

Mediating Role of New Product Performance in CRM Process and Company Performance

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Received: October 24, 2011

Accepted: October 29, 2011

Published: November 4, 2011

Abstract

This study is an attempt to find the mediating role of New Product Performance in CRM and Company Performance, in the manufacturing organizations of Pakistan. The CRM processes in the context of New Product Development described hypotheses for the additional research in order to increase the Company Performance. Data were collected from 233 respondents from seventeen randomly selected manufacturing organizations in Pakistan. The Pearson's correlation coefficient for Company Performance focused a strong and positive relationship of all variables. Models for the direct and indirect effects of company performance are examined for similarities and differences in perceptions. The result is conferred with detailed arguments about the role of Customer Relationship Management in new product performance are quiet influential in Company Performance. Thus, new product performance is an important mediator of the CRM processes-company performance link.

Keywords: Customer relationship management, New product development, New product performance, Pakistan.

1. Introduction

CRM integrally used for the existing products, and to maintain the status quo of the organization. It enhances the performance of organizations like wise it enables efficient productive customer interactions across all infrastructure of channels. It facilitate web collaboration to reduce customer service costs, assimilate call centers enabling multi-channel personal customer interaction and integrates examination of the customer while interaction at the transaction level. While its not paying attention for creating the new product development and its performance.

For the performance of organization it mediate through the performance of new launches and products in manufacturing “Innovate or die” is the new battle cry of the business world. Around the world, the message is out: either you succeed at new product development and launch, or face a slow downward spiral into oblivion (Cooper *et al.* 1986). The intricacy and uncertainties related with new product growth are growing along with the pressure to create more new products. To succeed and good in performance companionship and decision that they need basically to develop better new products and they need to do so quick for growth and profits (Booz 1982). CRM most recent trends are used for the developed products, the data is used to smooth the progress of customer facilities dealings by developing the information required to resolve the issue or problems existing to the trade with the customers. While launching and designing a new product or it is the most important to know and consider the use of the product (what does the product do), the level of usability of the product (how does it work, can it be used comfortably) and the meaning that the product conveys, which could be possible by the usage of CRM technologies within an organization. Some manufacturers appear to have been able to challenge that: compared to their competitors, they have better quality through the systematic usage of CRM, are more dependable, respond faster to changing market conditions and in spite of all that, attain lower costs and good performance of organization (Ferdows and De-Meyer 1990).

Sadeghi & Farokhian (2011) discussed the products and services which retain satisfied customer, as publicized loudly of presented by organizations. These were considered as the consequence of company and attract everybody towards products or of creative minds, those who bring about and flourished the ideas of new products for their customers. Svendsen, Haugland, Gronhaug & Hammervoll (2011) inspected the influence of a firm’s marketing strategy on linking customers in new product development. Special attention is paid to three facets of a marketing strategy. These are: product discrepancy, competitor orientation and brand profiling stress. Turner (2011) when organization paid attention to the concept of holistic and proactive customer interaction management it create value for customers. So that’s why they recommend a well synchronized combination of online and offline customer service guide that give each customer a flawless resolution of his or her problem, along with advice on how to avoid possible pitfalls and create a good will for the organization status . Celsi & Gilly (2010) described the Ad campaigns target consumers with information about the company. And how advertising affects employees’ customer focus its products, when there are new products developed and affects sometimes its employees. Ads also arrive at the organization’s employees it contains in order useful to employees in gathering customer needs. Srinivasan and Moorman (2005) the Strategic firm commitments and relate it with rewards for customer relationship management. That was discussed in the context of online retailing its purely as academic studies that offer a usually positive representation that effect customer relationship management (CRM) on firm performance.

2. Theoretical Framework

2.1 CRM Process

Customer relationship management (CRM) is a merger of people and processes. So that it influences the processes prevailing in the organizations through people and technology. It pursues to recognize a company's customers in order to gain the relationship valued for the organization. The potential of Customer Relationship Management has been examined only in the context of existing products. CRM’s potential to assistance in upcoming new product development (NPD) has been neglected. Boulding, Staelin, Ehret, & Johnston (2005) reviewed existing literature on CRM and identified potential pitfalls and unknowns in CRM implementation. Customer relationship management (CRM) is an amalgamation of people and processes. So that it influences the processes prevailing in the organizations through people and technology that pursues to recognize a company's customers in order to gain the relationship valued for the organization.

2.2 Customer Information Management Customer Relationship Management is extensively recognized as an actual tactics and methods for gathering, examining, and interpreting valued customer information into managerial action. The customer process basically involves the Customer Information management; the important action of identifying customers and their demands and needs that necessary to be accomplished by methodically collecting, distributing and disseminating customer information. This database knowledge

can be used to grow new products that are associated with customer requirements, demands and needs and create value for the organizations and corporations.

