Survey of Customer Knowledge Management Impact on Customer Relationship Management: (Iranian study)

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Abstract

In this research, the effect of customer knowledge management on customer relationship management was investigated. Determining the relationship and the impact of customer knowledge management on customer relationship management is the aim of this research. Therefore, whilst a review have been done about the subject in literature, a questionnaire was designed and handed to 297 administrators, assistants and experts who were statistical society members (1440 peoples of Melli bank branches in Mazandaran province). The collected data were entered in SPSS and LISREL software then coding and analyzed. Cronbach Alfa test results, were confirmed, the research tool stability with 94.78 for stability coefficient. Results of kolmogorov – smirnov test show that customer knowledge management variables and customer relationship management is normal, and in order to Test the customer relationship management and customer knowledge management element priority the Kruskal - Wallis test was implemented. Then by regression sodality test, relationship between customer knowledge management and customer relationship management was investigated, and the results showed that, there is a significant relation between customer knowledge management and customer relationship management. Ultimately, the results of structural equations model analysis show the Root Mean Square Error of Approximation (RMSA) of less that 0-10 and fit suitability indicators of more than 0.9 which indicates model suitability, and the ratio of "k2 divided by freedom degree" was less than 5, which confirmed the model credibility in general. based on the path analysis results, we would claim that the influence of customer knowledge management on customers relationship management in Melli Bank branch in Mazandaran province is confirmed.

Keywords: Customer knowledge management, Customer relationship management, Competitiveness advantage

Introduction

With acceleration of business environment changes and the entry of new competitors in current banks for attracting and maintaining stakeholders and current levels of profitability for their current activities should spend more resources and manpower absorption with high performance and new and modern techniques. Knowledge as a key competitive factor in the global economy is considered, but for the successful presence in today's dynamic market should pay attention to an important component that is called customer. The use of knowledge management with customer relationship management creates opportunity for organizations which makes it more likely to detect opportunities in markets and increase their competitive advantage (Ebrahimi, 2007). In this research, firstly question is stated, then theoretical Foundations and conceptual model and after that research methodology and research goals and hypotheses are paid and finally using statistical methods and research findings can be expressed.

Problem statement

With intense competition and the recession of sale has been difficult maintainance of customer loyalty for companies. Researches has repeatedly shown that finding new customers is 4 to 5 times more expensive than the previous customer maintainance. It is necessary to replace to organize and better use of their knowledge management architecture with accumulating data that deals with organizing customer information. (Sheth , 2001)As markets and production and customer needs change.

Designers of production and service should be integrated and apply a large amount of information about their markets, competition and solutions which can provide to customers. Sellers and vendors must service to customers. Pioneers companies find out if they can use a customer's knowledge, proper management of customer knowledge can be substantially more productive. Knowledge of customer is base on a variety of information sources. Information can be numerical, text, organized in a table, or as separate from the others. Organizational information is key for their applying in business. So that, it can be converted to knowledge on the basis that it took informed business decisions. Economic analysts estimate that 80 percent of economical enterprise data is a data which don't have external structure and 20 percent have no organized data. It is a proven fact that 80 percent of revenue in an organization is provided from 20 percent of clients. It is necessary to design solutions to customer relationship management. So if architecture of customer relationship management consider to simple fact but important, implementation of Customer Relationship Management has less trouble and it will be done very fast and with fruitful results. Just way for using this 80 percent disorganized data is application of knowledge management architecture. (Clay camb, 2007)

Research questions

1- Does the customer knowledge management influence on customer relationship management?
2- Which components of customer knowledge management influence more on components of customer relationship management?

