

Customer Knowledge Management (CKM) as a Predictor of Innovation Capability with the Moderating Role of Organizational Structure: A Study of the Banking Sector of Pakistan

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Abstract

Purpose: The purpose of the study was to investigate the impact of CKM on innovation capability of the private banks of Pakistan under the moderating role of organizational structure.

Design/Methodology/Approach: The data have been collected via questionnaires distributed among the 400 employees (Officer Grade) of private banks in the Southern Punjab, Pakistan. The Feedback was received by the 301 employees. Hypotheses were tested using "Multiple Regression Analysis".

Findings: The results of the study indicate that Customer Knowledge Management (knowledge from customer, knowledge about customer and knowledge for customer) has positive impact on the innovation capability (innovation speed and innovation quality) with the moderating role of the organizational structure.

Research limitations/implications: The basic precautions are kept in consideration to make the research free from those errors which may cause interruption in data analysis and interpretation. But in spite of all the carefulness, there were some limitations which caused hurdles in the smooth working of the research. The main of the limitation was that the targeted population in collection of the data were restricted to the private banks of Southern Punjab, as it was very complex to capture the data from the whole province or the country within the available resources. Moreover, respondents of the understudy organizations were reluctant and hesitant in providing appropriate information regarding banks because of organizational privacy policies. Lastly, the study was restricted to only few variables Like CKM, Organizational structure, Innovation capability and Business performance as more variables like organizational learning can also be added as moderating variable in the study.

Practical implications: The consequences of this research will be helpful for the business organizations to attain their target goals by adding customers' knowledge and ideas into their policies and practices. This will provide applicable guidelines to the banks to implement CKM principles into their system to be more innovative and creative. This research will also prove beneficial for the banks because it provides logical reason of giving value to the stakeholders of the firm like customers and employees.

Originality/Value: CKM is a new concept which is introduced in the research as competitive advantage for the banks in the Pakistan. As if the banks take customer's feedback into consideration, it will lead towards less wastage of resources and improved business performance.

Keywords: Customer knowledge management; Organizational structure; Innovation capability; Business performance

Introduction

Comparing with the Developed Countries, implementation of the principles of CKM in the banking sector of Pakistan is new. CKM influences the innovation capability of the banking sector. CKM utilizes the information and knowledge obtained from customers to bring creativity in the organization and to meet customer requirements. The purpose of implementation of CKM is to influence organizational performance positively. In the previous studies customers knowledge was ignored and if discussed, then the combination of these variables like CKM, organizational structure and innovation capability was not taken into consideration. Managing customer knowledge becomes feasible and effective if structure and system of the organization provides support for its implementation.

CKM is emerging as a significant and impacting area in the business sector. CKM is an approach which comes into existence when principles of knowledge management and customer relationship management (CRM) are merged together. The organizational approach enhances the role of customers to maximize the value of the firm as co-producers and co-creators. In this modern era, customers are becoming more conscious, alert and innovative and can share their experiences

and ideas with other customers easily [1]. CKM is the advanced phase of Knowledge Management which states that customer should be taken as partner of the organization [2]. Modern organizations now realize that customers are the key stakeholder for it and their satisfaction should be the primary focus of the organization. CKM is considered as strategic tool for enterprises to achieve performance goals and to enhance innovation [3]. CKM includes three elements i.e., knowledge for customers, knowledge about customers and knowledge from customers. According to Wu et al. [4], CKM adds value to the businesses and helps them achieve defined goals and gain competitive advantage over competitors, and eventually grasp vast market share.

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More significantly the skill to generate knowledge and to have lessons from it can prove to be a competitive advantage because the generation of innovative knowledge and creative information today will emerge as the core knowledge in future [5]. Majority of the recent researches in this area has focused on highlighting the benefits associated with CKM. Similarly, one important aspect is that CKM increases sharing of ideas and experiences among customers as well as between firms and customers. This sharing promotes creative ideas and innovation. In this competitive world to compete and to effectively perform, organizations need to adapt innovation and sharing system in the organization [6]. Continuous innovation and knowledge management provide organizations the required edge to gain competitive advantage [7]. Thus, modern firms have taken initiation to execute principles of CKM to have participation of customers in the firms' processes and engagement of customers in organizations policies to utilize their unique ideas and knowledge. Recently, CKM has been considered as a key source for business performance and innovation capability [8-10].

The manner in which work procedures are carried out among organizational members and responsibility and power are allocated is called organizational structure [11]. Purpose of introducing organizational structure as a moderating variable is to critically analyze its impact on the relationship of CKM and innovation capability (innovation speed and quality) and suggest if the variable strengthens or weakens this relationship.

