementation (E.g. Software Selection, Benchmarking), and this could be due to the fact that these factors are related to any information system project, not particularly to CRM system implementation only. Therefore, this paper proposes a holistic framework for CRM system implementation based on an extensive review of the factors and essential elements that contribute to success of CRM project implementation.

A broad range of factors that can influence the success of CRM implementation has been mentioned in the literature. For example, Cho *et al*. (2002) noted that an effective *CRM strategy* has a critical role to play in the CRM systems implementation if the appropriate *training* is provided. However *top management team's support* is one of the keys to integrate the *legacy systems* with the CRM plan (Pushmann and Alt, 2001). Bose (2002) agreed that correct planning for *training* sessions, *management support* and *staff awareness programmes* are important to CRM implementation.

Central to this literature is considerable discussion on the importance of the human dimension, that is, employee involvement and the role of technology as an enabler, not the driver of CRM implementation (Hart et al., 2004; Jutla *et al*., 2001). Al-Mashari and Zairi (2000) also added the *organizational culture* factor to the effective implementation of the CRM. Umashankar (2001) showed the importance of *CRM Software Selection* as necessary to fulfil obligations in CRM–based marketing. *Realistic CRM Implementation Schedule, Benchmarking* and *Customer*

Satisfaction are critical factors for CRM successful implementation (Bose, 2002; Cho *et al*., 2002; Ocker and Mudambi, 2003).

Dubrovski (2001) indicated that successful CRM implementation requires an enterprise-wide *integration* of processes and a change in management focus and business performance metrics. Chan (2005) agreed that an integrated *business model* that ties together business organizations, processes, information and technologies along the entire value chain is critical to the success of CRM strategies. However, the CSFs for CRM will be reviewed and their possible benefits highlighted.

3.2 CRM Effectiveness

CRM, from a marketing perspective, identifies and targets best customers based on frequency and monetary scoring. It helps manage marketing campaigns with clear goals and quantifiable objectives. It also creates and manages solid sales leads for field and telesales representatives. Marketing and cross-selling opportunities are also increased. The enabled tight and accurate targeting and one-to-one marketing increases returns on marketing investments. CRM solutions also add more valuable

knowledge gained direçtly from customer interaction. This knowledge leads to enhanced relations and improved transaction.

However, CRM effectiveness shows the importance of employee's acceptance and that the quality and substance of responses sent out by each individual representative should be looked at. One has to keep in mind that the evaluation of results allows companies to continuously refine and improve efforts to optimise relationships (Umashankar, 2001). The organization must balance the metric of finding a cost-effective CRM solution with customer satisfaction (Dubrovski, 2001; El Sawy, 1997). However, in this study, we specify CRM effectiveness as high quality relationships resulted through the use of the CRM in certain activities, namely, customer relations and customer transactions.

3.3 CRM Success

Generally speaking, there is no clear definition of a successful CRM project. A successful CRM implementation is one that succeeds in meeting the business objectives. These objectives can be customer acquisition, customer retention, customer satisfaction, customer loyalty,

better customer service or any other objectives that are set by the organization. Customer relationship management includes the delivery of sustained or increasing levels of satisfaction, and the retention of customers by the maintenance and promotion of the relationship (Palmer, et al., 2005). Light (2003) states that trying to compete for new customers is more resource intensive than keeping existing ones. Therefore, organisations that recognised this believed that improvements in CRM effectiveness would keep customers happy.

Research shows that a 5 per cent increase in customer retention can increase the company profits with 20-100 per cent (Reichheld et al., 2000). However, customer retention that has been suggested by Jutla et al. (2001) is used to measure the CRM success in this research. However, customer retention that has been suggested by Jutla et al. (2001) is used to measure the CRM success in this research.

3.4 HYPOTHESES

3.4.1 The relationship between the CRM CSFs and CRM Effectiveness

This study attempts to investigate the effects of the CRM critical success factors on CRM effectiveness (See Figure 1). Thus, it makes an attempt to operationalise the CSFs, not only in terms of the importance of each factor (means) but also in terms of relative importance that is given to each factor. In this way, those factors may be classified as a strategic factors which require a significantly change in the manner of which business is being done (Turban *et al.*, 1999). Those factors include; top management support, organisational culture, developing a clear CRM strategy, clear project vision/scope and benchmarking. So, it is hypothesized that:

H1: The *strategic factors* examined in this study will have a positive impact on the quality of customer *relationships*.
H2: The *strategic factors* examined in this study will have a positive impact on the quality of *customer transactions*.

The next group of factors can be classified as tactical factors. At the tactical level the medium term planning of CRM specific organisational issues are largely concerned, where the decision are made by middle

managers (Turban et al., 1999). However, those factors include employees' acceptance, CRM software selection, integration with other systems and training. Therefore the following hypotheses are offered:

H3: The *tactical factors* examined in this study will have a positive impact on the quality of customer *relationships*.
H4: The *tactical factors* examined in this study will have a positive impact on the quality of *customer transactions*.