Theoretical Principles of research

Customer relationship management traditionally is famous as a tool for customers to contact company by various loyalty programs, but perhaps the greatest source of value had been forgotten: Knowledge in the clients (Duplessis, 2004). Use of customer knowledge management for customer relationship management reduces risk factor in strategic decisions to maintain customer loyalty. Thus, decision-making process will be more effective and smartly (Sheth, 2007). Customer Relationship Management is used as a management tool for managing relations with customers. To establish a good relationship with customers is essential that a communications of a company and its effects on clients is in favorable and satisfactory procedures and products to the market area should in the face of changing requirements for customer directly. This problem requires measured management from knowledge of customer. (Tonsu, 2006) For increasing efficiencies and effectiveness in organization and ensure optimal delivery of goods and services to customers and their satisfaction you should manage your knowledge about customers. Thus, an integral part of knowledge management is integral part of customer relationship management (Firouz Abadi, 2007). Organizations can not effectively communicate with customers unless they understand what services, how and when is valuable for clients and how much it costs.

Today, the value of knowledge management and customer Relationship management is recognizable for many leading companies in providing services and products to customers. Both approach emphasizes for allocation of resources and support business activities for competitiveness insist (Akhavan, 2008) organizations that use customer knowledge management to increase the quality of its services to clients, they understand the importance of using knowledge management to overcome in wasting customer information and proper use of it. (Afzali, 2007) In this study, we considered the effect of customer knowledge management on customer relationship management in the branches of the Melli banks Mazandaran province. This based on the framework obtained from customer knowledge management model (yingchun and dongxiao، 2007) which includes the size, business and produce the knowledge of customer, store and distribute the knowledge and its application and for customer relationship management is used model (Nagi,2009), including aspects of selected customers, attract customers, maintain and retain customers and grow business with clients.

A lot of researches have been done about knowledge management and customer relationship management but little researches focused on the relationship between them. In an article by (Yichen Lin,2006) entitled "having knowledge in creation of method for Customer relationship management". The goal of research has been stated about consideration of factors that has key effect on organizational performance and three variable source of knowledge client – customer knowledge management and measurable performance of customer knowledge considered that ultimately stated that customer knowledge and customer knowledge management are factors that using their effect on organizational performance has key effect. It has benefits for the organization and in another paper (peyman Akhavan, 2008) entitled the customer knowledge management where customer and knowledge are together, the goal of article was the use of management and value that is based on customer,

it helps to organization which perceive customers better and ultimately expressed using customer knowledge management organization can achieve be many opportunities before competitors that really increase sales and attract new customers that this matter has benefits, both customers and organization. In another article (Bose Ranjet ,2003) with title of application of knowledge management technology in customer relationship management express purpose of research in the role of knowledge management for improving the performance of customer relationship management and also expressed Knowledge Management implementation in this research to identify knowledge - stored knowledge – distribution of knowledge and application of knowledge that ultimately stated that the use of knowledge management based on customer organization strengthen and develop systems of customer relationship management. In another article (Gilbert Michael, 2002) under five light of knowledge management customers and how organizations intelligent, they to create value are used to describe the purpose of researching the concept of customer knowledge management and how to implement it represented the ultimate in style five researchers for customer knowledge management implementation were presented.
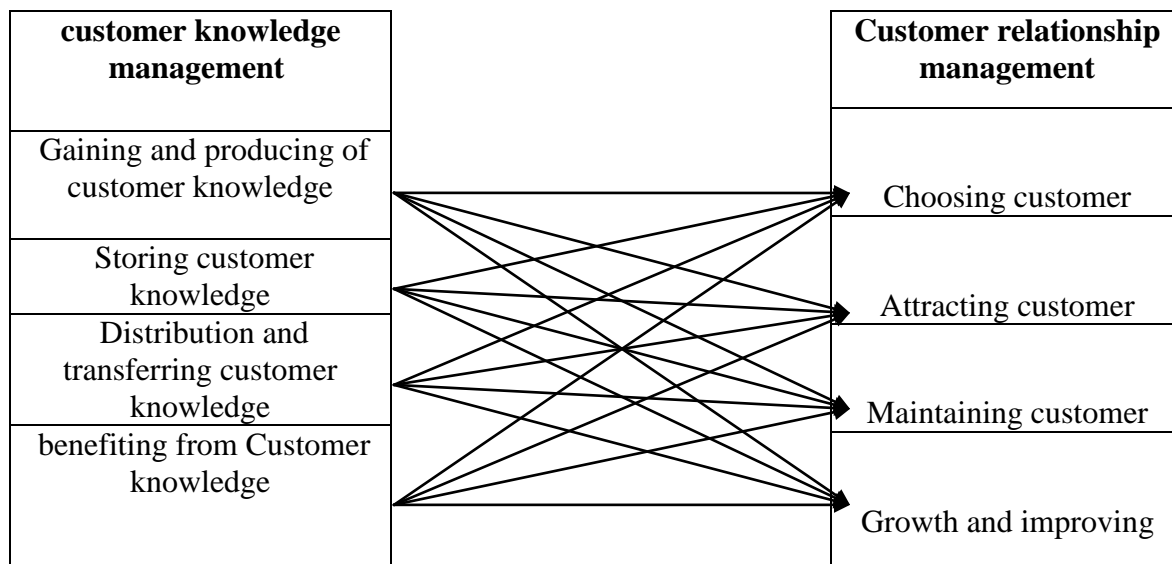