2.3 Customer Segment Value Management

Customer segment value management is needed to customer information management, distinguishing CRM activities amongst customers based on their preferences and value contribution to the company is a key concept of CRM (DeSarbo *et al.* 2001). Customer value has developed a key focus among tactic researchers and practitioners as an indispensable component of a firm's competitive strategy. It involves all doings and activities in market that help to estimate customers and integrate information about them in organizational processes for the proper usage of customer information to sustain the relationship. Supposed "lead users" are applicative and prominent example of this type of customers with high informational value. Lead users must have needs for new solutions much earlier than other customers and benefit meaningfully and significantly from a new product by obtaining a solution to their needs and problems about their already used products. "Opinion leaders" are a third valuable pillar of customers centered information for the purpose of New Product Development.

2.4 Multi-Channel Management

Multi-channel management usually contribution other resources of communication and channels of distribution, these are also recognized as an important CRM process and includes the systematic integration of multiple old-style and somewhat traditional and new electronic communication channels to manage the dialog and dealings with customers. That is consider the launch and success of NPD, multi-channel management offers numerous customs and way to interrelate and interact with customers for the determination of generating and launching new products which throughout transform the relationship of organizational performance in different phases of product development.

INSERT FIGURE-1

2.5 Effects of CRM Processes on New Product Performance

Customer relationship management processes as an advanced concept consisting of three sub-dimensions: customer information management, customer segment value management, and multi-channel management (Madhavan and Grover 1998). Customer information management mentions to the processing of data bases of information related with customers and is simple component of a firm's overall knowledge management and its performance.

H₁: The more a firm implements its CRM processes in an NPD context, the higher the firm's new product performance.

Customer Relationship Management has increased to the program of many organizational strategies and policies. CRM is explicitly, it includes the achievement and retention of customer and gathering information and its dissemination within the organization and outside the organization as well as the organization-wide responsiveness towards the performance of new product development (Jaworski and Kohli 1993). Jayachandran *et al.* (2004) exhibited that the existence of these customer related information processes increases CRM performance. Likewise customer information management also plays a central role in new product development. Multichannel integration is postulated as one of the important cross-functional processes in CRM strategy development. The nature of industry channel structure and channel participants as well as channel options, and alternative channel strategies and policies to use the implementations are important. The customer experience is discovered both within and across channels (Payne and Frow 2004).

2.6 Effects of New Product Performance on Company Performance

The incessant development and launch of new products is a significant foundation of competitive advantage. Empirical researches have confirmed that the successful and effective development and launching of new products is an imperative driver of company performance. Innovations ever create new markets and helped to differentiate the firms' offerings from competitors. There-fore, new products can lead firms to grow faster and to charge higher prices than their competitors that expect to give high revenue to organization.

H₂: The higher a firm's new product performance, the higher is its overall company performance.

High levels of company performance are pretentious by the type of grand policies pursued by the firm and the firm's industry type in which it is prevailing. Customer Relationship Management have greater effects on firm performance might be unclear for the understandings the concepts of CRM, there is need to develop expertise that enhance the organizational overall performance. So we may say that while customers have generally been satisfied with the firms' products and positive side-effects of CRM activities, many of those crops have not attained the financial performance wanted by the firm and their management. The skills and competencies to manage existing assets and capabilities, manipulation and the development of new capabilities are perhaps among the most relevant new product success factors (Castillo *et al.* Not given).

The new product performance might be the missing link between CRM processes and overall firm performance (Wang *et al.* 2004).

H₃: New product performance positively mediates the relationship between CRM processes and overall company performance

3. Data Collection and Sampling

The research study founded the analysis of an assessment questionnaire. The assessment questionnaire instrument provided statements relating to the Customer Relationship Management, company performance and New Product Performance. CRM process is distributed into three segments Customer information management, customer segment value management and Multichannel Management (i.e., phone, mail/fax, internet, e-mail) all items will be measured on a 7-point scale ranging from "strongly disagree" (= 1) to "strongly agree" (= 7) which are designated in questionnaire. To assess company performance, managers were asked to compare their own performance to competitors in terms of current profitability, growth, market share, and attracting new customers. The 7-point scale ranged from "much worse" (= 1), "same level as competitor" (= 4), to "much better" (= 7).