Banking sector of Pakistan has been chosen for this research study because in the growth of country's economy Banking sector of Pakistan is playing leading role. It has witnessed tremendous growth despite facing unfavorable market conditions. Private Banks have been selected as the sample for this study as according to the recent report published by SBP, private banks of this sector holds almost 80 percent of the banking assets.

This research takes examples from the banking sector of Pakistan to elaborate those principles of CKM which assist them to reap more fruits from external resources and to promote their innovation capability and flourish firm performance. The role of organizational structure is discussed as a moderating variable. In spite of highlighting the significance of CKM, in the previous studies the basic cause and effect relationships among CKM, innovation capability have not been thoroughly studied, especially in the Pakistani context. This ongoing study covers this gap by exploring the effect of CKM on innovation capability and the moderating impact of Organizational Structure on this relationship.

Literature Review

Customer knowledge management

CKM is a new approach adopted by the firms in which all the details, information, experiences, knowledge and ideas are gathered from the customer and all these items are utilized by the firms for the proceedings of the organization [1]. Knowledge management is a proceeding that converts individual knowledge to organizational knowledge. According to Smith and McKeen [12] the effective and beneficial dialogue with customers is core ability of the firm and few organizations can manage and utilize this information to add value for the customer and to improve firm performance. There were also mentioned three dimensions of knowledge management (knowledge from customer, knowledge about customer and knowledge for customer).

CKM is actually integration of customer relationship management and knowledge management. Customer relationship management focuses on maintaining good relationship with current and expected customers of the firm and knowledge management focuses on using knowledge as competitive advantage over its competitors. CKM is the combination of both terms [9]. CKM is about integration of knowledge management concepts and technology to help firms to serve and learn from customers. Scholars identified that there are three dimensions of CKM which are knowledge from customer, knowledge about customer and knowledge for customer. Knowledge from customer is collected from customers about products and services and competitors to analyze market trends [13]. Knowledge about customers is knowledge which is acquired to understand customer's background, his motivation, needs and demands. Knowledge for customer consists of all information which company provides to its customers for better decision making and all about products and services provided by the firms to accomplish their needs [14]. CKM provides customers a new platform to share their experiences and for rectification of their problems.

According to Rasula et al. [15] CKM is an approach in which knowledge is collected from the customers, this knowledge is refined and managed and then it is used for the benefit of the organization. CKM positively influences performance of the organization. Investigators explained that as much knowledge is shared between the stakeholders it will more affect the efficiency of the organization.

CKM is an ongoing process of collection, diffusion and implementation of customer knowledge and information in the organization. CKM decreases the acceptance issues of products and services by making customer a regular and proper stakeholder of the firm. Knowledge obtained through direct interaction with customers can help company in achieving sustainable competitive advantage. CKM can act as critical success factor for the firm [16].

Innovation capability

Innovation capabilities are the abilities of the firm to purposefully generate, expand or utilize its resources according to the changing needs of customers and market trends to attain sustainable competitive advantage [17]. Innovation capabilities are the abilities of the firm to detect opportunities and threat, utilize opportunities enhance tangible and intangible assets [18]. Innovation capabilities have two dimensions innovation speed and innovation quality [19]. Innovation speed is the total time consumed by new product or service from development to full and final commercialization. Innovation quality displays standardization of new products and services and adoption of systemic procedures for their production [20].

Innovation is a process of generating new ideas to change, to differentiate and to improve the performance of the firm. According to this study innovation is real execution of practical new ideas that embraces the motive of better organizational performance. Beside this creation of new ideas and information reduces the perceived risk for the organization [21] found that organization capacity to respond through adaptation of assets to the rapid changing demands of customers or changing market trends is called Innovation capability. This is important for every industry to increase its market growth. The implementation of new policies and ideas to capture value is called innovation. Because of enhanced competition and globalization innovation has become the basic necessity of the organizations. To exploit new opportunities and to attain sustainable competitive advantage innovation has to be implemented in the whole system.

Organizational innovation is adoption of new methods and procedures to conduct all the proceedings [22].

Three elements of innovation capability were mentioned which were innovation potential, innovation processes and results of innovation. Innovation potential describes factors which show present state of innovation. Innovation processes are practices which help organization to use this potential in efficient way. Results of innovation are creativity in products, services or processes. It was concluded that these three elements have positive influence on organizational performance. Those organizations which utilize all aspects of innovation capability can enjoy successful results. The impact of innovation capability should be disclosed in all perspective of organizational performance [23]. A firm must merge innovation capabilities with its organizational policies to develop and commercialize new products and services to strengthen its competitive advantage.

