Applying Customer Relationship Management Principles in a Sales-Oriented Engineering Organisation

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Abstract

Increasing levels of competition for customers have challenged organisations to adopt strategies to acquire new customers and to retain existing customers. The strategies to acquire new customers, regain lost customers and retain existing customers form part of customer relationship management. In the past years, the company in this study has lost customers and sales opportunities that also translate into a loss of profit. The current study was undertaken within the context of a company that is part of a global organisation providing engineering products and services and operating as a sales unit in South Africa. The main objectives of the study were to assess the current application of customer relationship management in the case study company; and to identify the challenges thereof with the purpose of developing strategies to close the gap. The study employed survey research and questionnaires as the research strategy and a data collection method. The results of the study indicate that the case study company paid more attention to customer focus, organisational culture and organisational compatibility. Information technology and department collaboration were identified as the areas which require improvement for the company to realize the benefit of effective customer relationship management and implementation.

Keywords

Customer Relationship Management, Customer Focus, Knowledge Management

1. Introduction

An increasing number of service providers have accepted the use of customer relationship management (CRM) strategies in order to enhance customer acquisition, loyalty and the customer value over the customer-organisation relationship lifecycle (Andotra and Abrol 2016). In an attempt to gain a competitive advantage, organisations have gradually employed CRM to undertake the approach of not just selling products to customers but also providing the services that support the products (Saarijärvi *et al.* 2013). Foster (2013) maintains that there are no agreed success factors in the implementation of CRM. The implementation of CRM is highly influenced by the organisational culture, the attitude toward customer focus and knowledge management (Saarijärvi *et al.* 2013). Despite the claim by authors in the field of CRM, this research did not identify a study which attempts to identify the challenges affecting the case study company in the effort to implement CRM and develop the strategy to support the organisation.

The case study company is part of a global organisation operating as a sales unit in South Africa providing engineering products and services and the company is embarking on initiatives to implement CRM as a competitive advantage tool. In the past years, the company has lost customers and sales opportunities which also translate into a loss of profits. Garrido-Moreno *et al.* (2014) suggest that not all companies that have embarked on CRM implementation realized the benefits associated with CRM strategies. The failure of CRM implementation originates from a failure to incorporate and communicate customer knowledge throughout the organisation (Akgün *et al.* 2014).

The research objectives of the study were to assess the current application of CRM success factors within the case study company and to identify the gaps in the application thereof for the purpose of suggesting strategies for effective CRM implementation.

2. Literature Review

Previous research related to CRM is diverse and as a result, various segments of categories have been incorporated in CRM research. Also, in consideration of the diversity of CRM related topics, research has been undertaken across various sectors and global regions to assess the progress of CRM studies. Several definitions have been developed for CRM including *inter alia* the following:

I.   CRM is a collective of information systems through which organisations can develop a single perspective of the customer (Haddara and Constantini 2017:952). The information systems enable the accumulation, analysis, and storage of data from the customer (Khodakarami and Chan 2014:27).

II.   CRM is a strategic approach taken by an organisation intended to contribute towards value creation for the organisation itself and the customer (Duque *et al.* 2013).

Management support is a vital aspect of CRM which is closely linked to the organisational commitment towards CRM (Garrido-Moreno *et al.* 2014). One of the signs that is deemed to be a reflection of the culture of an organisation is the style of management generally adopted within the organisation (Navimipour and Soltani 2016). A culture that incorporates the values of an organisation should be encouraged by management in conjunction with the implementation of CRM strategies (Jaber and Simkin 2017). CRM cultures that are customer oriented have been identified in previous literature to be indirect contributors to organisational performance through CRM implementation (Elkordy 2014).

The ability to adapt to changes in the market is enhanced by the organisation's ability to manage customer knowledge (Tseng 2016). This involves modifying organisational structures and the manner in which the organisation conducts business when the need arises as a result of new trends in the market (Mumuni and O'Reilly 2014). Knowledge management processes are considered as the dominant sub-process of CRM implementation, given that the effective implementation of CRM requires an efficiency of the process concerning customer knowledge management (Khosravi and Hussin 2015).