Data was collected from two hundred and thirty-three employees from 17 manufacturing organizations in Pakistan. Initially, the names of manufacturing organizations were taken from the list of KSE 100-index listed companies and the assessment questionnaires were sent through electronic mail to all the manufacturing companies for the sake of responses. The total responses accumulated was two hundred and thirty-three in which 222 (95.3%) were male respondent and 11 (4.7%) were female respondents. There were 103 (44.2%) education level of masters and above, 89 (38.2%) were graduates and 41 (17.6%) were under graduate respondents. 67 responses (28.8%) were from textile and garment product manufacturers. 17 (5.6%), responses were from chemical & pharmaceutical, 103 (44.2%) from household, food & FMCG, 18 (7.7%) from automobile sector and 32 (13.7%) from IT, telecommunication & technological product manufacturers.

4. Analysis Plan

For the testing of the hypotheses, we used path analysis in Structural Equation Modeling (SEM) through AMOS. SEM is an influential and flexible analytic technique that plays a critically important part in many empirical applications in social science research. It is dispersal free and compares favorably to structural equation modeling because of its strengths in forecasting about the hypothetical model (Flora and Curran 2004). External validity can be validated for all constructs. The relationships between the reflective indicators and the reflective operationalizations of the constructs must have to continuously strong and significant. The variance inflation factor (VIF) computes the inflexibility of multicollinearity in an ordinary least squares regression analysis, here the Path Analysis used which is also supported by regression (Duncan 1966) so that it provided guidance that measures how much the variance of an assessed regression coefficient that increased because of collinearity. Cronbach's alphas were calculated for each of the measurement (Churchill 1979). Cronbach's alphas are shown in Table for each construct measurement. The model fit the data well by suggested criteria goodness-of-fit index (GFI) was 0.90, (NFI) normed fit index was 0.90 (Venkatesh *et al.* 2001), and the model's comparative fit index (CFI) = 0.932, and goodness of fit index (GFI)=0.934 showed the fitness of mode . To ensure that measures loaded on the constructs as expected, confirmatory factor analysis was conducted with result.

5. Results

The Pearson's correlation coefficient for company performance focused a strong and positive relationship of latent variables. The company performance is significant positively correlated with CRM process ($r = 0.454$ at $p < 0.001$) New Product Performance ($r = 0.416$ at $p < 0.001$). The correlational effect on new product performance by considering its mediation with company performance indicated also vigorous and positive correlation with CRM process ($r = 0.435$ at $p < 0.001$), CRM Technology ($r = 0.395$ at $p < 0.001$) and CRM reward System ($r = 0.370$ at $p < 0.001$).

The results of Confirmatory Factor Analysis (CFA), as presented in table-1 as Factor Loadings or Regression Weights, which are the effect of latent variable on the observed measure models. The standardized factor loading or regression weights are taken because it is the correlation between the endogenous variables and the item. The adequacy of the measurement model was measured by evaluating the reliability of individual items, the internal consistency between items expected to measure the same construct, and the discriminant validity between constructs. Regression weights was considered as good when greater than 0.30 (Bernard 1998).

5.1 Company Performance

New product performance exposes a significant robust positive influence on company performance (path coefficient of .191; $p \leq .005$, $R^2 = 33\%$). Hypothesis₄ the higher a firm's new product performance, the higher is its overall company performance is therefore proven. Thus, the introductions of successful new products ever have a strong influence on improving company performance.

INSERT FIGURE-2

5.2 Test of Mediation

Hypothesis₅ discussed about New product performance (NPP) positively mediates the relationship between CRM processes and overall company performance. Analysis results regarding the relationship between CRM processes and company performance have been mixed. One likely description is that key mediating variables have not been accounted for. One such possible mediator is new product performance. For the analysis of this prospective a mediation analysis is used.

First of all the strong relationship between Customer Relationship management processes and company performance was found as the path coefficient = .097, $p < .001$.

INSERT FIGURE-4

Second, when new product performance is added into the model, the direct effect between CRM processes and company performance was reduced 6%. So that result of this analysis makes fully support for the mediation. In addition, the R^2 for company performance is significantly enhanced when new product performance is added to the model (R^2 19% to 27%). Thus, new product performance is an important mediator of the CRM processes-company performance link. The mediation consequences are precisely demonstrated by Fig 4.

5.3 Control Variables

In additionally to this the industry effect is taken as control variables. This legitimate to explain for mean differences of new product success and company success across the six industries. Our results indicated that there are no conspicuous industry differences in relation of new product performance. Also the influence of Customer Relationship Management processes on new product performance is significant irrespective of the industry. Although, the company performance diverges across industries, the consequences of new product performance on company performance is significantly stronger than the industry consequences.

6. Discussions and Recommendations

Data analysis and results used for the further discussion is carried out that open new horizon of thinking in order to achieve the goal of research. The detailed arguments about the role of Customer Relationship Management in new product performance context with all above taken indicators are given below.