Figure A - Conceptual model of research

Research methodology: This research located in terms of purpose among applied research and if it is classified according to the nature and types of research methods. This research is considered in group of correlation researches. Statistical community: This research community is employees of Melli bank branches in Mazandaran province that the number of employees in the basis of statistics is 1440 people.

Determination of sample size: In this study has been sampled of random sampling from the appropriate class type with subject of research from the statistical community. Sample size was determined of below statistical formula:

$$n = (Z^2 pqN)/(d^2(n-1) + Z^2 pq)$$

$$p = 0/5 \quad q = 0/5 \quad Z = 1.9d \quad d = 0/05 \quad N = 1440$$

Number obtained from the above formula is equal to:

$$304 = \{(1/96)^2 \times 0/5 \times 0/5 \times 1440\}/\{(0/05)^2 \times (1440-1) + (1/96)^2 \times 0/5 \times 0/5\}$$

Data gathering tools: with review literature, designed questionnaire with 42 option and with using Likert scale, data have been collected for research. Its validity confirmed with experienced professionals in the banking and its reliability of questionnaire calculated with alpha Kronbach obtained from the questionnaire data is to 94/87, which approved internal credit of the questionnaire.

Research goal: The purpose of this study considered determination of the relationship and effect scale on customer knowledge management components on customer relationship management components.

Therefore; organizations is provided this possible that their relationships with customers improve and their basic ability increase for competition in this field.

Research hypothesis

Main hypothesis: customer knowledge management influence on customer relationship management

Sub-hypotheses: customer knowledge management component influence on customer relationship management components.

Statistical techniques

In this study, Kronbach alpha test has been used in order to clarify the reliability of questionnaires, also, tests kolmogorov – smirnov for considering normal of each variable customer knowledge management and customer relationship management and Kruskal - Wallis ranking test was used for effective changing priorities of customer knowledge management and customer relationship management and also regression correlation coefficient test for considering relationship between customer knowledge management and customer relationship management and ultimately was used the structural equation model test for considering the effect of customer knowledge management and customer relationship management.

Research findings

Kalmograph – Smirnoph test:

Normal test variable component of customer relationship management

Table 1- normal test variable component of Customer Relationship Management

Order	Components	Significant level	Test result
1	Choosing customer	06.	Normal
2	Attracting customer	11.	Normal
3	Maintaining customer	08.	Normal
4	Growth and improving customer	13.	Normal

Test results showed that in order to significant levels of other components is greater than 0.05, this means that the variable component related to Customer Relationship Management are normal.

Normal test variable components of customer knowledge management:

Table 2- Test normal component variable customer knowledge management

Order	Variables	Significant level	Test result
1	Gaining and producing of customer knowledge	05.	Normal
2	Storing customer knowledge	08.	Normal
3	Distribution and transferring customer knowledge	11.	Normal
4	benefiting from Customer knowledge	21.	Normal

Test results: Test results showed that a significant level of other components is greater than 0.05, it means that the component related to variable of knowledge management is normal.

