CRM Capability to Model Firm Performance: Through Mediation of Supply Chain Integration andSCMC

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ABSTRACT

Companies have reacted to the apparent opportunities and threats of globalization through various global production practices that have increased supply chain complexity and various risks. In this complex situation delighted customers are backbone of the firm. To fulfill customer expectation and to enhance market and financial performance firms seek competitive capabilities. How firm knows that our customers are delighted they have started CRM practices to in order to interact with current and future customers. In a situation, The impact of CRM capability on firm performance is required to be investigated with mediation of SCI and SCMC. Based on 132 respondents cross sectional primary data about SCI and SCMC the results shows that SCMC impact the firm performance more than SCI. The result shows the partial and perfect mediation among study variables. This study makes some important contributions in existing literature of customer relationship and supply chain, by empirically testing the mediating role of SCI and SCMC between the relationship of CRM capability and firm performance. Managerial implications along with future directions are offered.

key words: CRM, Supply chain, firm performance,

1 Introduction

1.1 Background of the study

Firm performance has become an important component of empirical research in business policy fields. Firm performance is a broad concept that encompasses various dimensions of the operational, management and competitive excellence of firm and its activities. Apart from financial performance, some non-financial performance indicators have been noted in prior studies to enhance understanding of firm performance, like satisfaction and market performance (Chen & Quester, 2006). Firm performance has different dimensions like excellence in operations, revenue growth and

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relationship with customers (Slywotzky, 2000). Firms can get Excellency in operation by integrating supply chain. Attracting and retaining customer is the core purpose of any business. To get superior performance, firms required to integrate their supply chain (Lee, 1997). Davaraj (2007) said firms can reduce their cost, improve quality and deliver service or good on time at desired location if they integrate their supply chain. This will improve operational performance of the firm. As supplier integration become stronger and stronger, as a result manufacturing expenditures reduced and inventry turnover go toward its maximum.

CRM has positive and considerable impact on satisfaction of customers, their loyalty and on profit of the firm (Yim, Andereon, 2004). CRM considers customers as assets of the firm and listen their suggestions while negotiating with them and they build long term relationship with their customers. CRM is cross-functional process (Payne & frow, 2005; parvityar & Sheth, 2001). Morgan (2009) argued capabilities are abilities and organized knowledge which firms used for acquiring, deploying and to control resources to get better performance. Actually capabilities are normally controlled through organizational processes and provide opportunity for firms to look up their activities more efficiently and effectively (Day, 1994). There is a difference between capabilities and resources. Resources are static but capabilities are well defined process (Vorhies & Morgan, 2005). CRM capabilities are skills and build up processes of the firms which help to "identify attractive customers and prospects, establish and improve existing relationship with attractive customers and enhance these relationships to profitable stage" (Morgan, pg, 909, 2009). Integrated supply chain brings efficiency in operations and streamlines flow, which reduce the time interval between delivery of the service or product and request for that service or product (Hult, 2004). The objective of integrated supply chain strategy is to meet the requirement of final customer with the flow of material and information along a supply chain in order to reach a balance between high customer service and cost.

1.2 Significance of the study

This research help management of those businesses in Pakistan which are interested in implementation of CRM capability to enhance firm performance. This will also show the advantages and disadvantages (if any) of the supply chain integration (SC Integration) and supply chain management capability (SCMC) while improving firm performance.

1.3 Problem Statement

Customers are the assets of any organizations. Initially produce in bulk and then send it to market but now trend been changed due to competition and

access of information (Wang, 2013). Now customer demands more customized products and services. Firms are required to keep in touch with their customersFor understanding what trend is going now and what will be the requirement of customer in coming years. Firms practiced different tactics for establishing relationship with customers (Chau, 2009). From among different ways, one way is CRM capability which means how CRM capability impact the firm performance. SCM capability and integration of SCI are those elements which may impact the relationship of customer and service provider. In competitive environment where world become global village, there is a requirement of such study which can elaborate customer and service provider relationship. This study find out the direct relationship between CRM capabilities and firm performance. Mediation of supply chain integration and supply chain management capability is also tested.

1.3 Aim of study

The aim of study is to investigate the impact of CRM capability on the firm performance through the mediation impact of supply chain integration and SCM capability.

1.5 Research objectives

1. To investigate the effect of CRM capability on firm perfromance.

2. To inspect the mediation of supply chain integration between CRM capability and firm performance.

3. To investigate mediation effect of SCM capability between CRM capability and firm performance.

1.6 Research Questions

1. Does CRM capability affect the firm performance?

2. Does supply chain integration mediate between CRM capability and firm performance?

3. Does SCM capability mediate between CRM capability and firm performance?

2. Literature Review

2.1 CRM Cpability

CRM is defined as a set of different processes which help a business strategy. Attraction of new customers, identifications of new customers and retaining existing customers and developing long-term sustainable relationship with customers are the major dimensions of CRM (Chau, 2009). Important aspect of successful marketing practices is to develop long term relationship with customers. These long term relationship must be converted to close relationships. Customers are assets of firm and competitive value can be enhanced by managing them (Wang, 2013). Boulding (2005) defined three components of CRM (1) people (2) resources and (3) technology. Yim (2004) suggested another component 'strategy' as fourth part of CRM.

Zablah, Bellenger and Johnston (2004) concluded CRM as one or combination of five perspectives; CRM as strategy, CRM as philosophy, CRM as process, CRM as an information technology application and as organizational capability. Customer loyalty is a key to business profitability. Firm must pay more focus on serving the customer so customer becomes delighted and remain with firm (Piccoli, O'connor, CapaCCioli & Alvarez, 2003; Hassan, 2003).

CRM as strategy means maximum utilization of organizational resources to achieve a favorable market position. So this means not every relationship is good, manager should pay more attention to those customers who contribute more or highest value to the firm (Ryals, 2005).CRM as a process means "a collection of tasks or activities that help organization to achieve desired business outcome" (Hammer, 2001). Information technology solution support the business for building of profitable customer relationship (Torggle, 2008; Ang & Butlle, 2006). Capabilities are defined as skills or expertise of group or group members to perform firm's activities or tasks in such a way that create competitive advantages for firm (Grant, 1991). CRM as organizational capability is broader view of CRM because it integrates CRM processes with necessary tangible and intangible assets which are required for carrying out processes.