The model described a comparatively high extent of NPD performance. So the CRM has a much stronger consequences on NPD performance than single features of customer integration. Customer Relationship Management commonly observed as a way to assimilate sales, marketing and service strategies in the direction to increase customer benefits and enhance business-customer relationship in the long term relation but the framework and the results showed the excellence when it is used along with the new product links and contribute at high degree of success in the organizations.

7. Conclusion

In the CRM-NPD context it is strong that CRM can be leveraged to deliver important customer information which can be used to advance New Product Performance. Since the new product failure rate has continued high over the years. CRM provides companies with a talented way to attack this serious problem.

The positive correlation indicates degree of relationship between all variables hence Correlation matrix is unfolding the strong positive influence of all variables on Company Performance. Thus it is indicating that CRM processes are a rich predictor of new product success. In order to do so, though, it is critical that managers accept a broader viewpoint on CRM (beyond just relationship management).

7.1 Future Research Directions

The study represents a first step in examining the utility of customer relationship management processes as a contribution into the new product development process. There are several limitations and areas for upcoming researches.

First, some of the constructs were measured at a rather broad level. For example, our CRM technology measure evaluated the implementation of technology on an overall level. It is conceivable that more refined and precise distinctions need to be made. Additional, despite the detail that the measures demonstrated external validity, it would have been more ideal to have a more extensive pretest of new items. These issues need to be explored in future studies.

Second, as the research was conducted at the SBU (strategic business units) levels and not addressed important project-level aspects of business fields. It has been usually expected that CRM-driven new products tend towards the “incremental” end of the range. If this is so, this could possibly limit the development of “breakthrough” products and true modest advantage. However, this hypothesis could only be tested by a project level study design that takes the level of product novelty and newness openly into account. This may be an important avenue for upcoming researches.

Third, research is desirable to inspect how Customer relationship management may progress new product development at different phases of the NPD. It is likely that different contributions are needed at each of these stages. For example, preceding study suggested that customer information is particularly significant in early and late phases of new product development (Gruner and Homburg 2000).

Finally, research is desirable to recount customer relationship management processes to more traditional new product success issues such as the skill of NPD processes, top administration support, NPD strategy (Henard and Szymanski 2001) business culture etc. It is theoretically conceivable that numerous new product success factors could enable the influence of CRM processes on new product success. For example, an organic corporate culture that nurtures innovation and cross-functional collaboration should definitely affect the influence of customer information management as a CRM process on new product performance.