Kruskal - Wallis ranking test: Kruskal - Wallis rankings test for considering sequence results used that it should be considered. This test uses the original values ranking, not their values. Kruskal -Wallis determines how much group ranking differ all the groups average (Afshani and colleagues, 1386).

Table 3- priorities of affecting after selection of customers

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	4.00	287.56	Third	707.3	existing enough data to understand customer needs
				First	976	Identify the best and most important customers in the bank
				Fourth	615.2	Research for controlling needs and attitude of customers
				Second	925.1	Identify customers with most profitable
				Fifth	491.2	Possibility of identifying and eliminating non-profitable customers

As shown in the table above, the variable of identifying of the best and the most important bank customers with 97.6 average ranking is in the first priority, and the variable of possibility of indentifying and remove non-profitable customers with a 491.2 average ranking is the last priority.

Table 4- priority of affecting after absorbing of customer

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	5	146.767	First	1074.9	Trying to convert potential customers to real costomers
				Third	968.9	Evaluation of new communications
				Fourth	919.8	Rate assessment and consider efficiency assessment and effect advertise on customer
				Fifth	765.2	Existing management system between the organization and customers relations
				Sixth	645.2	Various activities to introduce the organization
				Second	974.8	Regarding the issue of public relations

As shown in the table above, the variables to convert potential customers to real customers with 1074.9 averages ranking is in first priority and various activities to introduce the organization with 645.2 average ranking are in sixth priority.

Table 5- priorities of affecting after maintaining customer

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	Effective factors
0.05	0.00	5	190.473	Sixth	647.3	Existing unit for assuring quality services
				First	1141.1	Investigation and processing customer complaints
				Fourth	817	Existing units to respond to customer demands
				Third	875.7	Considering customer recommendations for the development and presentation of services
				Second	1055.6	To have a time-controlled presentation of services
				Fifth	812	Existing programs to assess customer satisfaction levels of their performance

As shown in the table above, the variables and processes to customer complaints, with 1141.1 averages is in the first priority and the other hand, existing units for assuring quality services with 647.3 average ranking is in the sixth priorities.

Table 6- priorities of affecting on the Growth and enhancement of customer

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	Four	550.05	First	1056.8	electronical activities clients of full time
				Second	940.1	Rapidly services for customer
				Fourth	640.8	presentation advice to customers
				Fifth	320.9	Offering additional services to customers
				Third	756.2	presenting Special services to selected customers

As shown in the table above, the variable of electronical activities clients of full time with1056.8 average ranking is in the first priority after growth and enhancement of customer in this study. On the other hand, offering additional services to customer's with320.9 average ranking is in fifth priority.

Table7- priorities of affecting of variable of customer relationship management

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	3	33.9	First	645.1	Selecting Customers
				Fourth	499	Attracting customers
				Second	636.1	Caring customer
				Third	597.5	Growth and enhancement of customer

As shown in the table above, the variable of selecting customers with a 645.1 average ranking is in the first priority of variable of customer relationship management in this research. On the other hand, attracting customers with 499.0 average ranking is in the fourth priority.

Table 8 - priority of affecting on business production of customer knowledge

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	3	16.3	Fourth	551.7	Gather sufficient knowledge about customer's preferences and tastes
				Second	587.9	Using the idea of customers to meet their needs
				Third	580.2	Existing activities to create knowledge about customers
				First	658	Collect enough data to determine customer service

As shown in the table above, the variable of collect enough data to determine services to clients and collect enough knowledge about customer tastes and preferences respectively with 658.0, and 551.7 average ranking are in the first priority and fourth business production of customer knowledge in this study.