CRM capability is known as multi-dimensional construct which include management of customer interaction, up gradation of customer relationship and win back relationship of customers (Reinartz, 2004; Parvatiyar &Sheth, 2001). Customer interaction management capabilities are those skills that help in identification of new customers, acquisition of new customers and retention of exiting profitable customers. Expensive items or products and cross selling of products and services is done through customer up gradation strategy. Customer win-back capabilities mean re-establishment of relationship with inactive or profitable lost customer and on long run those

customers will have positive impact on firm performance (Reichheld & Sasser, 1999).

CRM initiative still faces high failure rates ranging between 50 to 70 percent (Awasthi & Sangle, 2012). Coltman,(2007), Wang and Feng (2012) explained the failure rate due to high emphasis on CRM but ignoring the other resources needed to establish a superior CRM capability. Day (1994), Grant (1991) and Barney (1995) suggested research based view model. This model suggests, firm should integrate their resources so that they can create distinctive capabilities that are difficult to replicate so that firm can take sustainable and consistent competitive advantages.

2.2 SCM Capabilities

To fulfill customer expectation and to enhance market and financial performance firms seek competitive capabilities. Supply chain management is future area for sustainable competitive advantage (Coyle, 1990; Fawcett, & Chinton, 1997). Now supply chain is not passive control but it is proactive in shaping of competitiveness and profitability (Holcomb, 1994). Building of successful supply chain offers opportunities for creation of maintainable competitive advantage (Cooper, 1997; Higginson, & Alam, 1997).

Lambert (1998) defined SCM as "Supply chain management is the integration of key business process from end user through original supplier that provides products, service and information that add value for customers and stakeholders". Traditional and nontraditional logistic activities are these processes. Traditional activities are ware housing, inventory control and transportation management while nontraditional logistic activities include purchasing of goods, production support activities, packaging and customer's order processing. So core concept of SCM is integration across business operation for satisfaction of customer, value creation, exceptional returns and long run competitive advantage. Superior SCM creates value for members of supply chain (Drayer, 1999).

2.3 Supply Chain Integration

Morgan (1997) defined the SC integration "the alignment of buyers, supplier and customer & their process to achieve an advanced form of competitive advantage". According to Marash and Clinton (1997) "the organizational efforts by three or more firms to manage and integrate material and related information flows in order to get closer to customer".

Firms are approaching to niche markets and targeting their customers with more customized products . Due to customization product portfolio size is expanding and appearing without limits. If a firm removes one product from its portfolio, 1.8 new products are ready to take place (Hoole, 2006). To maintain excellent business performance firms encounter challenges and

difficulties (Closs, 2008). Few approaches have been explored so for, but supply chain integration is one approach that organizations accepted because integration facilitate/enhance firms ability to respond customer quickly and timely. It also keeps in touch with international markets. The improved and sustainable linking of business partners brought significant improvement in firm's performance through integration (Goffiu, 2000; Kimm, 2006).

Supply chain integration is of two types. One is upstream and second is downstream integration. Upstream integration means, firms integrate their all suppliers so that enhancement in performance may be achieved. It is a process of restructuring and interlinking different firms by coordination, by sharing information and resources (Katunzi, 2011). Suppliers now directly participate in firm decision making process by providing accurate information timely (Peterson et al, 2003). Downstream integration means to engage customers with firms. Frohlich and West brook (2001), Narasimhan and carter (1998) argued, customer integration is a forward flow of goods and services and in return provides information to the firms. Pagh and cooper (1998) and Van, (1998) concluded integration as, engagement of customer in decision making process about how firms sold the products to them and it will bring coordination between customer and firm by improving existing methods and introducing new strategies (Frohlich& west brook, 2001). Close customer relationship reduces lead time and help in product traceability. It also leads to accurate, reliable and improved information exchange how firm can proactively understand customer requirement and satisfy them (Chin, 2004).

2.4 Firm Performance

Firm performance can be defined as a way where organizations compete with organizations for achieving market oriented and financial targets (Yamin, Gunasekaran, & Mavondo, 1999). It refers to the firm's financial and market performance (Slater & Narver, 1994). Prior studies showthat firm performance is multi-dimensional and a multifaceted construct (Carton & Hofer, 2010; Dvir, Segev, & Shenhar, 1993). Firm performance can be categorized by different methods. Dvir (1993) said that firm performance can be measured by market or sales growth, financial outcomes or customer satisfaction. Carton and Hofer (2010) suggested that financial performance is multifaceted variable. Venkatraman and Ramanujam (1987) considered profitability and growth components of performance. Performance of a firm is reflected from perceived benefits that estimated from integration of environmental management in business operation.

Firm performance concept is very important to management research. It explains variation in performance which is continuously debatable topic in

organizations (Helfat & Peteraf, 2003). It is a multidimensional construct which contains different aspects like organizational survival, corporate reputation and operation effectiveness (Richard, Devinney, Yip, & Johnson, 2009), and one of most important and extensively studied area is financial component which is attainment or achievement of economic goals of firm (J. B. Barney, 2002). To measure financial performance firms mostly use measures based on accounting like return on equity (ROE) return on sales (ROS) and return on asset (ROA) (Gentry & Shen, 2010). Stock based measures are also used like market return (Shook, 2005). Both market based and accounting based measures are mostly accepted as authenticated indicators of financial performance of firm (Richard, 2009).

According to researchers market measures reflect long term or future financial performance and accounting measures reflect short term or past financial performance (Hoskisson, Johnson, & Moesel, 1994; Keats & Hitt, 1988). Firm performance can be estimated subjectively or objectively according to the financial or non-financial data. Objective measures can be made through quantitative data and subjective measures can be achieved through qualitative data. In objective measures of performance financial indicators like increase in the sales, investment, rates achieved from the sales and profitability are included while in non-financial performance measures subjective indicators like number of the products launched in the market share, marketing activity, technological activity and product quality discussed. Firm performance can be measured by objective that is financial measures or subjective that is non-financial measures (Örnek & Ayas, 2015). Due to rapid changes in today's business environment firm's quick actions are required to respond to the changes in the environment. According to Salomon and Martin (2008) firms that quickly respond to the customers and business environment changing needs and adapt encourages innovation can enjoy permanent competitive advantage in the fast changing competitive industries. So it is very important to improve firm performance to continually innovate to make their products better than the rest of the market. If firms do not respond to changes in customer needs, customers may not like their products anymore and switch to other firms products which can affect firms profits which ultimately affects firm performance (Chang & Rhee, 2011). Firm's ability to exploit its resources through some operational capabilities is very important to firm's market success.