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Figures and Tabela

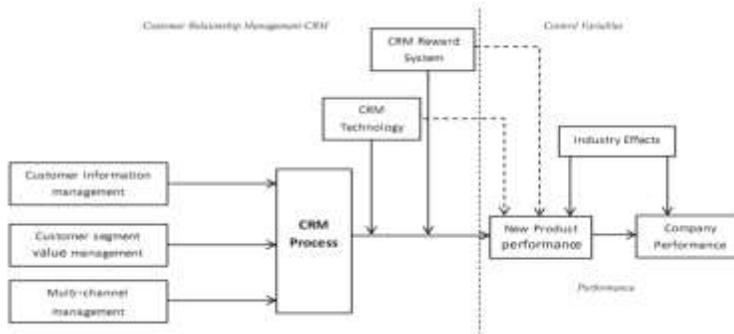


Figure-1 Theoretical Frame Work

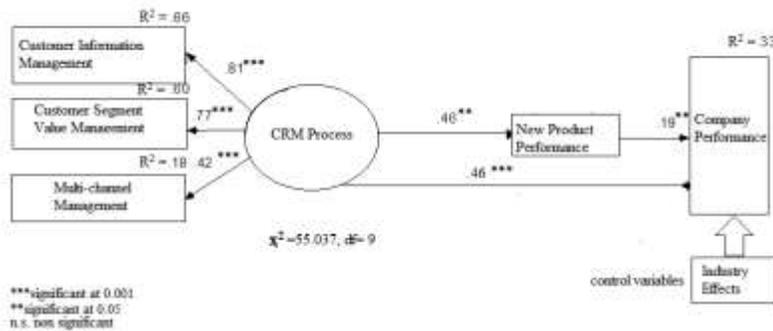


Figure-2 Model with Regression weights

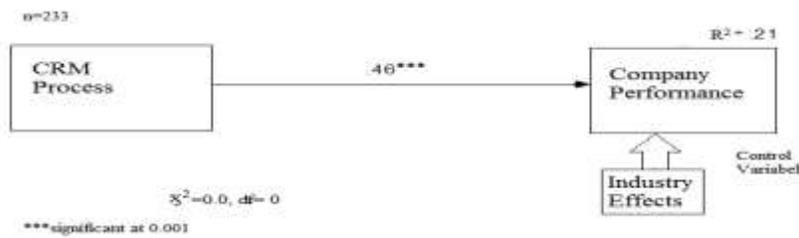


Figure-3 Test of mediation without NPP

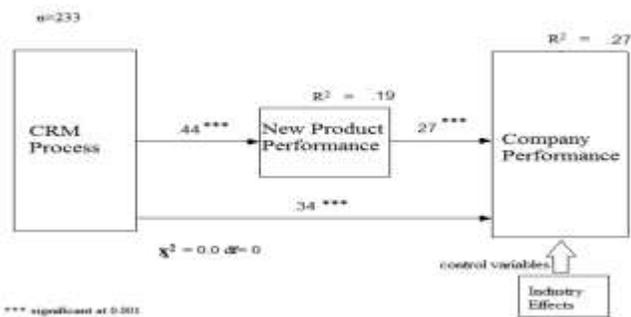


Figure-4 Test of Mediation with NPP

Table-1 Regression weight

Validity and Reliability of Items	
Measurement model for customer information management	
<i>Application the following customer-oriented activities in NPD (New Product Development)</i>	Weight (VIF)
Assessment of customer information requirements	0.454*** (1.259)
Retrieval of customer information that is already available within the organization	0.458*** (1.265)
Generation of new customer information	0.613*** (1.602)
Storage and maintenance of customer information in a comprehensive database	0.358***(1.1461)
Enabling access to customer information for all relevant departments	0.407*** (1.197)
Active dissemination of customer information to all relevant departments	0.492*** (1.319)
Identification of structures and patterns in customer information	0.474*** (1.290)
Examination of detailed customer profiles including their behaviors, needs, and desires	0.356*** (1.145)
χ^2 (Chi-square) = 35.619, df = 20, (cronbach's alpha) α =0.673	
Measurement Model For Customer Segment Value Management	
<i>Integration of the following types of customers into NPD</i>	
Economic	
Customers are economically attractive with respect to past business	0.393*** (1.183)
Customers are economically attractive with respect to present business	0.480*** (1.300)
Customers are economically attractive with respect to future business	0.424*** (1.219)
Informational	
The customer recognize problems early would benefit significantly from the new product/service	0.495*** (1.324)
The customers have high degree of application knowledge as a product user	0.432*** (1.230)
Opinion leader	
The customers talk very often about new products in their social environment	0.539*** (1.410)
Customers give a lot of information in discussions about new products to members of their social environment	0.391*** (1.180)

Customers very likely to be asked questions about new products by members of their social environment	0.496*** (1.326)
Customers often used as a source of getting advice by members of their social environment	0.363*** (1.152)
Relationship quality	
You have maintain a long-term relationship with the firm	0.477*** (1.295)
You have established frequent contacts with the firm	0.419*** (1.213)
Do you generally trust	0.406*** (1.197)
Are other organizations satisfied with the relationship with your firm	0.377*** (1.165)
The customer motivated to work with you	0.458*** (1.265)
χ^2 (Chi-square) = 172.323, df = 77(Cronbach's alpha) α =0.767	
Measurement Model For Multi-Channel Management	
<i>Usage of the following channels for interacting with customers in NPD</i>	
Phone	0.675 n.s. (1.028)
Mail/fax	0.725 n.s. (2.061)
Internet	0.717 n.s. (2.105)
E-mail	0.168 n.s. (1.838)
χ^2 (Chi-square) = 1.411, df = 2, (Cronbach's alpha) α = 0.642	
Measurement model New Product Performance	
Impact of new products launched in the last 3 years on today's total revenues	0.402 * (1.210)
Return-on-investment of new products launched in the last 3 years	0.495 * (1.243)
Impact of new products launched in the last 3 years on today's profits	0.443 * (1.324)
Profitability of new products launched in the last 3 years relative to the profitability of new products launched in the last 3 years by your main competitors	0.417 * (1.193)
χ^2 (Chi-square) = 2.541, df = 2, (cronbach's alpha) α =0.486	
Measurement Model For Company Performance	
Satisfaction by the current profitability	0.348 * (1.234)
Satisfaction about attaining growth targets	0.440 * (1.402)
Satisfaction about attaining market share	0.536 * (1.240)
Success in attracting new customers	0.435 * (1.137)
χ^2 (Chi-square) = 3.730, df = 2, (cronbach's alpha) α = 0.486	
*** p<0.001, **p<0.01, *p<0.05, n.s = non-significant	

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