Table 9 - priorities of affecting storing customer knowledge

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	5	89.008	Second	1004.5	Using a database to store customer information
				Sixth	717.6	Record and store customers knowledge after acquiring and developing
				Fifth	778.3	Store information about customer records and Interests
				First	1015.8	To update customer information
				Fourth	877.1.	Easy access and retrieval of customer knowledge
				Third	955.5	Storing information about transactions per customer

As shown in the table above, variables of updating customer information with 1,015.8 average ranking is in the first priority of affecting of storing customer knowledge in this study. On the other hand, variable of recording and storing customer's knowledge acquiring and developing with 717.6 average ranking is in the sixth priority**.**

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	5	172.95	Sixth	623.5	existing the culture of sharing customers knowledge
				Third	887.4	Providing data to clients
				Second	1048.5	transferring employees knowledge leaving the organization to replace
				First	1,105.3	Important to transfer knowledge about new services to customers
				Fifth	843.1	transfer to customers between sectors and individual organizations
				Fourth	840.8	Using information technology to distribute customer knowledge

Table 10 following priorities influence the distribution and customer knowledge transfer

As shown in the table above, variables of import to transfer knowledge about new services to customers with 1105.3 average ranking is in the first priority. On the other hand, variable of existing culture of sharing customer knowledge with 623.5 average rating is in sixth priority.

Table 11 - priorities of affecting on utilizing the customers knowledge

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	3	68.93	Fourth	489.8	existing appropriate systems for utilizing knowledge of customers
				Third	560.3	Timely attention to customer knowledge
				First	709.7	Quick access information about customer needs
				Second	618	encourage to use knowledge related to customers in employees

As shown in the table above, variable of quick access to information about customer needs and existing appropriate systems for utilizing knowledge of customer order with 709.7 and 489.8 average rating respectively are in the first and fourth priority, affecting using customers knowledge in this study.

Table 12- priority of affecting variable of KM

Error percent	Significant level	Degrees of freedom	Chi-square calculated	Ranking of effect	Average ranking	effective factors
0.05	0.00	Four	14.78	Second	604.9	Production customers knowledge
				Fourth	553.7	Storing customers knowledge
				First	652.1	distribution customers Knowledge
				Third	567.1	Using Customer Knowledge

As shown in the table above, the distribution of customer's knowledge with 652.1average ranking is the first priority in affecting customer knowledge management in this study.

On the other hand, variable of customers storing customer's knowledge with 553.7 average ranking is in the fourth priority. Regression correlation coefficient test of Customer Knowledge Management and Customer Relationship Management

Research hypotheties

Zero hypothetis: There is no significant relationship between customer knowledge management and customer relationship management in Melli Bank of Mazandaran Province.
One hypothetis: There is significant relationship between customer knowledge management and customer relationship management in Melli Bank Mazandaran.

Statistical hypothetis

In order to run regression, firstly, it is used Scatter chart for determining whether linear model for variables is reasonable or not.
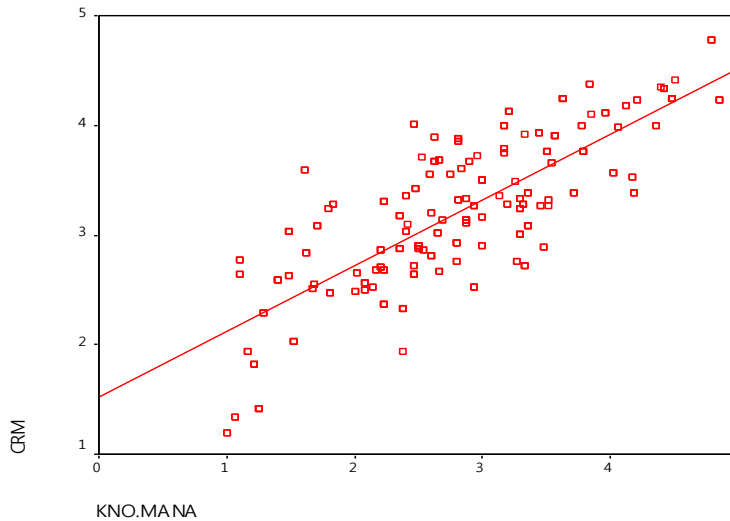

Figure 1. Scatter chart

The above chart shows double variables of test have appropriate scatter as compared with the regression line. Coefficients table is used in order to clarify the results of linear regression of two variables.