Operational capabilities have more importance than possession of the resources (O'Cass & Sok, 2012), it means simply by possessing some resources firms cannot achieve specific marketplace objectives in the competitive markets without the aligned capabilities. Firm may own non

substitutable, valuable and rare resources, but can fully realize this potential through its superior operational and marketing resource deployment capabilities (O'Cass, Ngo & Siahtiri, 2015).

Performance measurement of a firm plays very important role in observation, development and implementation of a strategic plan. It helps managers in evaluation of firm's objectives whether they are achieved or not and firm is moving in same direction they want it to go (Teeratansirikool, Siengthai, Badir, & Charoenngam, 2013).

Strong relationship between firm resources and firm performance exist. According to resource based view (RBV) on the basis of some unique resources firm can compete with other firms (Wefald, Katz, Downey, & Rust, 2010). The question is which resources enhance the firm performance? Some theorists said that firm resources that cannot be easily replaced by the competitors will increase firm success and enhance its performance (Wernerfelt, 1995). According to J. Barney (1991) competitive advantage can be generated form its resources if they contain following attributes Inimitability, value, non-substitutability and rarity. Teece (2007) said that processes used by firm directly affect the firm performance. According to RBV firm performance depends on how well organization resources are used or on treatment of firm's resources (Wefald, 2010). But firms not only concentrate on growth and profitability in the present but also focus on its future position. That how firm will compete in the future on basis of this resource and enhance firm performance. Hamel and Prahalad (1994) highlighted importance of "competing for future" as an ignored dimension of firm performance.

Firm performance is a multifaceted concept (Venkatraman, 1989). Firm performance is measured through different dimensions including market growth, increase in market share and firm image in main reputation group. Profitability is another dimension of firm performance (Xiaoying, 2008). Performance outcome is positive, significant impact of supply chain integration (Wu, 2009).

In an environment where competition exists firm performance is a fundamental issue.. Firm performance denotes to what level the firm achieves its desired market oriented goals as well as its financial goals (Yamin, 1999). Organizational performance is improved by any organizational initiative undertaken to its SCM (Strock, 2000).

2.5 Theoretical Reflection

The resource based view is suitable frame work to measuring firm performance and supply chain (Olavarrieta, & Ellinger, 1997). The resource based view complements traditional industrial organizational theory by

considering resources as competitive value for the firm. Unique resources of the firm put up competitive return to firm as compare to its competitor (Barney, 1991).

Structural contingency theory suggest, an external environment impact the strategies of the firm. As supply chain structure get change, manufacturer should change its processes so that cannot get disturbed and remained fit in organizational environment (Hambrick, 1983; Kotha & Nair, 1995). To form efficient and improved SCI, customer and supplier integration is required.

Learning organization always improves and enhances their organizational knowledge. They learnt from past experiences (March, 1991). There is several aspect of organizational learning but the key aspect is dealings of parties and collaborations of parties (Argyris & Shon, 1978). Organizational knowledge is based on facts, results of experiences, interpretations, observations and measurements (Alavi & Leidner, 2001).

According to Nonaka (1994) knowledge is result of how information exchanges among parties and smooth flow of information so learning mean, information gathering and associated benefits with that information.

2.6 Gap in Literature

Despite the extensive research on CRM, it is not well understood in South Asian countries and especially in Pakistan. Very few studies were conducted in Pakistan. This study explored the relationship between CRM capability on firm performance through mediation of supply chain integration and supply chain management capability.

Clear directions are given by prior literature on firm performance and supply chain integration (Frohlich & west brook, 2001). Results of researchers are not consistent, some researchers concluded that supply chain integration do not affect firms performance (Rodrigue, 2004), direct effect (droge, 2004; Kim, 2009) and mediated effect (Stan 2001; Vickery, 2003). Different scholars have different views about SCI and firm performance (Fabbe, Costes & Jahre, 2007 & 2008). Results of researchers are not consistent so this inconsistency in researcher's findings provides us an opportunity to test the supply chain integration and firm performance in the association of customer relationship management capability and supply chain management capability.

2.7 Substantiating Evidence from literature

Capabilities are abilities of firm that make organization unique to its competitors. CRM capabilities are totally depending on technology and knowledge as knowledge and technology is improving firm are going toward more customizations (Plakoyiannaki & Tzokas, 2002). In first stage firm manage interaction with its customer, in next stage firms upgrade their

relationship with customers and as a result customer win back capability work (Sofi, 2013). Customer capabilities from four phases (1) Customer interaction management (2) customer relationship upgrading (3) customer win back management and (4) last is customer knowledge management capability (S. Yildiz, 2010). In this competitive environment business performance is core objective of organizations. To perform better business performance, firms are required to look on immeasurable and uncontrollable factors. Business goals should be revised time by time so that business performance can be measured and evaluate (Sebahattin Yildiz & Karakas, 2012). A qualitative and quantitative criterion is required to measure business performance (S. Yildiz, 2010).

2.8 Critical analysis of literature

Researchers emphasized close and long term relationship between manufacturing firm and their supplier. Integrated supply chain with manufacturing line support organization to reduce cost, enhance business performance and improve delivery of products and services (Lambert, 1978). Increased competition among firm emphasize to firm to reset their relationship with supplier. Systematic approach is required to re-establish long term beneficial relationship with supplier (Lambert, & Cooper, 2000). Ryals (2005) explored that those firm who consider customer as assets of firm and apply customer relationship management can earn more than 270%. Stock price is also increased by satisfying customers and making them loyal customers (Fornell, Mithad, & Krwashnan, 2006). Conclusion of prior studies recommends that supply chain integration must impact performance of firm (Frohlich & west brook, 2001).