At the other end of the list (i.e., the least important or less critical) were the Realistic CRM Implementation Schedule, Enterprise performance metrics for CRM, Personalisation, Customer Orientation and Data mining could come in at a later stage in the CRM implementation, when many of the internal improvements had been accomplished, but involvement is definitely needed. Thus, the following hypotheses are proposed:

H5: The *operational factors* examined in this study will have a positive impact on the quality of *customer relationships*.
H6: The *operational factors* examined in this study will have a positive impact on the quality of *customer transactions*.

3.4.2 Effects of CRM Effectiveness on CRM Success

There is only one valid definition of business purpose: to create and retain a customer. It is the customer who determines what the business is

(Drucker, 1954). This study identifies several mediating variables, CRM effectiveness, that influence the relationship between CRM CSFs and CRM Success. For example, many researchers have emphasised the role of relationship quality (*Enhanced Relations*), transactions quality (*Improved Transactions*) as an intangible aspect of CRM effectiveness, and dimensions such as *customer retention* to measure the CRM success (Dorsch et al., 1998; Wang et al., 2004). However, there is no consensus on which dimensions make up relationship effectiveness. However, this study considered *relationship quality* and *transactions quality* as indicators to build and maintain a long-term relationship. High quality customer relations and transactions means that fewer customers will defect, and the long-term effects on firm performance can be significant. Reichheld and Teal (1996) showed that a 5 per cent increase in customer retention could have a 30- 95 per cent effect on customer net present value and a similar effect on corporate profits. The following hypotheses are therefore proposed:

H7: The *relationships quality* has a direct and positive effect on CRM success (*Customer Retention*).
H8: *transactions quality* has a direct and positive effect on CRM success (*Customer Retention*).

3.4.3 Effects of CRM CSFs on CRM Success

The relationships between strategic factors, tactical factors, operational factors and CRM success (customer retention) have been addressed in a number of studies (Avlonitis et al., 2005; Bose, 2002; Chan, 2005; Chen and Karen, 2003; Kennedy and King, 2004; Zablah et al., 2004). Chen and Karen (2003), for example, state that managing customer relationships effectively and efficiently, boosts customer satisfaction and retention rates. They further mentioned that getting to "know" each customer through data mining techniques and a customer-centric business strategy helps the organization to proactively and consistently offer (and sell) more products and services for improved customer retention and loyalty over longer periods of time. Thus, we are examining the indirect effects of the use of the CRM on the relationship success directly and through its improvements of relationship quality. Accordingly, we put forward the following hypotheses:

H9: The *strategically factors* examined in this study will have a positive impact on CRM success (*Customer Retention*).
H10: The *tactical factors* examined in this study will have a positive impact on CRM success (*Customer Retention*).
H11: The *operational factors* examined in this study will have a positive impact on CRM success (*Customer Retention*).

4. Research methodology

4.1. Research design

This research aimed to develop a generic model for CRM implementation. After reviewing the literature, arguments are summarised into an integrated CRM model, whose validity and value were tested by gathering data from Egyptian banks that utilize a CRM system. Especially, based on the model, the study investigated:

- The CRM success implementation factors as considered by bank managers;
- CRM consequences on customer relationship effectiveness and relationship success.

4.2. Data collection

The generalisability of the study relied on the representativeness of the respondents. Therefore, a representative selection of the Egyptian banks was made from a database of banks that are registered with the central bank of Egypt. The selection included local banks, foreign banks and joint banks. All the selected banks had implemented the CRM system at least 1 year ago. A research packet, which contained a covering letter and an anonymous [self-administering] questionnaire, was mailed to the head of marketing departments; customer services officers or customer

relationship managers that were users of the CRM system [312 in total]. This procedure resulted in 159 useful responses or a 50.96 % overall response rate.

The sample can be described as follows: a majority of the respondents were involved on CRM implementation [69.81%], most were younger than 40 years old [60%], and a few respondent [approximately 5.7 %] were more than 50 years old. With respect to years of working with CRM, approximately 66% of the sample had used CRM for less than 2 yeas, and 34% had used it between 2 and 4 years. In terms of ownership (35.7%) of the respondents were members of local banks, 28.5% were members of joint banks and (35.8%) were members of foreign banks. Finally, more than half of the respondents hold the position of customer service manager in their banks (52.8%). On the other hand, 30.2% hold the position of marketing manager, 9.4% hold the position of sales manger and 7.5% are IT manager.

To ensure that the valid responses were representatives of the larger population, a non-response bias test was used to compare the early and

late respondents. χ^2 tests show no significant difference between the two groups of respondents at the 5% significance level, implying that a non-response bias is not a concern.

4.3. Research instrument development—Measures

The development of the research instrument was based mainly on new scales, because we could not identify any past studies directly addressing all of the issues in this research. However, and where possible, we used validated measures that have been previously applied. The constructs, scale items and factor loadings obtained from exploratory factor analysis are presented on the data analysis section.