Organizational structure

Organizational structure is actually a format and pattern which helps organization in the achievement of the targets [24]. Organizational structure defines policies and practices like task assignment, resource allocation, supervision and coordination which lead organization towards goal attainment [25]. There are two basic types of organizational structure mechanistic organizational structure and organic organizational structure [26]. Mechanistic organizational structure focuses on standardization and centralization while organic organizational structure emphasizes on mutual adjustment and decentralization. Mechanistic organizational structure promotes written communication while organic organizational structure focuses on verbal communication [27]. Organizational structure is actually chosen on the basis of the type of the business but it is mostly observed that those organization which believe in employees capabilities, value their feedback, make them part of decision making process enjoys more advantages than those organizations which focus on centralization [28].

Research Model and Hypotheses

Keeping in the mind the above discussions, the conceptual model for this study emerges as mentioned here in Figure 1. CKM consisting of sub dimensions (knowledge for customer, knowledge about customer and knowledge from customer) is independent variable. Innovation capability covering innovation quality and innovation speed is dependent variable. Organizational structure is taken as moderating variable in the model.

Customer knowledge management and innovation capability

CKM is considered as the origin of innovation for the firm. Organizations which want to be innovative and interested in generating and implementing new valuable ideas should focus on having feedback from the customers [29]. Belkahla and Triki [29] found CKM system helps firms to attain that capacity and capabilities which promote innovation in the organization. The scholars explained that firm should build organizational capacity in which employees work more on customer knowledge for the sake of innovation enhancement. Employees should try to extract more customer knowledge from any source. Organizations should work actively rather than passively for the customer involvement in the proceedings of the firm. The investigators said customer knowledge as the intellectual asset for the innovative performance of the organization.

Innovation diffusion is now basic necessity of any business and when a customer share novel and unique ideas and experiences it

will enhance innovation capability. It was identified that knowledge management policies and practices which aim to fulfill customers need, create value to the organization will promote innovation capability of the firm. It will help organization in the delivery of new products and services in the market as well as interaction between all stakeholders will be increased. The findings showed that to achieve sustainable innovation in the organization, firm should have access to customer knowledge which relates to end users' needs. The scholars highlighted that importance of innovations lies in the reality that innovation is not scientific obligation but now it is the immense need of the society [30].

CKM is a strategic tool for the organizations to improve innovation [3]. CKM is helpful for the organizations to detect new market opportunities and it manages long customer relationship. Collaboration with customers is the key input that impacts the innovativeness of the organization. The scholars said that firm which has adequate CKM policies and practices will detect new market opportunities and grasp large market share than its competitors. Besides generating CKM system firm has to create an infrastructure that continuously support and refine it. Organizations which have more skills and capabilities to attain and manage customer knowledge have more chances to be innovative [31].

CKM is actually to manage customer knowledge, information and ideas. If this knowledge and ideas cannot be handled in efficient and effective way it will not be competitive advantage for the company. CKM takes new ideas and listen to customers problems which bring diversity of information to the company [30]. When new ideas are appreciated it will promote creativity and innovation capability of the organization. These new ideas and information will be used in the development of new products and services. So CKM will contribute in the promotion of creativity for the organization.

This leads to the first hypothesis as:

H1: CKM enhances the innovation capability of the firm.

Organizational structure and innovation capability

Organizational structure plays a crucial dual role in the innovation. Firstly, it acts as an initiator for the development of innovation capabilities. Secondly as a moderator it measures the performance returns earned from execution of innovation capabilities. The findings of this study indicated that instead if incremental product innovation capability, radical product innovation capability increases when structure becomes more informal. When a firm wishes to reap the results from innovation capabilities and achieve more positive outcomes, it should adopt informal structure [32].

Innovation is always combination of new ideas, capabilities and information. If an organization wants to be innovative it must efficiently utilize its resources and new technology. Innovation promotes learning of the whole organization and it becomes possible only if organizational structure favors innovation and creativity. Every organization follows both types of structure; organic and mechanistic. No organization can purely follow only one structure [33]. Organizational departments are the combination of organic and mechanistic structure. Innovation triggers organization to adapt change and choose flexible structure which follows innovation and modern systems. Organizational structure shifts from one to another according to the requirements of innovation and changing needs of market. The researchers concluded that organizational structure has deep impact on the innovation capability of the firm and it adjusts according to the need of the firm. Organization should manage its internal resources and policies

in a way to promote innovation capability. By following this type of system organizational structure supports organization to be creative and innovative and attain sustainable competitive advantage. It was concluded that all three dimensions specialization decentralization and formalization have significant positive relation with the innovation. Organization must change and set its organizational structure to implement creativity to satisfy customer needs and demands. As innovation improves performance of the organization it should be considered very carefully and should be synchronized with organizational structure [34].

All types of businesses suffer from intense competition in the market and industry. They have to differentiate themselves from the competitors by adopting innovation as the basic competitive tool. The development of logistic service innovation capability is the source of improvement in the firm performance. There should be organizational structure which enhances the innovation capability of the firm. Selection and management of organizational structure and its policies is totally under the control of organization. Organizational structure is of two types centralized and decentralized. It is up to the organization whether it adopts or shifts towards the organizational structure which best suits to increase its innovation capability [35].