Investment benefits from information technology (IT) can be adapted to apply to CRM and to establish a link between the IT investment and financial performance measures (Haislip and Richardson 2017). The IT capability possessed by an organisation enables the flow of information required for effective knowledge management to occur (Hasanian *et al.* 2015). The seamless manner in which information can be used to facilitate knowledge is proposed to be influential towards CRM adoption (Garrido-Moreno *et al.* 2014; Hasanian *et al.* 2015). The summary in Table 1 outlines the key factors from the literature for enhancing CRM implementation.

Table 1: Key factors to enhance CRM strategy performance

Author	Key Factors to Enhance CRM strategy Performance
Akgün *et al.* (2014)	Reconstructing organisation to adapt to CRM strategy, customer-orientation, application of knowledge management.
Ashraf *et al.* (2014)	Verbal communication between departments, written communication about CRM to the organisation stakeholders, merging of activities between departments.
Cambra-Fierro *et al.* (2017)	Market orientation, application of knowledge management practices, development of staff skills for CRM related activities, IT support infrastructure, financial resources.
Chang *et al.* (2014)	Verbal communication with customers.
Dennis and Marcus (2013)	Regeneration of knowledge and unique organisational capacity.
Elkordy (2014)	Unique organisational capacity, IT support infrastructure, customer focus, organisational structure conducive to CRM adoption.

Author	Key Factors to Enhance CRM strategy Performance
Foster (2013)	Complaint resolution, feedback processes, addressing guarantees and processes for corrective action.
Garrido-Moreno *et al.* (2014) Hasanian *et al.* (2015) Khosravi and Hussin (2015) Khodakarami and Chan (2014)	Application of knowledge management practices.
Iriana *et al.* (2013)	Establishing organisational cultures conducive to CRM strategy, compatibility of existing IT infrastructure with CRM tools, the extent of the ease at which CRM tools could be used.
Navimipour and Soltani (2016)	Financial resources, technology acceptance, ease of use, online learning platforms, IT support infrastructure, employee satisfaction, organisational culture, and organisational flexibility, integrated into organisational strategy.
Peltier *et al.* (2013)	Data quality, a culture conducive to CRM adoption, the interaction between departments, sharing of information.
Šebjan *et al.* (2014)	Organisational structure (process-driven, technology-driven or innovation-driven).
Steel *et al.* (2013)	Streamline sources of data, the interaction between departments, upgrading or modification of IT supporting infrastructure, use of project management principles.
Vazifehdust *et al.* (2012)	Higher level management support, highlighting CRM achievements, a culture conducive to CRM adoption, IT support infrastructure, development of staff skills, establishing processes to implement CRM strategies, on-going learning about CRM best practices, application of knowledge management.
Zandi and Tavana (2011)	Reconstructing organisation to adapt to CRM strategy.

3. Research Methodology

The research employed the survey research method due to its ability to cover the broader population at a low cost, as well as its flexibility (Trochim *et al.* 2014). The survey questionnaire was distributed to a total of 86; the number of employees who were selected as a sample from the total population of 150 employees of company. The survey was only distributed to employees who have access to computers and the internet. The list of employees who have access to computers and the internet was provided by the Human Resource manager of the company and the list was used as the sample frame. The research only used primary data from the survey questionnaire to answer the research questions. The online platform Surveymonkey provided the ability to distribute the survey questionnaires to the target group which was opened for two months to receive feedback. During this period the research team was not expected to perform any task except sending reminders after every two weeks. The survey collected a total number of forty (40) useful responses which represents a response rate of 47% of the total distributed survey questionnaires.

4. Results

The following section details the study result which includes demographic information, descriptive statistics of the variables of interest and validation.