Two consecutive rounds of pre-testing were conducted in order to insure that respondents could understand the measurement scales used in the study: First, the questionnaire was reviewed by three academic researchers experienced in questionnaire design and next, the questionnaire was piloted with two CRM experts known to the researchers. The pilot took the form of an interview where the participants were first handed a copy of the questionnaire and asked to

complete it and then discuss any comments or questions they had. The outcome of the pre-testing process was a slight modification and alteration of the existing scales, in light of the scales context under investigation.

5. Analysis and Results

First, the psychometric properties of the constructs were assessed by calculating the Cronbach's alpha reliability coefficient and the items-to-total correlation (Nunnally & Bernstein, 1994). These coefficients are represented for each of the constructs in (Table I). All scales have reliability coefficients ranging from 0.7409 to 0.9637, which exceed the cut-off level of 0.60 set for basic research (Nunally, 1978).

Table I: Measure of constructs' reliability

Constructs	Number of Items	Alpha
Strategical Factors[a]	5	.8685
Tactical Factors[a]	4	.9254
Operational factors[a]	5	.9637
Relationships Quality[b]	4	.7409
Transactions Quality[b]	4	.8567
Customer Retention[c]	4	.9289

[a] **CRM Critical Success Factors**
[b] **CRM Effectiveness**
[c] **CRM Success**

Second, we performed an exploratory factor analysis [with Varimax rotation] to examine if the items for a construct share a single underlying factor [i.e. are unidimensional] to assess (a) CRM critical success factors

and (b) CRM effectiveness measures to produce a concise set of classification dimension. Items, which did not satisfy the following two criteria, were deleted: [1] dominant loadings greater than 0.5, and [2] cross-loadings less than 0.35 (Hair *et al.*, 1998).

The 14 items (variables) measuring the CRM critical success factors (Enablers) in the research model were subjected to principal component factor analysis. Eigenvalues and scree plot were used to determine the number of factors to be extracted. A three-factor structure was suggested using the criteria of an eigenvalue greater than 1, and the extracted factors account for 74.24 % of the total variance. All factor loadings are generally high, and the lowest loading is equal to 0.515, while the Kaiser–Meyer–Olkin test of the factor analysis is substantial [0.766]. The resulting factor loadings are shown in table (**II**) with all factor loadings less than 0.5 suppressed. All items loaded onto the expected factors as they were originally designed. Factor loading were all higher than 0.5 on its own factors and, therefore, each item loaded higher on its associated construct than on any other construct. This supported the discriminant validity of the measurement.

Table II: Results of factor analysis for CRM Effectiveness

CRM Effectiveness	Component	
	Factor 1 Relationships Quality	Factor 2 Transactions Quality
Responding to customers queries	.687	
Customer care	.674	
Complaint handling	.812	
Improving communication with the customer	.864	
Processing customer orders		.890
Refining the billing system		.813
Personalizing service offering to each customer		.698
Credit control		.703
Initial Eigenvalues	**3.023**	**1.999**
% of Variance	**37.787**	**24.983**
Cumulative %	**37.787**	**62.770**

The 10 items (variables) measuring the CRM effectiveness in the research model were subjected to principal component factor analysis. A three-factor structure was suggested using the criteria of an eigenvalue greater than 1, and the extracted factors account for 78.224 % of the total variance. All factor loadings are generally high, and the lowest loading is equal to 0.649, while the Kaiser–Meyer–Olkin test of the factor analysis is substantial [0.632]. The resulting factor loadings are shown in table (**III**) with all factor loadings less than 0.5 suppressed. All items loaded onto the expected factors as they were originally designed.

Next, several fit statistics were utilized to evaluate the acceptability of each of the factor models. As recommended by Bentler and Bonnet (1980), the goodness-of-fit index was utilized and deemed acceptable if above the recommended value of 0.90. The comparative fit index (CFI) also was used and acceptable model fit is demonstrated with CFIs above 0.90, as well. Furthermore, adjusted goodness-of- fit index (AGFI), and root mean square residual (RMSEA) also were provided. Standard cut offs for the above indices, as proposed by experts (Bentler, 1990; Hu and

Table III: Confirmatory Factor Analysis of Model Constructs

Construct	Chi-Square	DF	P	GFI	AGFI	CFI	RMSEA
Strategical Factors	13.303	5	.121	.970	.909	.979	0.10
Tactical Factors	3.823	2	.148	.988	.941	.996	0.07
Operational factors	10.227	5	.069	.977	.932	.991	0.08
Relationships Quality	8.398	2	.151	.977	.890	.943	0.10
Transactions Quality	4.5	2	.052	.986	.932	.987	0.08
Customer Retention	11.23	2	.060	.965	823	.987	0.09

Statistic	Suggested
Goodness-of-fit index (GFI)	≥0.90
Adjusted goodness-of- fit index (AGFI)	≥0.80
Comparative fit index (CFI)	≥0.90
Root mean square residual (RMSEA)	≤0.10
Chi-Square Significant	≥0.05

Bentler, 1995; Joreskog and Sorbom, 1982), are provided in Table IV. The results indicated that the scales were unidimensional.