Organizational structure did not directly impact innovation but their relationship is mediated by organizational learning and knowledge management. Innovation can flourish in the organizational structure which is pleasant and feasible for organizational learning and which focuses on knowledge management. Management of the organization should align organizational structure and culture with organizational learning and knowledge management to excel in innovation [36]. While Chen et al. [37] it is concluded that organizational structure and climate has direct and deep link with the knowledge management and innovativeness of the organization. Decentralized and less formalized organizational structure promotes diversity and enhances openness by supporting creative behavior which is necessary for internal creativity of the organization. This type of structure has positive impact on knowledge creation which leads towards more innovative environment in the firm. Enterprises should cultivate organizational structure which promotes innovativeness and knowledge sharing in the organization.

Organizational structure determines power, roles, responsibilities and controls information flows between different managerial levels. If organizational structure is decentralized than it will welcome new

ideas and information to be entered in the organization. If organization is structured in a way to share information and knowledge among all the employees it will promote the atmosphere of creativity in the organization Muhammad Siddique. Decentralized and specialized organizational structure positively impact innovation capability of the organization. If organizational structure encourages employees to give their opinion and share their unique ideas it will bring newness in the system.

This evolves our second hypothesis as mentioned in Figure 1.

H2: Organizational structure has moderating role in between CKM and innovation capability of the firm.

Research Methodology

The study carried out for this research has been depended on empirical analysis relying on the beliefs that a transparent position will be taken to observe the linkages between CKM and innovation capability in the light of organizational structure. For this causal study data have been gathered through questionnaire and statistical tools were utilized to obtain and analyse the data.

Sample

By keeping the above discussion in consideration, workers employed at posts (OG1, OG2, OG3) in the banking sector of Pakistan represent the population of the research. Banks of Southern Punjab were chosen as sample due to their affordability and accessibility within the available resources of the researcher and are supposed to transparently display the banking sector (HBL, MCB, Khushhali Bank, FINCA bank, NRSP Bank, Bank ALFALAH) because these cover the vast area of Southern Punjab.

Sampling Technique

Simple random sampling technique was adopted because accurate strength of the population might not be estimated as it is very inconvenient and difficult to gather information from the banks related to the number of employees because the organizations do not want to expose information related to number of employees because of prevailing business trend in Pakistan. That is why, for estimating the sample size, instructions put forward by Chou and Bentler [38] were utilized. The investigators emphasize that sample size should be more than 300 respondents to obtain questionable statistics. The

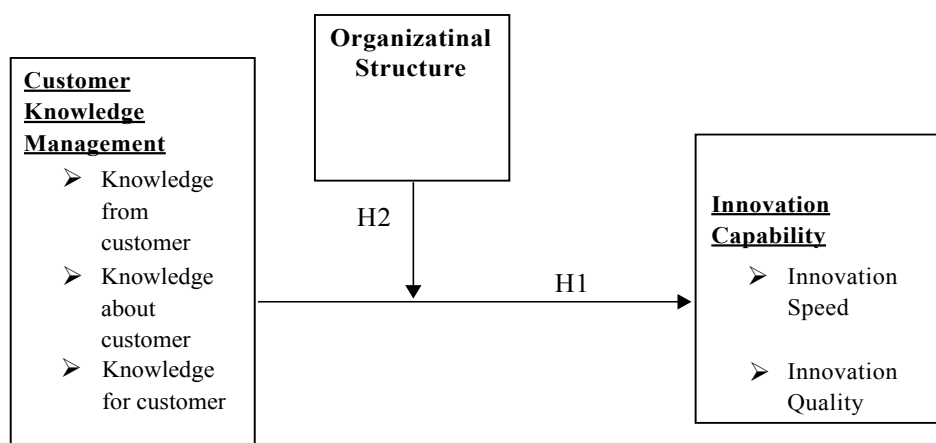


Figure 1: The conceptual model.

more the number of subjects in the data collection, more will be the generalizability and reliability of the results of the research.

Questionnaire/Instrumentation

An attempt was made to shape such self-explanatory instrument which includes all requisite guidelines. In the first paragraph intention of this instrument was clearly described to the respondent and they were assured that their credentials will be kept confidential. Instrument was designed on the basis of ordinal and nominal scales. Nominal scale was adopted to gain personal information about respondent. The second portion of the instrument is consisted of the construct of the research. In the instrumentation ordinal scale has been adopted as it displays variety of shades in adoption, options are mentioned in specific order and application of principles are well categorized but indication of origin were not appropriate because measurement has been relied on emotions and not on some valid instrumentation. It covers 25 questions based on ordinal scale according to five points Likert type scale. 1 depicts strongly disagree, 2 stands for disagree, 3 nominates neutral, 4 mentions agree and 5 for strongly agree. Before divulging second portion which contains construct of the study, instructions describing the scale was mentioned. It was clearly mentioned in the instructions that responses should be on the bases of actual working in the banks and not on individuals' personal beliefs. Instrument has been attached as Annex A.