4.1 Demographics

Table 2 provides an overview of the research participant demographics, and includes job titles, qualifications and experience.

Table 2: Demographics information

	Number	Valid Responses %	Cumulative %
Departments			
Regional Sales	6	15.0	15.0
Engineering	11	27.5	42.5
Customer Services	7	17.5	60.0
Field Services	7	17.5	77.5
Human Resources	1	2.5	80.0
Logistics	3	7.5	87.5
Finance	3	7.5	95.0
Management	1	2.5	97.5
Other	1	2.5	100.0
Total	**40**	**100.0**	
Qualification			
Matric	12	30.0	30.0
3 Year Degree/Diploma	9	22.5	52.5
4 Year Degree/Diploma	7	17.5	70.0
Master's Degree or Equivalent	5	12.5	82.5
Other	7	17.5	100.0
Total	**40**	**100.0**	
Experience Levels			
1 Year or Less	4	10.0	10.0
2 - 5 Years	10	25.0	35.0
5 - 10 Years	11	27.5	62.5
10 - 15 Years	6	15.0	77.5
15 - 20 Years	4	10.0	87.5
Over 20 Years	4	10.0	97.5
Missing	1	2.5	100.0
Total	**40**	**100.0**	

The majority (27.5%) of the respondents were from the engineering department followed by customer service (17.5%) and field service (17.5%). Most (30%) of the respondents held a matric certificate as the highest qualification which was followed by 22% with a four year degree. The respondents' work experience ranged from 1 year to more 20 years and the majority (27. 5%) had the working experience of 5 to 10 years. The demographic information indicates that the respondents had sufficient knowledge of the organisation.

4.2 Descriptive Statistics

Table 3 provides the internal consistency (Cronbach's alpha), the item means, the standard deviation, and the ranking by means. The majority (6) of the variables had an internal consistency ranging from 0.6 to 0.85 which shows that the items were measuring the intended concept (Collis and Roger 2014; Trochim *et al.* 2014). The information technology (IT) use for CRM, and department collaboration both had internal consistencies of less than 0.6, and the result of the two variables should be used with caution.

Customer focus was the most practiced success factor of CRM with an item mean of 3.944, indicating that the case company focuses its business around the customer. Organisational culture followed by a mean of 3.733, which indicates that the norms and values are in line with CRM practices. This was followed with a mean of 3.6 of organisational compatibility to CRM. The highest standard deviation was indicated for knowledge management. The standard deviation for knowledge management could be attributed to the number of questions in the scale. Also, this indicates that there was a high variation in the agreement from the mean values for the questionnaire items. The scale

for knowledge management consists of six statements, which is the highest number of items for the scales in the questionnaire. The lowest standard deviation could be observed from the scale for CRM organisational compatibility, which could be attributed to the scale consisting of the lowest number of items in the scale. Also, this indicates that there was a low variation in the agreement from the mean values for the questionnaire items.

Table 2: Items mean and standard deviation

Variables	Cronbach's alpha	Items Mean	Standard deviation	Ranking
Customer focus	0.851	3.944	2.337	1
Organisational culture	0.822	3.733	2.015	2
CRM Organisational compatibility	0.793	3.600	1.471	3
Organisational commitment	0.754	3.583	2.488	4
Management support	0.718	3.542	2.250	5
Knowledge management	0.600	3.521	4.537	6
IT Use for CRM	0.522	3.504	2.163	7
Department collaboration	0.466	3.125	2.579	8

4.3 Validity

This section detailed the method used to ensure that the tools or survey questionnaires were measuring the intended concepts (Habib *et al.* 2014). The research employed face validity, content validity, and factor analysis as the method of assessing construct validity. The scholars from the University of Johannesburg were given the survey questionnaires to provide their views and suggestions to improve the face validity of the survey questionnaire. The study leader, who is an expert in the field of CRM, together with an extensive literature review improved the content validity of the research. Table 4 below shows that the research did not have the problem with the sample size since the KMO index ranged from 0.5 to more than 0.8. The high factor loading (greater than 0.3) indicates that the variables or factors had construct validity.