Table 13 - coefficients table

Significant level	T	Standard coefficient		Coefficient non-standard		Model
		Beta coefficient	Standard deviation	Regression coefficients		
000. 000.	18.663 21.684	784.	081. 028.	1.515 601.		Fixed Km-mana

Regression equation:
+ 1.515 (affecting rate) 601. = Prediction of relationship
ANOVA:
ANOVA table consider acceptability of the model from the perspective of statistic. All rows of regression shows information about changing present model and the remaining row of information about changes that it doesn't count in the present model.

Table 14 - ANOVA table

Model	Sum of squares	Degrees of freedom	Mean Square	F	Significant level
Regression Remaining Total	83.511 52.395 135.906	1 295 296	83.511 178.	470.188	000.

Total of regression squares and remaining are equivalent. It shows that half of the changes have been shown by the model. Significance level of F statistic is less than 0.05. This means that shown changes by the model isn't eventually.

Therefore; there is significant relationship between customer knowledge management and customer relationship management at Melli Bank of Mazandaran Province.

Table 15 - Table of affecting rate

Model	Correlation coefficient R	Square R (coefficient of determination)	The adjusted R square	SEM (Residual standard deviation s)
1	784.	614.	613.	42144.

Summary table of above reports severity of model relationship and dependent variable models and reports. Multiple correlation coefficients show that the level and intensity of correlation of two variables is equal to %61 and since the above ratio is a positive sign, type of relationship is straight and aligned. Above coefficient shows a relatively strong relationship between two variable customer knowledge management and customer relationship management. The coefficient indicates that more than half the changes in customer relationship management have been recognized with the model. Patterns of determined relationship effect of macro variables on customer knowledge management on customer relationship management components between Melli Bank staffs of Mazandaran Province

Table 16 - Profile of constituting component variables of knowledge management and customer relationship management (dependent variable)

As in equation	As Figure	Independent variable	Row
X1	Kno-Prod	Customer Knowledge Production	1
X2	Kno-Stor	Customer Knowledge Store	2
X3	Kno-Dist	distributing customers Knowledge	3
X4	Kno-Expl	Using Customer Knowledge	4
Dependent variable			
Y1	cus.sele	Selecting Customers	1
Y2	cus.recr	Attracting Customers	2
Y3	cus.guar	Caring Customer	3
Y4	cus.grow	Growth and improving customer	4