Measurement of customer knowledge management

Data related to three dimensions of CKM is captured as Questions 1-4 form part of the construct of knowledge from customers and its purpose is to gather information about competitors, market and products to have grip on external environment. Questions 5-11 form part of the construct of knowledge about customer. The purpose of this construct is to obtain information about customer wants, background and transaction histories which help organization to understand customers' demands. Question 12-15 form part of the construct of knowledge for customers [39,13,14]. The intention of this construct is to mention knowledge that every organization provides to its customers to satisfy their needs. This sort of knowledge shows how customers perceive service quality of the banks.

Measurement of organizational structure

Data related to organizational structure is gathered as Question 16-20 form part of organizational structure construct [40]. The purpose of this construct is to identify what kind of structure each bank adopted and how the atmosphere of the organization affects innovation.

Measurement of innovation capability

Data related to innovation capability dimensions (innovation speed, innovation quality) is gathered as Question 21-25 form part of innovation speed construct [41]. The purpose of these questions is to investigate how much banks is efficient and active in generating new products and services. Lahiri Innovation quality of the banks is measured through question 26-30. The purpose of this construct is to measure the quality and performance of the banks in generating and launching new services.

Analysis and Results

Reliability

Cronbach's alpha is a value which is utilized to access the reliability of the scale adopted in the study. This value is normally affected by

number of the respondents and as well as number of questions in the instrument. The scales having Cronbach's alpha value above than 0.7 is considered better and acceptable. Cronbach's alpha value for all the variables; knowledge from customer, knowledge for customer, knowledge about customer (I.V), Organizational structure (Moderator) and Innovation speed, innovation quality (D.V) is above 0.7 which depicts that all scales are reliable (Table 1).

Sample adequacy

The KMO and Bartlett's test is adopted to examine the adequacy of the sample chosen for the study. The KMO values which are between 0.5 and 0.7 are considered average, if these measures lie between 0.7 and 0.8 are taken fairly good and if lie between 0.8 and 0.9 are considered excellent. The significance level of Bartlett's test should be less than 0.05. In the findings of this study KMO value is .936 which is excellent and significance level is .000 which is very good (Table 2). So this finding proves that for further factor analysis sample is statistically significant.

Linearity test

Customer knowledge management to innovation capability: The independent value CKM has been examined with the dependent variable innovation capability. In the linearity test the value of deviation is taken significant if it is more than 0.05. Among innovation capability and CKM the significance level is .056 which is greater than 0.05; therefore linearity existed between innovation capability and CKM (Table 3).

Organizational structure to innovation capability: At the next stage linearity test is conducted between moderating variable and all the dependent variables. Now linearity test is taken between organizational structure and innovation capability. Variance from the linearity must be above 0.05 which displays the level of significance. Between innovation capability and organizational structure, significance level is .542 which is more than 0.05, so linearity exists between organizational structure and innovation capability (Table 4).

Multiple regression analysis: In this part of model 1, effect of CKM on innovation capability is measured. This model shows direct relationship between independent variable CKM to innovation capability (Figure 2). The findings for regression analysis displayed the significance between variables at 0.000 level. Below are the values for regression analysis and relationship path.

The value of R square is .510 which shows 51% variation in innovation capability is due to CKM.

F test is utilized to examine the fitness of the model. The value of

Construct	No. of items	Cronbach's alpha
Knowledge from Customer	4	0.863
Knowledge for Customer	4	0.826
Knowledge about Customer	7	0.709
Organizational Structure	5	0.837

Table 1: Reliability statistics.

Kaiser-Meyer-Olkin	Measure of Sampling Adequacy	0.936
Bartlett's Test of Sphericity	Approx. Chi-Square	1801.492
	Df	28
	Sig.	0

Table 2: KMO and Bartlett's test.

			Sum of Squares	Df	Mean Square	F	Sig.
Innovation Capability Customer Knowledge Management	Between Groups	(Combined)	126.401	141	0.896	5.133	0
		Linearity	78.689	1	78.689	450.59	0
		Deviation from Linearity	47.712	140	0.341	1.951	0.06
	Within Groups		27.767	159	0.175		
	Total		154.168	300			

Table 3: Linearity test between CKM and innovation capability.

			Sum of Squares	Df	Mean Square	F	Sig.
Innovation Capability Organizational structure	Between Groups	(Combined)	92.687	18	5.149	23.62	0
		Linearity	84.349	1	84.349	386.9	0
		Deviation from Linearity	8.338	17	0.49	2.25	0.54
	Within Groups		61.481	282	0.218		
	Total		154.168	300			

Table 4: Linearity test between organizational structure and innovation capability.