Table 3: Factor loadings

Variable	Likert scale items	Factor loading	KMO index
Customer focus	We follow up on the performance of our products used by our customers.	0.842	0.656
	We measure the value that various customers bring in order to allocate our resources accordingly.	0.576	
	We regularly interact with our customers to attain the latest information about their needs.	0.479	
	We allocate different resources to loyal customers compared to those we allocate to new or potential customers.	0.348	
Knowledge management	The manner in which employees are grouped enables customer knowledge to be shared across the organisation.	0.812	0.807
	Knowledge gained through experience of individuals in the company is regularly documented.	0.756	
	We always have up to date information about our customers.	0.771	
	We can share and access information to and from other departments.	0.689	
	We have training programs to enable us to manage customer information effectively.	0.631	

Variable	Likert scale items	Factor loading	KMO index
	We have multiple communication channels with customers in obtaining information from them.	0.610	
Department collaboration	We have a common an understanding when communicating customer needs with other departments	0.962	0.637
	Different departments willingly share resources in our company	0.664	
	We have regular meetings with teams from other departments.	0.598	
Management support	Our company allocates financial resources specifically to enable management customer relationships.	0.928	0.793
	Managers are highly involved with subordinates in customer interaction.	0.724	
	Business strategies supported by management are typically aligned to enable CRM strategies.	0.636	
Organisational commitment	Our company has employees in positions specifically to implement CRM strategies.	0.837	0.645
	We have training programs which we attend focusing on building relationships with customers.	0.748	
	Top management recognizes employee's positive contributions to serving the customer.	0.518	
CRM IT use	Finding customer information through our internal web based platforms is easy.	0.777	0.716
	We have customer information in our databases whereby customer types are categorized in an organized manner.	0.771	
	The customer information we possess can be found in the same format understood by various employees across the organisation	0.755	
Organisational culture	Any initiatives or changes we make within the organisation are made considering how the customer will be affected.	0.567	0.528
	The organisation has a culture where all employees are expected to partake in CRM activities.	0.688	
	Management practices a culture of empowerment for employees to manage customer relationships.	0.346	
Organisational compatibility	The structure of our company can easily be modified to suit changing customer needs.	0.544	0.500
	Employees can share knowledge across the organisation independently from management approvals.	0.285	

5. The application of CRM in the case study company

A questionnaire was distributed to eighty-six staff members within the case study company, which included engineers, technical staff, logistics staff, customer service, and administrative staff via the SurveyMonkey online research platform. The questionnaire was open for two months, after which responses could no longer be submitted. The Likert scale data were analyzed using the statistical package for social sciences (SPSS). The Kaiser-Meyer-Olkin (KMO) test was employed to assess if the sample size was adequate to perform a factor analysis of the various factors.

The descriptive statistics in Table 3 indicated that the case study company considers all the variables assessed in the current research. Although the organisation considered the variables of interest the application was not equal to all the variables. Customer focus was identified as the variable which receives the highest attention. The results also show

that the respondents had varying point of views (standard deviation of 2.337) about how this was considered in the implementation of CRM. The organisational culture was identified as the second variable which received the highest level of attention during the CRM implementation. The collaboration between departments was identified as the variable which received the minimal attention.

6. The strategies to close the gap in a CRM application

The nature of the data collected to answer the research question was that of primary data supported by an intensive literature review. The overlapping stages in quantitative data analysis in conjunction with the comments received from the questionnaire were employed to establish the strategy to improve CRM applications in the case study company.

6.1 Strategies to improve customer focus

Making provision to create awareness of the relevant distribution channels through which the case study company operates could enhance customer focus. Also, establishing the means to have a wider variety of products customized locally would possibly increase the level of customer focus. Improving the elements of quality management such as complaint resolution, customer feedback, provision of guarantees and corrective action would have a positive effect on the level of customer focus.