Finally, given that the purpose of the study is to test the hypothesized causal relationships among the constructs of the model, we used the structural equation-modeling package of AMOS. Since the sample size of 159 cases is not sufficient to support a structural equation model at the level of complete disaggregation of measured variables (by using the multiple measured variables as indicators for each construct), we used the factor scores as single item indicators and performed a path analysis, applying the maximum likelihood estimates (MLE) method, following the guidelines suggested by Joreskog and Sorbom (1982).

The application of the MLE method for estimating the model entails that the constructs should satisfy the criterion of multivariate normality (Bagozzi and Yi, 1988). Therefore, for all the constructs, tests of normality, namely skewness, kurtosis, and mahalanobis distance statistics (Bagozzi and Yi, 1988), were produced. These indicated no departure from normality. Thus, as normality was confirmed for all the constructs, we proceeded in using the MLE method to estimate the model. Figure 2

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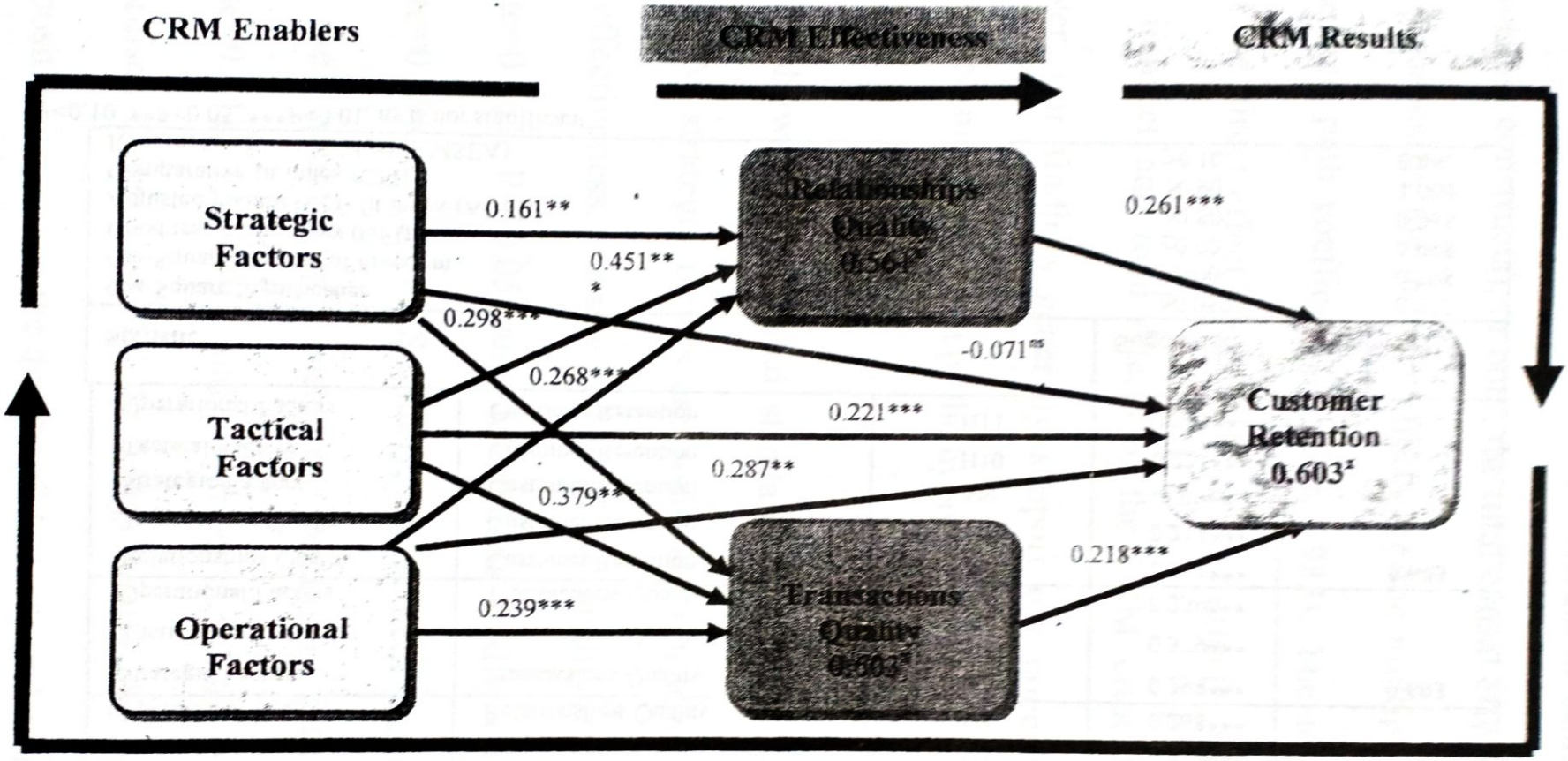
Chi-Square Significant	≥0.05

illustrates the path diagram for the causal model. It also presents the estimated standardized parameters for the causal paths, their levels of significance and the square multiple correlations for each construct.