3. Theoretical framework

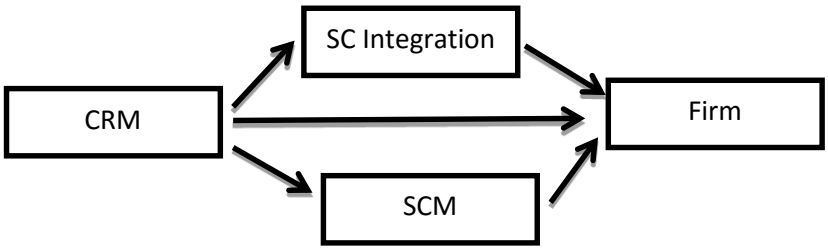


Figure I Theoretical Model

H1: CRM capability has direct positive impact on firm performance.
H2: CRM capability has direct positive impact on supply chain integration.
H3: Supply chain integration has direct impact on Firm performance.
H4: CRM capability has positive impact on firm performance through mediation of SC Integration.
H5: CRM capability has positive impact on SCM capability.

H6: SCM capability has direct impact on firm performance.
H7: CRM capability has positive impact on firm performance through mediation of SCM capability.

4. Research Methodology

The data was collected from CRM and supply chain managers of different firms. These firms are randomly selected from the list provided by Haripur chamber of commerce and Islamabad chamber of commerce. In an competitive environment, where every firm is trying to compete its competitor and increase market share. For maximizing sales and acquiring new customers, role of CRM capabilities becomes significant. Without support of whole system CRM does not work a lonely. As this study tested the relationship between CRM capabilities and firm performance through mediation impact of SCI and SCMC separately.

4.1. Sample Selection

Krejcie & Morgan(1970) created the table by using following formula.

$$n = \frac{X^2 * N * P\ (1-P)}{(ME^2 * (N-1) + (X^2 * P * (1-P)}$$

Where
n= Sample Size
X^2= Chi-Square for the specified confidence level at 1 degree of freedom
N= Population Size
P= Population Proportion
ME= Desired Margin of error (expressed as a proportion)

Table 4.1
Sample Size Table

	Size of Population					
Margin of error	>5000	5000	2500	1000	500	200
+/- 10%	96	94	93	88	81	65
+/- 7.5%	171	165	165	146	127	92
+/- 5%	384	357	333	278	217	132
+/- 3%	1067	880	748	516	341	169

Among the population of 300 registered firms at Haripur chamber of commerce and Islamabad chamber of commerce we calculated sample size which is 150. To get 150 responses we approached the 200 randomly selected organizations directly and indirectly (online sources). Among the two hundreds questionnaires 153 questionnaires we collected either online and by hand as well. From returned questionnaires 10 questionnaires found incomplete or they are falling in outlier category so we excluded 10 more questionnaires. At the end 143 questionnaires were used to test the impact among variables.

4.2. Unit of Analysis

How CRM capabilities impact firm performance was the core task that we investigated. Whether SCI and SCMC separately mediate the relationship or not. To find the desired relationship our respondents for this research were CRM and SC managers. On the basis of information provided by managers we evaluated firms or organizations. So unit of analysis for this research is firm and their mangers are respondents.

4.3. Data Collection

Cross sectional primary data is collected for this research work. Questionnaires were distributed among randomly selected firms located at Haripur (Hattara Industrial Zone) and Islamabad (I-9, I-10). Major part of the questionnaire consisted on likert scale questions and some portion consisted of descriptive information like age, experience, income and gender etc. All close ended questions consist of 5-point Likert scale questions starting from 1 for strongly disagree to 5 for strongly agree and 3 nor for agree and disagree.

Sample is drawn by using simple random sampling technique. Haripur chamber of commerce and Islamabad chamber of commerce provided list of registered manufacturing firms. Selected firms were approached directly by visiting and contacting them. Some of the managers asked about online questionnaire. So they were provided such facility also. Data is collected in two months i.e. March, April, 2016.

4.4. Type of Study

This is survey based quantitative study showing positivism paradigm of philosophy. This whole study depends on primary data and it is deductive in nature.

4.5. Instrument Selection

Supply chain management capability: In this study 9 items scale of Lin, Madu and Lu (2004) is adopted for collection of the information about supply chain management capability. This scale focus on supplier

relationship management and how much suppliers are involved in decision making process.

Firm performance: Firm performance is evaluated by 4 items scale. These four items were adopted by study of Chan, Huff and Barclay (1997) scale for information gathering. It includes market share growth and income growth also.

CRM capability: CRM capability is measured by 12 items scale presented by Churchill's (1979). It is used by many researchers so for, it is valid and reliable for collection of CRM capability information. It covers three dimensions of CRM capability (1) customer interaction management capability (2) customer relationship upgrading capability and (3) customer win back capability.

Supply chain integration: 6 items scale of Frohlich and Westbrook (2001) is adopted for measurement of supply chain integration. It is extensively used for collection of information by many researchers since 2001. Results and information from this instrument are valid and reliable.

Data Analysis

Two methods were used to examine the mediation impact of supply chain integration and supply chain management capability on association of CRM capability and firm performance. First method that was used is direct regression test which describe the direct relationships among independent variable, dependent variable and mediator variable and second method is Baron and Kenny (1986) four steps which describe the mediation effect between independent and dependent variable.

SPSS is used to analyze the data. It is appropriate software that helps to identify relationship among variables and it is readily available software in market. Correlation, regression model and descriptive analyses are checked by testing the hypotheses.

4.6. Data Analysis and Results

The current study used different tests like reliability test, regression and correlation to analyze the data.