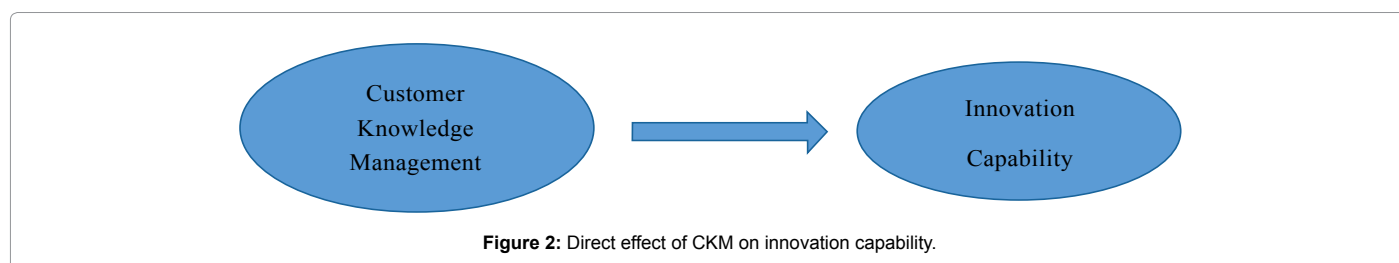


Figure 2: Direct effect of CKM on innovation capability.

	R ²	F	B
Customer knowledge management	0.51	311.718	0.714
Innovation Capability		0	0

Table 5: Regression analysis of CKM and innovation capability.

F test is highly significant (at significance level .000) in this research which proves that model is good fit for the data.

The impact of every independent value (IV) on the dependent variable (DV) in the standard deviation is determined by beta value. β Value is .714 which shows that 1% change in CKM brings 71.4% change in innovation capability (Table 5).

Effect of customer knowledge management on innovation capability with the moderation of organizational structure

In the present model effect of all dimensions of CKM (Knowledge from customer, Knowledge about customer and knowledge for customer) is examined on innovation capability (innovation quality and innovation speed) while taking into account the moderating role of organizational structure.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where Y represents (Innovation speed and innovation quality) X1 represents the standardized scores of CKM (Knowledge from customer, Knowledge about customer & knowledge for customer), β_1 is regression coefficient of all CKM dimensions, X2 means standardized values of organizational structure and coefficient of organizational structure is β_2 , where X3 stands for interaction term ($X_3 = X_1 \times X_2$) of the standardized values of organizational structure and CKM (Knowledge from customer, Knowledge about customer & knowledge for customer). β_3 is regression coefficient of interaction term.

Variables	ΔR^2	ΔF	B
Customer Knowledge Management	0.51	311.718 (0.000)	.714 (0.000)
Organizational Structure	0.1	73.785 (0.000)	.466 (0.000)
Interaction	0	2.884 (0.000)	.478 (0.091)

Table 6: Criterion: Innovation capability.

Hypothesis No.	Hypotheses	B (Sig. level)	Accepted/Rejected
H1	Customer knowledge management enhances the innovation capability of the firm.	0.714 (0.000)	Accepted
H2	Organizational structure has impact on innovation capability of the firm.	0.740 (0.000)	Accepted

Table 7: Summary of all hypothesis accepted or rejected.

According to Table 6 in this scenario effect of CKM on innovation capability with the moderating role of organizational structure is statistically significant because $\beta_1 > 0$. In this case, organizational structure is found as enhancer of the relationship between CKM and innovation capability as ($\beta_2 > 0$, $\beta_3 > 0$) (Table 7).

Regression equation

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = \beta_0 + .714 X_1 + .466 X_2 + .478 X_3$$

Conclusion

This research interrogated how CKM (Knowledge from customer, knowledge about customer and knowledge for customer) affect innovation capability (innovation speed and innovation Quality) of the

banks by taking organizational structure as a moderator. Besides this, these studies also examined that if there exists relationship between dependent and independent variables than how organizational structure acts as moderator and affect their relationship. To achieve the settled goals of this research, banking sector of Southern Punjab is taken as target population of the study. Data collection was done through questionnaire. After this, data were analyzed by using various statistical tools and techniques. In the end findings and results was concluded.

The resultant beta value was 0.714 (sig. level 0.000) when impact of CKM was examined on innovation capability, so it shows that there exists direct and positive relationship between CKM and innovation capability. The result is synchronized with the findings of previous research [3,1,30,31]. This result shows that when banks prefer customer knowledge in their system, creativity and innovation will be welcome in the banks. When banks are able to manage new ideas and information from the customer side, it will enhance their innovation capability.