F. Statistical hypothetis:

H_0: RMSEA ≥ 0.10

H_1: RMSEA <0.10

Pattern of relationship in structural equation model of variable of customer knowledge management component on customer relationship management component among personnel Melli Bank in Mazandaran province is base on Lisrel structural equation software is as follows:
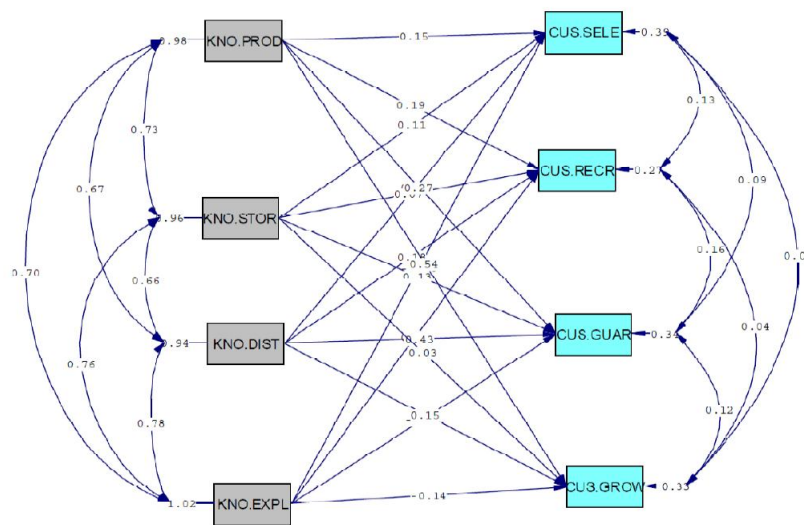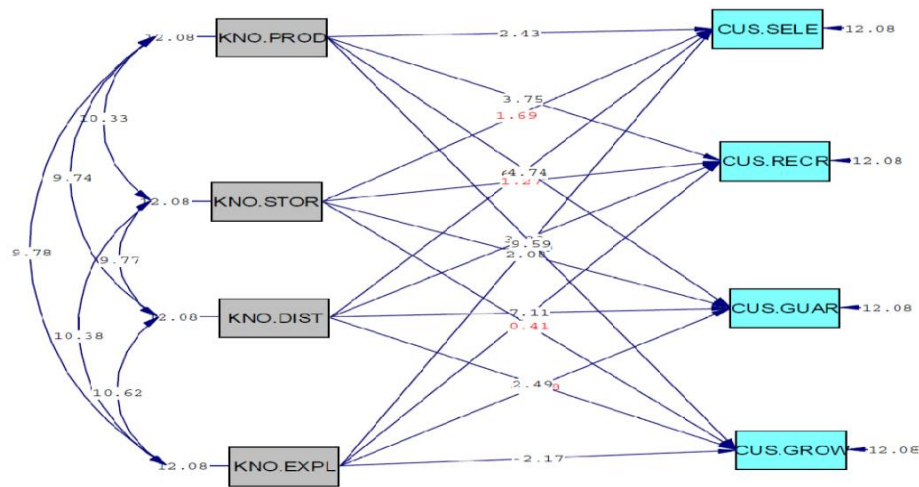

Chi-Square=23.59, df=9, P-value=0.07202, RMSEA=0.046

Figure2. Estimate diagram LISREL software
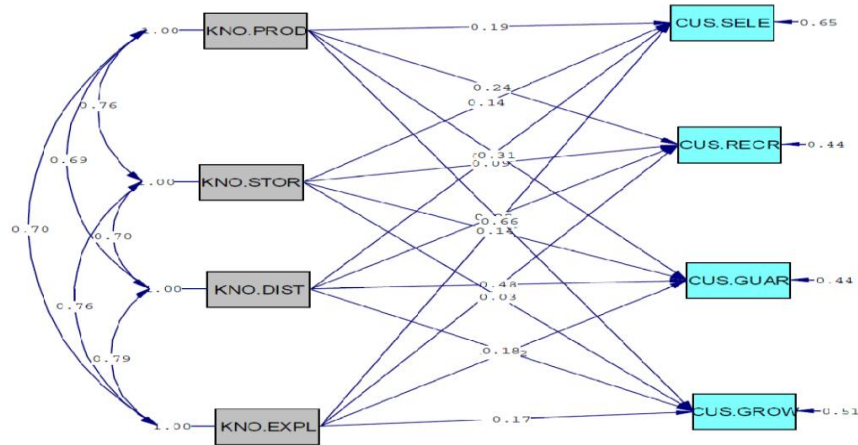
Chi-Square=23.59, df=9, P-value=0.07202, RMSEA=0.046

Figure3. Estimated standard diagram LISREL software

Chi-Square=23.59, df=9, P-value=0.07202, RMSEA=0.046

Figure4. T-Value Estimation diagram software

T-Values diagram identifies what variables model has been proven (Du toit & Du toit, 2001). Here, *T-Values* diagram has identified that impact of some variables of the customer knowledge management, especially knowledge component of variables of storing knowledge and applying knowledge of customers in the model were not confirmed (the color of these variables in the chart is red.) In order to, the above cases, regression relations (estimate and standardized coefficient) structural equation of identified factors of utilizing of customer knowledge as well as indirect and direct effects basis on output of Lisrel software is as follows. The following equations of variables have been defined as it is in the first table of test.