A more detailed analysis of the results and measures for model fit are reported in Table **V**. Since there is no definitive standard of fit, a variety of indices are provided along with suggested guidelines. The chi-square statistic of the model was very small ($X^2 = 0.798$) and insignificant (P = 0.372), indicating a very good fit. Additionally, the results of the rest measures, together with the squared multiple correlations indicate that the overall fit of the model to the data is quite strong.



** Significant at 0.10, **Significant at 0.05, ***Significant at 0.01, ns not significant and* ^{z} *Squared Multiple Correlation*

Figure2: Results of Path Analysis

Table 1: Standardized Regression Weights

Predictor variables	Criterion Variables	Hypothesized relationship	Standardized coefficient	R^2
Strategic Factors	Relationships Quality	H1	0.161**	0.561
Tactical Factors	Relationships Quality	H3	0.451***	
Operational Factors	Relationships Quality	H5	0.268***	
Strategic Factors	Transactions Quality	H2	0.298***	0.603
Tactical Factors	Transactions Quality	H4	0.379***	
Operational Factors	Transactions Quality	H6	0.239***	
Relationships Quality	Customer Retention	H7	0.261***	0.603
Transactions Quality	Customer Retention	H8	0.218***	
Strategic Factors	Customer Retention	.H9	-0.071^{ns}	
Tactical Factors	Customer Retention	H10	0.221***	
Operational Factors	Customer Retention	H11	0.287**	

Statistic	Suggested	Obtained
Chi-Square Significance	≥0.05	0.372
Chi-Square/ Degree of Freedom	≤5.00	0.798
Goodness-of-fit index (GFI)	≥0.90	0.998
Adjusted goodness-of- fit index (AGFI)	≥0.80	0.965
Comparative fit index (CFI)	≥0.90	1.000
Root mean square residual (RMSEA)	≥0.10	0.460

*P<0.10, **P<0.05, ***P<0.01, ns is not significant

Since the causal effects of the CRM critical success factors may be either direct or indirect i.e., mediated via the effects of other variables (CRM effectiveness constructs), or both, the total causal effects were computed. More specifically, the indirect effects are the multiplicative sum of the standardized path coefficients (Asher, 1983). The total effects are the sum of the direct effect and all the indirect effects. Table VI shows the direct, indirect and total effects of the CRM critical success factors. However, our findings generally support our conceptual model. The results place support to most of the hypotheses.

Table **V** shows the estimated standardised parameters for the causal paths. CRM strategic factors are positively affect all variables of the CRM effectiveness, namely relationships quality (**H1**) (Standardised Estimate=0.161, P< 0.05) and transactions quality (**H2**) (Standardised Estimate=0.298, P< 0.01). Similarly, the tactical factors are positively affect the quality of customer relations (**H3**) (Standardised Estimate=0.451, P< 0.01) and improve customer transactions (**H4**) (Standardised Estimate=0.379, P< 0.01). Finally, the operational factors have a positive impact on the quality of customer relations (**H5**)

Table VI: Direct, Indirect and Total Effect of the CRM Usage

Criterion Variable	Predictor variables	Direct Effect	Indirect Effect	Total Effect
Relationships Quality	Strategic Factors	.161	.000	.161
	Tactical Factors	.451	.000	.451
	Operational Factors	.268	.000	.268
Transactions Quality	Strategic Factors	.298	.000	.298
	Tactical Factors	.239	.000	.239
	Operational Factors	.379	.000	.379
Customer Retention	Strategic Factors	-.071	.107	.036
	Tactical Factors	.221	.200	.421
	Operational Factors	.287	.122	.409
	Enhanced Relations	.218	.000	.218
	Improved Transactions	.261	.000	.261
	Reduced Cost	.218	.000	.218

(Standardised Estimate=0.268, P< 0.01) and transactions quality (**H6**) (Standardised Estimate=0.239, P< 0.01). Thus, this finding places empirical support to the anecdotal evidence that factors such as top management support, organisational culture, CRM strategy, project vision, benchmarking, CRM software selection, training, personalisation, customer orientation and data mining play a critical role in applying the CRM system.

With respect to the CRM success, it was found that all variables of CRM effectiveness, namely *relationships quality* (Standardised Estimate=00.261, P< 0.01) and *transactions quality* (Standardised Estimate=00.218, P< 0.05) have significant and positive effects upon *CRM success*, supporting the hypotheses **H7** and **H8**. The above significant relationships provide empirical support to the theoretical views that state that the CRM is a facilitator of customer retention strategies, enabling personalise sales activities and customized product offerings (Kennedy and King, *2004*; Wang *et al.*, 2004; Zablah *et al.*, 2004).