The impact of CKM on innovation capability with the moderating role of organizational structure was examined and equation $Y = \beta_0 + .714X_1 + .466X_2 + .478X_3$ was attained which shows that $\beta_1 > 0$ and ($\beta_2 > 0$, $\beta_3 > 0$). This proves that CKM is significantly and positively related to innovation capability with the moderating role of organizational structure. This confirms second hypothesis of this research.

The consequences of this research will be helpful for the business organizations to attain their target goals by adding customers' knowledge and ideas into their policies and practices. This will provide applicable guidelines to the banks to implement CKM principles into their system to be more innovative and creative. This research will also prove beneficial for the banks because it provides logical reason of giving value to the stakeholders of the firm like customers and employees. As banks take customers feedback into consideration, it will lead towards less resources wastage and improved business performance.

Limitations of the Research

A complete attempt has been exercised to make this research free from errors and biases. Full effort has been made to keep this study convenient, simple and understandable. The basic precautions are kept in consideration to make this research free from those errors which may cause interruption in data analysis and interpretation but in spite of all these carefulness, there were some limitation which causes hurdles in the smooth working of the research which were mentioned below:

- First of all shortage of appropriate time for the research was basic limitation for the study.
- Secondly, less availability of the required resources was a constraint of this research.
- Target population was restricted to the private banks of Southern Punjab, as it was very complex to capture data from whole province or country within available resources and limited time frame.
- Moreover respondents of the understudy organizations were reluctant and hesitant in providing appropriate information regarding banks because of organizational privacy policies.
- Lastly, this study was restricted to only few variables Like CKM, Organizational structure and Innovation capability as more variables like organizational learning can also be added as moderating variable in the study.

Recommendations

Calculated and purposeful attempts should be exercised to implement the basic principles of CKM into the policies and practices of the private banks which will be in the best concern of the organizational business. The management of the banks should introduce such mechanism by which feedback from the customers can be captured transparently and conveniently. Banks should also be aware of that organizational structure, policies and practices which will foster management of customers' ideas, knowledge and experiences. Banks should opt that structure which give value to the customers' knowledge and merge that knowledge in the vision and mission statements of the organization so that banks may grasp more customer and achieve more business targets like improved operational performance, increased profits and enhanced innovation capability. For further research it is also recommended that the relationship between CKM, organizational structure, innovation capability should be investigated in some other context like mobile industries and insurance companies etc.

References

1. Taherparvar N, Esmaeilpour R, Dostar Md (2014) Customer knowledge management, innovation capability and business performance: a case study of the banking industry. *Journal of Knowledge Management* 18(3): 591-610.
2. Sulaiman S, Ariffin MKA, Esmaeilian GR, Faghihi K, Baharudin BHTT (2011) Customer knowledge management application in Malaysian mobile service providers. *Procedia Engineering* 15: 3891-3895.
3. Fidel P, Schlesinger W, Cervera A (2015) Collaborating to innovate: Effects on customer knowledge management and performance. *Journal of Business Research* 68(7): 1426-1428.
4. Wu J, Bin G, Yongjiang S (2013) Customer knowledge management and IT-enabled business model innovation: A conceptual framework and a case study from China. *European Management Journal* 31(4): 359-372.
5. Abou-Zeid ES, Cheng Q (2004) The effectiveness of innovation: a knowledge management approach. *International Journal of Innovation Management* 8(03): 261-274.
6. Sanders Jones JL, Linderman K (2014) Process management, innovation and efficiency performance: The moderating effect of competitive intensity. *Business Process Management Journal* 20(2): 335-358.
7. Joshi KD, Chi L, Datta A, Han S (2010) Changing the competitive landscape: Continuous innovation through IT-enabled knowledge capabilities. *Information Systems Research* 21(3): 472-495.
8. Tzokas N, Saren M (2004) Competitive advantage, knowledge and relationship marketing: where, what and how? *Journal of Business & Industrial Marketing* 19(2): 124-135.
9. Rollins M, Halinen A (2005) Customer knowledge management competence: Towards a theoretical framework. 2014 47th Hawaii International Conference on System Sciences, vol. 08, pp: 240a.
10. Rauniar R, William D, Greg R, Paul H (2008) Shared knowledge and product design glitches in integrated product development. *International Journal of Production Economics* 114(2): 723-736.
11. Baligh HH (2006) Organization Structures. In: *Organization Structures: Theory and Design, Analysis and Prescription*. Information and Organization Design Series, vol 5. Springer, Boston, MA.
12. Smith HA, McKeen JD (2005) Developments in practice XVIII-customer knowledge management: adding value for our customers. *Communications of the Association for Information Systems* 16(1): Article 36.
13. Gebert H, Geib M, Kolbe L, Riempp G (2002) Towards customer knowledge management: Integrating customer relationship management and knowledge management concepts. *The Second International Conference on Electronic Business (ICEB 2002)*.
14. Gebert H, Geib M, Kolbe M, Brenner W (2003) Knowledge-enabled customer relationship management: integrating customer relationship management and knowledge management concepts [1]. *Journal of Knowledge Management* 7(5): 107-123.