Table 4.2

Descriptive of Cronbach's Alpha

Construct/Dimensions	No of Items	Cronbach's Alpha	Standard Deviation
SCMC	9	.830	5.13
FP	4	.637	3.04
CIM	4	.717	3.06
CRU	4	.760	3.15

CWB	4	.628	2.97
SCI	6	.715	4.16

To see the internal consistency of study the Cronbach's alpha was computed. The cut off value of this alpha is .70 (Nunnally, 1978). Some researcher argued that the 0.6 value of Cronbach's alpha is also sufficient for reliability and result at 0.6 are valid and reliable (Yong, Hua & Mei, 2007). A study of Nunnally (1978) alpha value ranging between 0.5 and 0.6 is adequate for introductory study. The Cronbach's alphas values are above the standard value of 0.70which shows the significance and reliability of the information. One variable and one dimension of other variable have the Cronbach's alpha value less than 0.7 but still they are meeting the standard value of Yong, Hua and Mei (2007). Those two are firm performance and customer win back capability, a dimension of CRM capability. The Cronbach's alpha value of supply chain management capability is 0.830 with 9 items scale which is reliable and statically significant. The Cronbach's alpha of firm performance is 0.637 significant in the light of Yong et al (2007) research work. Four items were used for information gathering. Customer initiation management capability is significant at 0.71 alpha value. Customer initiation management capability is a dimension of CRM capability and four items were utilized for recording of the responses from sample. Second dimension of CRM capability is customer relationship up gradation capability. Customer relationship up-gradation management capability has the alpha value of 0.76 which is the sign of significance and reliability for accurate information collection. The information was collected by utilization of four items. Third dimension of CRM capability is customer win back capability. Four items provide the information about this dimension and alpha value is 0.62. SCI was measured through 6 items and gave the alpha value 0.71. It is significant and reliable value.

From above findings and discussion it is apparent that the alpha values are supporting all the construct and dimension for further analysis. So the results from these variables will be reliable and generalize able.

4.7. Descriptive analysis

As a 5-point likert scale was used in the questionnaire, where the minimum value was 1, which showed strongly disagree and 5 was maximum which showed strongly agree related to the items. The mean is average of the responses, which for this study; Result was greater than 3 or close to 4 which showed that most of the data is towards agrees. After taking the mean of each variable it was calculated that how each variable was deviated from its mean which is usually called standard deviation, where N shows the total number of useful respondents. All the values are shown in table 4.3.

Table 4.3

Descriptive of Variables

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CRM Cap	143	2	5.00	4.00	.64	.42	-.701	.203	.175	.403
SCI	143	2.17	5.00	3.97	.69	.48	-.571	.203	-.213	.403
SCMC	143	2.78	5.00	4.19	.57	.32	-.400	.203	-.701	.403
FP	143	1.75	5.00	3.75	.76	.57	-.487	.203	-.307	.403
Valid Number	143									

In this table we have minimum, maximum, mean, standard deviation, skewness and kurtosis of the data used in the study. The minimum value shows the minimum response that is 2.00 and maximum value shows the maximum response i.e. 5 for CRM capability. The mean of CRM capability is 4 which shows that most of the respondents tend to agree towards CRM capability as the mean is greater than the value of 3.5 which is middle value between 2 and 5. The std. deviation of CRM capability is .64. The value of skewness and kurtosis of CRM capability came out to be -.70 and .175 respectively. The minimum value shows the minimum response that is 2.17 and maximum value shows the maximum response i.e. 5 for SCI. The mean of SCI is 3.97 which shows that the response was between agree and disagree both as the mean is around the value of 3.5, the middle value between 2.17 and 5. The std. deviation of SCI is .69 shows that most of the responses lies around mean with variation of +ve and –ve 0.69. The value of skewness and kurtosis of SCI came out to be -.571 and -.213 respectively. The minimum value shows the minimum response i.e. 2.78 and maximum value shows the maximum response i.e. 5 for SCMC. The mean of SCMC is 4.19 which shows that the response was between agree and strongly agree both as the

mean is around the value of 4 the middle value between 2.78 and 5. The std. deviation of SCMC is .57 shows that most of the responses lie around mean with variation of +ve and –ve .57. The value of skewness and kurtosis of SCMC came out to be -.40 and -.70 respectively.

The minimum value shows the minimum response that is 1.75 and maximum value shows the maximum response i.e. 5 for firm performance. The mean of firm performance is 3.75 which show that most of the respondents tend to agree towards firm performance as the mean is greater than the value of 3.25 the middle value between 1.75 and 5. The std. deviation of firm performance is .76 shows that most of the responses lies around mean with variation of +ve and –ve .76. The value of skewness and kurtosis of firm performance came out to be -.48 and -.30 respectively. The skewness values less than from one and greater than -1 shows that data is normally distributed and this is also supported by kurtosis values which lies in the range of +3 and -3.

4.8. Interpretation of Data

Among the received 143 questionnaire none of the respondents were female. All respondents were male and consist of 100% of total population.(See Table 4.5)

Table 4.4

Descriptive of Gender (N=143)

Category	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Male	143	100	100	100
Female	0	0	0	0
Total	143	100	100	100

Education descriptive shows that most of the respondents were highly educated. Only 5 respondent having education at F.A/F.Sc level. Frequency for bachelors is 101; Masters 32 and other include Ms, PhD and Mpm is 5. Bachelors are high in frequency and 70.6% of total sample so most respondent are highly educated.

Masters marked 22.4% of total sample and second highest value is sample where as 3.5% peoples were others in education.(See Table 4.6)

Table 4.5

Descriptive of Education (N=143)

Category	Frequency	Percentage	Valid Percentage	Cumulative Percentage
FA/F.Sc	5	3.5	3.5	3.5

Bachelors	101	70.6	70.6	70.6
Masters	32	22.4	22.4	22.4
Others	5	3.5	3.5	3.5
Total	143	100	100	100

Table 4.7 indicates that majority sample for this study age between26 and 30. 50.30% almost around fifty percent of the respondents are youngsters peoples and acquired information from them will be reliable. The second highest frequency shows the respondents are falling between the age of 20 and 25, and consist of 25.2% of total sample. The respondents having age between 31 and 40 are 22.40% of total population. 2.1% respondents were more than 41 years old. We did not include any respondent in sample who is having age less than 20 years.