CRM success is not directly affected by the *CRM strategic factors* (Standardised Estimate=-0.071^{ns}, P> 0.10). Thus, the results do not provide support for (**H9**). However, this negative and insignificant direct effect is offset by the indirect positive effect of the *CRM strategic factors* on *CRM success*. This result may be interpreted by the fact that the strategic factors are related to the top level of the management and is not seen directly by customers. Therefore, it is not the strategic factors per se, but rather the efforts of customer service people who deal directly with the final customers that lead to successful implementation of the CRM in terms of customer retention. The *strategic factors* indirectly affect *customer retention* through the improvement of CRM effectiveness. Indeed, the results indicate that customer service people have a positive impact on *customer retention*. In other wards, this finding support Chan, (2005), Chen and Popovich, (2003) and Johnson (2004) views that the mere use of the CRM does not automatically lead to the customer retention. Rather, it implies that the use of the CRM enables the implementation of interactive marketing activities and customized product offerings without the need to sacrifice efficiency, as it was always the case in the past. In other wards, CRM is more than just

technology. While technology is a key enabler, it is only a means to the end. Therefore, customer service people play a central role in the successful implementation of the CRM programs within banks.

Finally, unlike the *strategic factors*, the *tactical and operational factors have* a significant and positive direct impact on *CRM success (customer retention)*, providing support for **H10** (Standardised Estimate=00.221, P< 0.01) and **H11** (Standardised Estimate=00.287, P< 0.05). Since tactical and operational factors are treated at a lower level of management and therefore could be felt by the final customer, their effect on customer retention is strong and significant.

6. Discussion and Implications

The purpose of this article is (a) to offer some useful and practical guidelines for banks and other types of businesses wishing to successfully apply CRM systems and (b) to enhance our understanding of its impact on relationships effectiveness and success.

6.1 CRM Critical Success Factors

This study provides new theoretical grounds for studying the CRM. It also supplies banks with a number of operative CSFs that may be essential if they are to remain competitive in the dynamic marketplace. Not only does this study provide an empirical assessment of the essential elements in CRM implementation, but it also assesses the critical success factors that were distilled from a comprehensive review of the relevant literature. These CSFs includes three basic categories; 1) Strategic related factors, 2) Tactical Factors and 3) Operational Factors.

Banks should consider some factors at the strategic level. To achieve strategic advantages, top management should also be personally knowledgeable of the CRM potential and proactively involved in its internal diffusion in order to manage it effectively. Using the CRM for marketing purposes should be based on clear goals. However, successful implementation of the CRM depends on how clearly defined the strategic goals are for an organisation. However, while both technology and business processes are both critical to successful CRM initiatives, it is the individual employees who are the building blocks of customer

relationships. Therefore, CRM implementation requires changes to organizational. Finally, benchmarking play a significant role in shaping the strategic direction to be taken for changes a CRM package.

At the tactical level, the medium-rang planning of CRM specific organisational issues is largely concerned. However, employees' acceptance, integration with other systems, CRM software selection and training and updating employees on CRM systems are major challenges.

At the operational level, realistic CRM implementation schedule, enterprise performance metrics for CRM, personalisation, customer orientation and data mining play a critical role to successfully implement the CRM system.

6.2 CRM Effectiveness

The data suggest two effectiveness dimensions for the CRM implementation. These dimensions include relationships quality (*enhanced relations*) and transactions quality (*improved transactions*). Overall, the CSFs variables, strategic, tactical and operational factors,

explain 56.1% of *relationships quality* and 60.3% of *transactions quality*. These findings have major implications for marketing people, as they suggest the notion that the CRM CSFs should be implemented holistically rather than piecemeal to get the full potential of the CRM. Many of these CSFs exhibit synergy with one another. For example, top management support to CRM means that it will place customer orientation at the top of its agenda, and place a high priority on human resources development (training).

6.3 CRM Success (*Customer Retention*)

The findings show that acquiring a better understanding of existing customers allows companies to interact, respond, and communicate more effectively to significantly improve retention rates. The results clearly demonstrated that CRM CSFs and CRM effectiveness have catalytic influence on CRM success (customer retention). Overall, the CSFs variables, strategic, tactical and operational factors and the CRM effectiveness dimensions, relationships quality, transactions quality and cost reduction, explain 60.3% of CRM success (customer retention). This result supports the theoretical view of Xu (2002) that CRM

implementation ensures customer satisfaction and retention by solving customer problems quickly.

The standardized coefficient weights show that the Operational Factors (B= 0.287) is relatively stronger than tactical factors (B= 0.221) in explaining the CRM success. In the same spirit, the standardized coefficient weights show that Transactions quality (B= 0.261) is relatively stronger than relationships quality (B= 0.218) and the cost reduction (B= 0.140) in explaining the CRM success.