15. Rasula J, Vukšić VB, Štemberger MI (2012) The impact of knowledge management on organisational performance. *Economic and Business Review for Central and South-Eastern Europe* 14(2): 147.
16. Sofianti TD, Suryadi K, Govindaraju R, Prihartono B (2009) Customer Knowledge Management in New Product Development. *Proceedings of the Scientific Conference APIEMS2009*.
17. Breznik L, Hisrich RD (2014) Dynamic capabilities vs. innovation capability: are they related? *Journal of Small Business and Enterprise Development* 21(3): 368-384.
18. Teece DJ, Pisano G, Shuen A (1997) Dynamic capabilities and strategic management. *Strategic management journal* 18(7): 509-533.
19. Magnusson PR (2003) Benefits of involving users in service innovation. *European Journal of Innovation Management* 6(4): 228-238.
20. Lanjouw JO, Schankerman MA (2002) Research productivity and patent quality: measurement with multiple indicators.
21. Racela OC (2014) Customer orientation, innovation competencies, and firm performance: A proposed conceptual model. *Procedia-Social and Behavioral Sciences* 148: 16-23.
22. Kalkan A, Bozkurt OC, Arman M (2014) The impacts of intellectual capital, innovation and organizational strategy on firm performance. *Procedia-Social and Behavioral Sciences* 150: 700-707.
23. Saunila M, Ukko J (2012) A conceptual framework for the measurement of innovation capability and its effects. *Baltic Journal of Management* 7(4): 355-375.
24. Ingham H (1992) Organizational structure and firm performance: An intertemporal perspective. *Journal of Economic Studies* 19(5).
25. Child J (1972) Organizational structure, environment and performance: The role of strategic choice. *Sociology* 6(1): 1-22.
26. Csaszar FA (2012) Organizational structure as a determinant of performance: Evidence from mutual funds. *Strategic Management Journal* 33(6): 611-632.
27. Zhu S, Jiao H (2013) Organizational structure and corporate performance: insights from 6,065 listed corporations. *Chinese Management Studies* 7(4): 535-556.
28. Holagh SR, Noubarb HBK, Bahadorc BV (2014) The Effect of Organizational Structure on Organizational Creativity and Commitment within the Iranian Municipalities. *Procedia-Social and Behavioral Sciences* 156: 213-215.
29. Belkahla W, Triki A (2011) Customer knowledge enabled innovation capability: proposing a measurement scale. *Journal of knowledge management* 15(4): 648-674.
30. Sindakis S, Depeige A, Anoyrkati E (2015) Customer-centered knowledge management: challenges and implications for knowledge-based innovation in the public transport sector. *Journal of Knowledge Management* 19(3): 559-578
31. Darroch J (2005) Knowledge management, innovation and firm performance. *Journal of Knowledge Management* 9(3): 101-115.
32. Menguc B, Auh S (2010) Development and return on execution of product innovation capabilities: The role of organizational structure. *Industrial Marketing Management* 39(5): 820-831.
33. Lam A (2011) Innovative organisations: Structure, learning, and adaptation. Paper presented at the DIME Final Conference.
34. Abbas MA, Hayat K, Saddique Md (2013) Impact of Unrelated Diversification on Financial Performance of the Firms: Evidence from Pakistan. *Management and Administrative Sciences Review* 1(2): 23-32.
35. Daugherty PJ, Chen H, Ferrin BG (2011) Organizational structure and logistics service innovation. *The International Journal of Logistics Management* 22(1): 26-51.
36. Singh SK (2011) Organizational innovation as competitive advantage during global recession. *Indian Journal of Industrial Relations* 46: 713-725.
37. Chen CJ, Jing-Wen H, Yung-Chang H (2010) Knowledge management and innovativeness: The role of organizational climate and structure. *International Journal of Manpower* 31(8): 848-870.
38. Chou CP, Bentler PM (1990) Model modification in covariance structure modeling: A comparison among likelihood ratio, Lagrange multiplier, and Wald tests. *Multivariate Behavioral Research* 25(1): 115-136.
39. García-Murillo M, Annabi H (2002) Customer knowledge management. *Journal of the Operational Research Society*: 875-884.
40. Lai YH (2013) The moderating effect of organizational structure in knowledge management for international ports in Taiwan. *International Journal of Computer and Information Technology* 2(2): 240-246.
41. Liao C, Hsiu-Yu W, Shu-Hui C, Chuang-Chun L (2010) Enhancing knowledge management for R&D innovation and firm performance: An integrative view. *African Journal of Business Management* 4(14): 3026.