Table 4.6

Descriptive of Age (N=143)

Years	Frequency	Percentage	Valid Percentage	Cumulative Percentage
20-25	36	25.2	25.2	25.2
26-30	72	50.3	50.3	50.3
31-40	32	22.4	22.4	22.4
40<	3	2.1	2.1	2.1
Total	100	100	100	100

Table 4.5 shows the result of experiences held by the supply chain mangers . Among them, 59.4 % had the experience ranging from 1-5 years where as the second highest were 39.9% holding 6 to 15 years of the experience. Only 1 respondents were having experience more than 16 years which is 0.7% of the total sample

Table 4.7

Descriptive of* Experience *(N=143)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 Years	85	59.4	59.4	59.4
	6-15 Years	57	39.9	39.9	99.3
	16-25 Years	1	.7	.7	100.0
	Total	143	100.0	100.0	

Among the sample of 122, the multinational firms hold 41% with 50 frequency where as national companies hold 59% with frequency of 72

Table 4.8

***Descriptive of* Company**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Multinational	57	39.9	39.9	39.9
	National	86	60.1	60.1	100.0
	Total	143	100.0	100.0	

4.9. Correlation

Correlation is a statistical tool which is used to describe the degree of relationship among different variables. The correlation explains the level in which the servant leadership is connected with the all other variables. Correlation analysis is the statistical tool which we use to determine the strength and direction of relationship between two variables either in positive way or negative and weak and strong. The value of correlation ranges from +1 to -1 and both these values show highest positive and negative relationship. While the value zero value is showing that there is no relationship exists. Correlation among different variables is shown in table 4.9.

Table 4.9

Descriptive of Pearson's Correlations

	Constructs	**1**	**2**	**3**	**4**
1	CRM Cap	1			
2	SCMC	.45**	1		
3	FP	.39**	.29**	1	
4	SCI	.40**	.57**	.30**	1

**p<.01, *p<.05

The above table shows that the all variables are positively correlated. The most correlated value in present study is between the SCI and SCMC, which has a correlation value of 0.57 and is significant at the value of 0.01. It is pursued by the CRM capability and SCMC with the Pearson correlation value of 0.45 and is significant at the value of 0.01. Then later to that the SCI has a correlation value 0.40 and is significant at 0.01 with CRM capability.

The correlation between the CRM capability and firm performance is 0.39 and is significant at 0.01. Whereas SCMC and firm performance have positive but weak relationship with r=0.29 at significant level of 0.01 also SCI and firm performance have 0.30 value of Pearson's correlation.

The table no 4.9 shows that relationship between CRM capability and SCMC is strong positive and statistically significant. CRM capability also has positive and significant relationship with firm performance. CRM capability and SCI also have positive relationship at $p<0.01$. SCMC and firm performance have positive correlation and significant. Similarly SCMC and SCI has strongest positive correlation at $p<0.01$. Firm performance and SCI are positively correlated at significant level of less than 0.01.

This table results shows that all relationships are uni-dimensional and none of the relationship is inverse to other. Although two relationship are weaker but still they are significant at $p<0.01$ so they have the overall effect.

4.10. Hypotheses Testing

4.10.1 Direct Effects

The regression shows the relationship among independent variable and dependent variable. The value of R^2 ranging from 0 to 1, one value shows the perfect relationship that all the changes occur in dependent are due to independent variable.

The P value shows the significance level of the result. If the value of P is less than 0.05 then it is considered as significant relationship between dependent and independent variable with 95 percent confidence level and if the value is less than 0.01 then it might be considered as highly significant relationship with 99.99 percent confidence level.

Table 4.10

Regression Analysis of CRM Capabilities w.r.t Firm Performance (N=143)

Variables	B	S.E	β	t	R^2	F
Constant	1.89	.36		5.16**		
CRMC Capabilities	.46	.09	.39	5.12**	.15	26.22**

**p<.01, *p<.05Dependent variable Firm Performance

Table 4.10 shows the regression analysis between CRM Capabilities and Firm Performance. The R^2 value shows the variation that is brought by CRM Capabilities in Firm Performance. The figure 0.15 is showing that 15% variation is due to CRM Capabilities.

β value 0.39 indicates that CRM Capabilities positively and significantly change the Firm Performance. It is also verified by t-test which is 5.12 at $p<0.01$. F value also supports our results with value of 26.22 at significant

level of 0.01. Hence from above discussion we conclude that CRM Capabilities has positive impact on Firm Performance so in this case H1 is accepted.

Table 4.11

Regression Analysis of CRM Capabilities w.r.t SCI (N=143)

Variables	B	S.E	β	t	R^2	F
Constant	2.24	.33		6.72**		
CRMC Capabilities	.43	.08	.40	5.25**	.16	27.06**

**p<.01, *p<.05 Dependent variable SCI

Table 4.11 shows regression results of CRM Capabilities and SCI. We want to investigate CRM Capabilities relationship with SCI. For the sake of desired relationship we tested these variables by regression. We find R^2=0.16 which mean 16% variation in variable SCI is brought by CRM Capabilities. This is also supported by other factors as well like β value is 0.40 which mean positive and significant change is brought by CRM Capabilities in SCI. T value 5.25 significant at p=0.01 and F value 27.06 significant at p<0.01 also support the results.

So from above discussion we conclude that there is positive relationship exists between CRM Capabilities and SCI. Therefore H2 is accepted.

Table 4.12

Regression Analysis of SCI w.r.t Firm Performance (N=143)

Variables	B	S.E	β	t	R^2	F
Constant	2.44	.35		6.88**	.09	13.98**
SCI	.33	.08	.30	3.74**		

**p<.01, *p<.05 Dependent variable Firm Performance

Relationship between SCI and Firm Performance is tested by using regression. Regression result shows us that 9 percent variation in Firm Performance is brought by mediator variable i.e. SCI. β 0.30 value also support R^2 value and it is statistically significant at p<0.01 for t test. F test also support our result with 13.98 value but significant at p<0.01. SCI positively impact Firm Performance so H3 is accepted.

Table 4.13

Regression Analysis of CRM Capabilities w.r.t SCMC (N=143)

Variables	B	S.E	β	t	R^2	F
Constant	2.61	.26		9.75**	.20	35.70**
CRMC	.39	.06	.45	5.97**		

**p<.01, *p<.05 Dependent variable SCMC

Above table demonstrate the result of impact of CRM Capabilities on SCMC. Regression analysis of CRM Capabilities and SCMC shows that R^2=0.20 which mean 20 percent change in dependent variable is due to independent variable. β value is 0.45 with t statistic of 5.97 significant at p<0.01. F test also support our results by showing the value 35.70 significant at 0.01. Our assumed hypotheses H5 is accepted which tells us that CRM Capabilities has positive impact SCMC.