We were surprised, however, to find that CRM strategic factors have shown only a negligible negative impact on CRM success. However, upon closer examination of our study, this should not have been unexpected. This negligible negative direct effect (-.071) is offset by the indirect positive effect (.107) of the CRM implementation on customer retention. This means that it is not the use of the CRM per se, but rather the efforts of customer service people, through the use of the CRM, that lead to customer retention (CRM success). The strategic factors

indirectly affect CRM success through its use in customer service activities.

7. Limitations and Suggestions for Future Research

As with any study, there are certain limitations that should be recognized. First, we assessed CRM success by using customer retention (a four-item measure), while there is evidence that CRM success is a much broader construct that includes customer loyalty (Jutla et al., 2001) satisfaction (palmer et al., 2005). Second, the present study relied on a sample of banks managers and, consequently, we cannot afford to generalize the findings in other types of businesses. Third, the data are cross-sectional in nature and hence it is not possible to determine causal relationships.

The direction for future research, which emerged from our findings, is to improve our understanding of these CSFs in other types of business. For example, each CSFs discussed in this study warrants more in depth study. While some CSFs has been recurring issues in marketing, information technology and management information system research, their implications for CRM requires a new perspective. Given the high costs

associated with the implementation of CRM systems, a potentially fruitful area would be to develop the quantification of CSFs into an "index of practice" so that companies could determine the level of performance on a time-based approach. The results from an audit, with regard to the index, could pinpoint areas that need attention and improvement. Future research may choose to focus on one or more of the CSFs to generate an in-depth knowledge to inform both theorctical and practical applications. Researchers could use these factors to assess the success of companies. On the other hand, these CSFs must be subjected to review, critique, and discussion for an extended period before getting general aceeptance. Additional items might be tried in each category. Finally, different constructs could be tried to measure the CRM success. To this end, a very promising research approach is the development of a model that explains how CRM technology influences variables such as customer loyalty (Jutla et al., 2001), business development (Hart et al., 2004) and customer satisfaction (Bueherer et al., 2005). Finally, further research is required to test the relationship between the relationships quality and the transactions quality.

References

Abbott, J.. Stone, M. and Buttle, F. (2001). "Integrating customer data into customer relationship management strategy: An empirical study." Journal of Database Marketing **8**(4): 289-300.

Abdullah, M., Al-Nasser, A. and Husain, N. (2000). "Evaluating Functional Relationship between Image, Customer Satisfaction and Customer Loyalty Using General Maximum Entropy." Total Quality Management **11**(4): 4-5.

Al-Mashari, M. and Zairi, M. (2000). "The Effective application of SAP R/3: A Proposed Model of Best Practice." Logestics Information Management 13(3): 156-166.

Asher, H. B. (1983). Causal Modeling, Sage, Beverly Hills, CA.

Avlonitis, G. J. and Panagopoulos, N. G. (2005). "Antecedents and consequences of CRM technology acceptance in the sales force." Industrial Marketing Management **34**(4): 355-368.

Bagozzi, R. and Yi, Y. (1988). "(1988). "On the Evaluation of Structural Equation Models." Journal of the Academy of Marketing Science **16**(1): 74-94.

Bentler, M. B.. (1990). "Comparative Fit Indices in Structural Models." Psychological Bulletin **107**: 238-246.

Bentler, P. and Bonnet, D. G. (1980). "Significance Tests and Goodness of Fit in the Analysis of Covariance Structures." Psychological Bulletin **88**: 588-606.

Bhaskar, R. (2004). "A Customer Relationship Management System to Target Customers at Cisco." Journal of Electronic Commerce in Organisations **2**(4): 63-73.

Bose, R. (2002). "Customer relationship management: key components for IT success." Industrial Management & Data Systems **102**(2): 89-97.

Butler, T. and Fitzgerald, B. (1999). "Unpacking the systems development process: an empirical application of the CSF concept in a research context." The Journal of Strategic Information Systems **8**(4): 351-371.

Chan, O. J. (2005). "Toward a Unified Veiw of Customer Relationship Management." Journal of American Academy of Business **6**(1): 32-38.

Chen, I. J. and Popovich, K. (2003). "Understanding customer relationship management (CRM): People, process and technology." Business Process Management Journal **9**(5): 672-688.

Cho, Y., Im, I., Hiltz, J. and Fjermestad, J. (2002). An Analysis of Online Customer Complaints: Implications for Web Complaint Management. Proceedings of the 35th Hawaii International Conference on System Sciences.

Davenport, T. H. and Short, J. E. (1990). "The new industrial engineering: information technology and business process design." Sloan Management Review **31**(4): 11-27.

Digman, L. A. (1990). Strategic Management: Concepts, Decisions, Cases. 2nd ed., Homewood, IL,, IRWIN,Inc.

Drucker, P. (1954). The Practice of Management. Newyork, Harper and Row Publishers.