6.2 Strategies to improve knowledge management

It is essential for the case study company to sustain the training of employees, particularly towards customer-oriented training. Such training in the context of CRM would be vital to extend beyond customer services staff. Employees need to be empowered in making business oriented decisions in order to promote learning amongst employees who are not part of management.

Platforms within the internal web-based platforms of the case study company are increasingly being established whereby employees can join groups similar to the structure of social media platforms in order to share information. Support of these web-based platforms would increase the level of knowledge management within the case study company. Knowledge management could be improved by the integration of telephonic communication, information from physical customer engagement and information received from customers through email and other web-based platforms.

6.3 Strategies to improve interaction and collaboration between departments

Department collaboration was indicated to be the least practiced CRM success factor within the case study company. This is indicative of the need for platforms of engagement between various departments to be established.

6.4 Strategies to improve management support for CRM

The strategy to improve managerial support for CRM would be to adopt a project management approach to CRM implementation. The reduction of the risks associated with the adoption of CRM strategies includes incorporating project plans to continuously track the finances and resources associated with CRM implementation (Jaber and Simkin, 2017).

6.5 Strategies to improve organisational commitment towards CRM

To improve organisational commitment towards CRM activities, it is recommended that the case study company also acknowledge staff members who do not face customers but contribute to the delivery of goods and services to the customer.

6.6 Strategies to improve IT use for CRM purposes

To improve IT use for CRM purposes, updates to employees in the form of an email should be sent with links showing them how to navigate the various pages within the intranet platforms.

6.7 Strategies to improve the CRM organisational culture

To improve CRM organisational culture, awareness needs to be created for non-customer services staff regarding customer service activities through customer focused training.

6.8 Strategies to improve organisational compatibility towards CRM

The improvement of organisational compatibility towards CRM requires a strategy to have wide organisational input regarding the aspects of the organisation that would need to be modified to be compatible with CRM.

7. Conclusions

After the data collection and analysis was performed, it could be concluded that not all of the factors could be retained as they were with the items used for their measurement. The scales for the factors of organisational compatibility for CRM and organisational culture were indicated to lack reliability and validity. The scale for customer focus could be used with caution as it shows a degree of reliability and validity to some extent. The CRM success factors that were adequately identified in the current study were that of knowledge management, organisational commitment, IT use for CRM, management support and department collaboration.

It was established through an analysis of the items means for the various success factors that customer focus was the factor that was mostly practiced in the case study company. This shows that the company does focus its business around customer needs. An organisation that conducts business in a manner that best provides value to its customers is recognized to be market oriented. This indicates that there is an awareness within the case study company of the importance of knowing what the market demands.

Organisational commitment towards CRM was indicated to have the highest items mean out of the five factors with a satisfactory Cronbach's alpha for reliability, indicating an item mean of 3.583. This was followed by management support with an item mean of 3.542. This corresponds to what is highlighted by Garrido-Moreno *et al.*, (2014) that management support is a vital aspect of CRM which is closely linked to the organisational commitment towards CRM.

Management with an attitude oriented towards accumulation and sharing of knowledge enables the knowledge management process (Hasanian *et al.*, 2015). Consequently, having a relatively high indication that management support is present for CRM within the case study company makes it conducive for the company to enable knowledge management practices.

There is an indication that the case study company has made efforts to be customer focused, internally, however, efforts to enhance collaboration between departments have been comparatively neglected. Improving such collaboration between departments could be enabled by knowledge management practices which, amongst other things, encourages collaborative learning between departments. Having such a low collaboration between departments would hinder the company from effectively gathering market intelligence, as collaboration between departments was considered critical for adopting a market-oriented approach. It was recommended that the case study company should involve all the departments in the implementation of CRM. The future research should identify the impact of industry 4.0 in the implementation of CRM.

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