Table 4.14

Regression Analysis of SCMC w.r.t Firm Performance (N=143)

Variables	B	S.E	β	t	R^2	F
Constant	2.12	.45		4.67**	.08	13.09**
SCMC	.38	.10	.29	3.61**		

**p<.01, *p<.05 Dependent variable Firm Performance

SCMC directly impacts the Firm Performance. R^2 value 0.08 clearly shows us that 8 percent change in Firm Performance is due to SCMC. β value 0.29 also support the results and t statistics with value of 3.61 with significance level p<0.01. F test also support the result 13.09 and statistically significant at p<0.01. Hence from above discussion H6 is accepted and shows that SCMC has positive impact on Firm Performance

4.10.2. Mediation Effects

In this report, we check the mediation of SCMC and SCI with CRM capabilities and firm performance. The mediation is done in four steps, which was proposed by Baron and Kenny, (1986).

Table 4.15

Mediation Analysis of SCI between CRMC and FP (N=143)

Model	IV	DV	B	SE	β	t	R^2	F	ΔR^2
Model-I	CRM	FP	.46	.09	.39	5.12**	.15	26.22**	.15
Model-II	CRM	SCI	.43	.08	.40	5.25**	.16	27.06**	
Model-III	SCI	FP	.33	.08	.30	3.74**	.09	13.98**	
Model-IV	CRM	FP	.38	.09	.32	3.92**	.15	26.22**	
	SCI		.18	.09	.16	2.00*			

* p < 0.05, ** p < 0.01,

In step one; we have checked the direct effect of independent variable (CRM Capabilities) on the dependent variables (Firm Performance). The

value of R^2 is 0.15, which shows the selected independent variables explain 15% of dependent variable firm performance. The beta value of CRM capabilities attributes is .39 and significant at 0.01. The value of F is 26.22 and is significant showing that overall the model is significant and fit for predicting the dependent variable at $p<0.01$.

In step two; the impact of independent variable CRM capabilities is checked on mediator which is SCI. The value of R-square is 0.16, which shows the selected independent variables explain 16% of dependent variable. Beta value of CRM capabilities is 0.40 and significant at 0.01. The value of F is 27.06 at $p<0.01$ is significant showing that overall the model is significant and fit for predicting the dependent variable.

In step three; the impact of mediator SCI is checked on dependent variable, which is Firm Performance. The value of R-square is 0.09, which shows the selected independent variables explain 9% of dependent variable. The beta value of SCI is 0.30 and significant with t test 3.74 at 0.01. The value of F is 13.98 at $p<0.01$ and is significant showing that overall the model is significant and fit for predicting the dependent variable.

In step four; independent variable CRM capabilities is checked on dependent Firm Performance along with the mediator SCI. The value of R-square is 0.15, which shows the selected independent variables explain 15% of dependent variable. The beta value of CRM capabilities is .16 with t test 2 which is insignificant at $0.05<p$. The value of F is 26.22 significant showing that overall the model is significant and fit for predicting the dependent variables. This establishes partial mediation of SCI on CRM capabilities and firm performance.

H4 shows the relationship between CRM capabilities and firm performance. Baron and Kenny (1986) described four conditions for valid mediation. The first condition is that there should be relationship between dependent and independent variable. In our study first condition there is relationship between independent variable (CRM capabilities) and dependent variable (firm performance). (See table 4.9 & Model-I in table 4.15).

Second condition of Baron and Kenny (1986) state that there should be positive or negative relationship exist between independent variable and mediator variable. In this research independent variable (CRM capabilities) and mediator variable (SCI) has such relationship. We meet the second condition as well. (See table 4.9 & Model-II in table 4.15).

Third step is there should be relationship between mediator and dependent variable. In our case there is a strong relationship between mediator and dependent variable. (see Table 4.9 & Model-III in Table 4.15).

The fourth and important step is to check the impact of independent variable on dependent variable by controlling through mediator. For partial mediation β value must be decreased and R-Square value should increase and if already existing relationship become insignificant this mean there is perfect or complete mediation. In our case there is a partial mediation. T-test value is 2.00 at p<0.05. (See model-IV in Table 4.15)

In this report, we check the mediation of SCMC with CRM capabilities and firm performance as dependent variable. The mediation is done in four steps, which was developed by Baron and Kenny, (1986).

Table 4.16

Mediation Analysis of SCMC between CRMC and FP (N=143)

Model	**IV**	**DV**	**B**	**SE**	**β**	**t**	**R^2**	**F**	**ΔR^2**
Model-I	CRM	FP	.46	.09	.39	5.12**	.15	26.22**	
Model-II	CRM	SCM	.39	.06	.45	5.97**	.20	35.70**	
Model-III	SCM	FP	.38	.10	.29	3.61**	.08	13.09**	.15
Model-IV	CRM		.38	.10	.33	3.85**			
		FP					.15	26.22**	
	SCM		.19	.11	.14	1.652			

** $p < 0.05$, *** $p < 0.01$,

In step one; we have checked the direct effect of independent variable (CRM capabilities) on the dependent variables (firm performance). The value of R-square is 0.15, which shows the selected independent variables explain 15% of dependent variable firm performance. The beta value of firm performance attributes is .39 and significant at 0.01. The value of F is 26.22 and is significant showing that overall the model is significant and fit for predicting the dependent variable at p<0.01.

In step two; the impact of independent variable CRM capabilities is checked on mediator which is SCMC. The value of R-square is 0.20, which shows the selected independent variables explain 20% of dependent variable. Beta value of CRM capabilities is 0.45 and significant at 0.01. The value of F is 35.70 at p<0.01 is significant showing that overall the model is significant and fit for predicting the dependent variable.

In step three; the impact of mediator SCMC is checked on dependent variable, which is firm performance The value of R-square is 0.08, which

shows the selected independent variables explain 8% of dependent variable. The beta value of SCMC is 0.29 and significant with t test 3.61 at 0.01. The value of F is 13.09 at $p<0.01$ and is significant showing that overall the model is significant and fit for predicting the dependent variable.

In step four; independent variable CRM capabilities is checked on dependent firm performance along with the mediator SCMC. The value of R-square is 0.15, which shows the selected independent variables explain 15% of dependent variable. The beta value of CRM capabilities is .14 with t test 1.65 which is insignificant at $p>0.05$. The value of F is 26.22 significant showing that overall the model is significant and fit for predicting the dependent variables. When beta value is decreasing and R-Square value is increasing then partial mediation exist. But in this case perfect mediation exist because when mediator brought in direct relationship, the direct relationship become insignificant.