Dubrovski, D. (2001). The Role of Customer Satisfaction In Achieving Business Excellence. The 6th TQM World Congress.

El Sawy, A. (1997). "Redesigning the Customer Support Process for the Electronic Economy: Insights From Storage Dimensions." MIS Quarterly **21**(4): 457-484.

Fjermestad, J., Nicholas, C. and Romano, J. (2003). An Integrative Implementation Framework for Electronic Customer Relationship Management: Revisiting the General Principles of Usability and Resistance. Proceedings of the 36th Annual Hawaii International Conference on System Sciences (HICSS'03).

Group, G. (2005). **http://www3.gartner.com**.

Gupta, M. and Shukla, S. (2001). "Implementation Issues in CRM: A Study in the Indian Banking Sector." Productivity **42**(1): 26-38.

Guynes, C. and M.T., V. (1996). "Critical success factors in data management." Information & Management **30**(4): 201-209.

Hart, S., Hogg, G. and Banerjee, M. (2004). "Does the level of experience have an effect on CRM programs? Exploratory research findings." Industrial Marketing Management **33**: 549–560.

Heygate, R. (1999). "CRM 123, CRM Resources." IEEE Computer Society.

Hu, L. T. and Bentler, P. M., Eds. (1995). Evaluating Model Fit, in Structural Modeling Concepts, Issues and Applications. R. H. Hoyle, ed., Sage, Thousand Oaks, CA.pp 76-99.

Johnson, J. (2004). "Making CRM Technology Work." British Journal of Administrative Management **39**: 22-23.

Joreskog, K. and Sorbom, D. (1982). "Recent Developments in Structural Equation Modeling." Journal of Marketing Research **19**: 404-416.

Jutla, D., Craig, J. and Bodorik, P. (2001). Enabling and Measuring Electronic Customer Relationship Management Readiness. Proceedings of the 34th Hawaii International Conference on System Sciences.

Karakostasa, B., Kardarasb, D. and Papathanassiou, E. (2004). "The state of CRM adoption by the financial services in the UK: an empirical investigation." Information & Management **In Press**.

Kennedy, M. E. and King, A. M. (2004). "USING Customer Relationship Management to Increase Profit." Strategic Finance **85**(9): 36-42.

Krueger, M. (2000). " Fulfillment: The Gateway to Customer Loyalty." Manufacturing Systems **18**(9).

Lenskold, J. D. (2004). "Customer-Centric Marketing ROI." Marketing Management **13**(1): 26-31.

Light, B. (2003). "CRM packaged software: a study of organisational experiences." Business Process Management Journal 9(5): 603-616.

McGovern, T. and Panaro, J. (2004). "The human Side of Customer Relationship Managment." Benefits Quarterly **20**(3): 26-33.

McKenzie, J. (2001). "Serving Suggestions." Financial Management (CIMA). **Dec**: 26-27.

Oakland, J. S. (1995). Total Quality Management-Text with Cases. Oxford:UK, BH Ltd.

Ocker, R. and Mudambi, S. (2003). Assessing the Readiness of Firms for CRM: A Literature Review and Research Model. Proceedings of the 36th Annual Hawaii International Conference on System Sciences (HICSS'03).

Palmer, R., Lindgreen, A. and Vanhamme, J. (2005). "Relationship marketing: schools of thought and future research directions." Marketing Intelligence & Planning **23**(3): 313-330.

Payne, A. and Frow, P. (2004). "The role of multichannel integration in customer relationship management." Industrial Marketing Management **33**: 527-538.

Porter, M. (1987). "From competitive advantage to corporate strategy." Harvard Business Review **65**(3): 43-95.

Pushmann, T. and Alt, R. (2001). Customer Relationship Management in The Pharmaceutical Industry. Proceedings of the 34th Hawaii International Conference On System Sciences.

Reichheld, F. F., Markey, R. G. and Jr, H., C. (2000). "The loyalty effect - the relationship between loyalty and profits." European Business Journal 12(3): 134-41.

Tellefsen, T. and Thomas, G. P. (2005). "The Antecedents and Consequences of Organisational and Personal Commitment in Business Service Relationship." Industrial Marketing Management **34**: 23-37.

Turban, E., McLean, E. and Wetherbe, J. (1999). Information Technology for Management: Making Connections for strategic Advantage. USA, John Wiley & Sons.

Umashankar, V. (2001). "E-CRM - Issues of Semantics, Domain & Implementation." Productivity **42**(1): 19-25.

Xu, Y., Yen, D. C., Lin, B. and Chou, D. C. (2002). "Adopting customer relationship management technology." Industrial Management & Data Systems **102**(8): 442-452.

Zablah, A. R., Bellenger, D. N. and Johnston, W. J. (2004). "An evaluation of divergent perspectives on customer relationship management: Towards a common understanding of an emerging phenomenon." Industrial Marketing Management **33**: 475-489.