H7 shows the relationship between CRM capabilities and firm performance through mediation of SCMC. Baron and Kenny (1986) described four conditions for valid mediation. The first condition is that there should be relationship between dependent and independent variable. In our study first condition there is relationship between independent variable (CRM capabilities) and dependent variable (firm performance). (See table 4.9 & Model-I in table 4.16).

Second condition of Baron and Kenny (1986) state that there should be positive or negative relationship exist between independent variable and mediator variable. In this research study independent variable (CRM capabilities) and mediator variable (SCMC) have such relationship. We meet the second condition as well. (See table 4.9 & Model-II in table 4.16).

Third step is there should be relationship between mediator and dependent variable. In our case there is a strong relationship between mediator and dependent variable. (See Table 4.9 & Model-III in Table 4.16).

The fourth and important step is to check the impact of independent variable on dependent variable by controlling through mediator. For partial mediation β value must be decreased and R-Square value should increase and if already existing relationship become insignificant, this means there is perfect or complete mediation. In this research relationship between CRM capabilities and firm performance become insignificant when it is tested through mediation. Hence, perfect mediation exist between CRM capabilities and firm performance . (See model-IV in Table 4.16)

4.10.3 Sobel Test

To verify mediation effect we test the Michael E. Sobel's to find the significance of outcome of mediation. Values of online Sobel test are found

to be 6.64 for CRM capabilities that is significant at p-value 0.00. Thus, confirmed that SCI mediates the relationship between CRM capabilities and firm performance. The results show that mediation exists; hence, our hypothesis H4 has been supported. (See table 4.17 & Figure 1)

Similarly Sobel test value calculated for CRM capabilities, SCMC and firm performance found to be 6.69 with p-value of 0.00. This confirmed that SCMC mediates the relationship between CRM capabilities and firm performance. H7 is supported by Sobel test results. Hence H7 is also accepted.

Table 4.17

Mediation Analysis of SCI and SCMC between CRM Capabilities and FP Through Sobel test

Variables	Test statistic	Standard Error	P-Value
SCI	6.64**	.011	0
SCMC	3.799**	3.900	0.00

**p<.01, *p<.05

5. Discussion

With this paper we intended to investigate the impact of CRM capabilities on firm's performance. The results found the positive relationship between these two variables. The first hypothesis H1 was supposed to that the independent variable has direct positive impact on dependent variable. In the light of regression analysis, analysis shows that relationship exist with the β value of 0.39. This mean 1 unit change in independent variable will bring 0.39 change in dependent variable. Thus, supposition is supported by current results. Hence on the basis of these results it is concluded that there is a positive relationship between CRM capability and firm performance. H1 is accepted. Whether CRM capabilities impact the mediator variable or not. We proposed the second hypothesis H2 which is showing positive relationship between CRM capability and SCI. The correlation results support supposition and showed positive significant relationship between these two variables. β and t values support the correlations findings with 0.40 and 5.25 at $p<0.01$ respectively support the correlations results for these two variables. CRM capability does have significant impact on SCI. Hence H2 is supported by results.

Relationship between SCI and firm performance is hypothesize in H3. H3 suggests that SCI positively impact the firm performance. This performance is either in the form of share growth, income growth or maximizing the customers. The results of correlations and regressions

values confirm the supposed estimation. SCI bring 30% increment in firm performance a lonely. H3 is supported by results. After confirmation of first three hypothesis, there is a requirement of whether relationship between dependent variable and independent variable effective directly only or any moderator or mediator can impact existing relationship. The mediation of SCI was tested. Results shows that β value of direct relationship decreased after mediation. Which meet the partial mediation condition. Sobel test also support the mediations of SCI between firm performance and CRM capability. H4 is accepted.

H5 and H6 also accepted by the light of regression and correlations results. H7 which was supposed to explain the mediation of SCMC between CRM capability and firm performance. The β value become insignificant in last step of Baron and Keny (1986) model. When the value become insignificant after mediation variable's impact, then it is known perfect mediation. SCMC perfectly mediate the relationship of CRM capability and firm performance.

SCI partially mediate the relationship between CRM capability and firm performance while SCMC perfectly mediate the same relationship.

6. Conclusion

The model was proposed to test whether there is an effect of CRM capabilities on the firm performance. The mixed results showthat SCI does not weight the same importance as SCMC when it comes to firm performance. It can be seen from results the more strong SCMC the more enhancement in firm performance. The study confirms the prior research by adding literature between CRM capability and firm performance. Similarly, SCI and SCMC mediation between firm performance and CRM capability confirm the theoretical support and assumptions. The overall impact of SCMC is more significant of firm performance as compare to SCI. The firms who implemented SCI, they also enhanced their performance but those firms who managed supply chain capabilities enhanced their firm performance relatively more better. The increased market share, Income growth and maximization of profits are firm performance indicators.

7.Managerial Implication

This study have number of practical implication to enhance the firm performance. These suggestions emerges from this research. CRM capabilities have positive impact on firm performance. Those firms who have their customer relationships department, fulfilling the customer needs and wants. So those firms who does not has customer relationship department must start work on it. Those firms who already implementing CRM capabilities, should consider implementations of SCMC in their first

priority to improve firm performance firm performance. Although SCI support the firm's activities to enhance their performance but SCMC comparatively return back more in the form of profitability, growth in income and capturing of maximum market share.

8.Limitations and Future Recommendations

In business to business context conducted this explored lot of opportunities to firms that can be utilized to enhance their performance but there are few limitations to this research as well. The first thing is about data collection. Data was collected from Islamabad (I-9 Industrial zone) and Haripur (Hattar industrial zone) zones only. So the results are generalizable to only theses two sectors. The data was cross sectional and collected in the months of March and April 2016. The longitudinal data may provide different results. The results are based on 143 respondents data which is small sample.

The research also explored few future avenues as well. This study considered only two zones for data collection, in future other zones of the country may be considered. In this research study only three dimensions of the CRM capability were considered , In future other dimension of CRM capability may be considered like CRM as technology. May be other more factors to be considered into account that may impact these relationships.

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