Structural equations model in order to estimate the coefficients based on the direct relationship model is:
CKM & CRM = [(0. 15 $_x$ 1.Y1 + 19. X 1.Y2 + 0.27 x 1.Y.3 + 0.54 x 1.Y)) +. 13. X 2.Y3 + 41 $_x$ 3.Y1 + 18.X 3.Y2 + 0.43 x 3.Y.3 + 0.15 x 3.Y4.18 $_x$ 4.Y1 + 22. X 4.Y2 - 0.14 $_x$ 4.Y4]
Structural equation model of a direct relationship diagram based on standard coefficients are:
CKM & CRM = [(0. 19 $_x$ 1.Y1 + 24.X 1.Y2 + 0.31 x 1.Y.3 + 0.66 x 1.Y) +.14.X 2.Y3+.52 $_x$ 3.Y1 + 22.X 3.Y2 + 0.48 x 3.Y.3 + 0.18 x 3.Y4 .23 $_x$ 4.Y1 + 28.X 4.Y2 - 0.17 $_x$ 4.Y4].
With considering results of influence customer knowledge management component on customer relationship management component became clear that the acquisition and production component of customer knowledge has the most influence on growth and enhancement of customer with rate of 0/66.

Table 17 - Test results and output LISREL software

Chi-square	df	Chi-square / df	RMSEA	GFI	AGFA	CFI	NFI	NNFI	PNFI
23.59	9	2.62	0.046	0.97	0.93	0.90	0.92	0.93	0.94

Test results show that in order to the index *RMSEA* or estimation square of approximation error variance is less than 10 percent *(RMSEA = 0.046)* goodness of fit index, *GFI* , NFI , NNFI, CFI, PNFI, AGFI is more than 0.9 *(GFI = 0.97 and* NNFI *= 0.93,* NFI = 0.92, CFI = 0.90 PNFI = 094, AGFI = 0.93), so we can say that above models fit well real world data as well as in order to Chi-square ratio to degrees of freedom will be less than 5 (2.62) endorses the validity of the model, that is; a total structural equation model of impact of variable acquisition and production of customers knowledge on components of customer relationship management among the personnel of the Melli Bank of Mazandaran province is approved. Generally fit index are between zero and one. Coefficients more than 90 percent is acceptable (Hooman, 2005).   As a result, the present model is reasonable propriety. Other points of Chi square ratio is regarding to the degree of freedom if the ratio of Chi-square to degrees of freedom is less than 5, model has good fit (Jorsekog, 1970).

Conclusion

Review about related research with topic shows that each of them somehow related to present research. Some of them consider to subject of customer knowledge management and some paid too general and simple have mentioned impact of customer knowledge management on improving customer relationship management. But the results of experience and data analysis have considered affecting all dimensions of customer knowledge management on all aspects of customer relationship management with using LISREL software in this study. Eventually whole structural equation model confirmed impact of customer knowledge management with customer relationship management.

Practical suggestions based on research results

In the present study the totality impact of knowledge management impact on customer relationship management were accepted.
- In order to approval and identification of impact of customer knowledge management on customer relationship management in the present research proposals according to each dimension is provided.
- In dimension of acquisition and production of customer knowledge, for acquisition and production of customer knowledge in bank must interact closely with customers is established. Therefore, managers recommended that needed skills to be trained staffs for proper encounters with customers.
- Using a comprehensive program including an interview, call the customer or feedback form of experiences and ideas and become aware of the needs of its customers
- In dimension of storing knowledge customers, it is recommended in Melli Bank of Mazandaran province to use systems that register customer information moment interact with the organization. Stored information of customers periodically organize and once with changes it cleared and updated to be ready for proper use and for stabilization and control and updating customer information reward to your staff.
- In dimension of transferring and sharing knowledge, it is recommended in Melli Bank of Mazandaran province to pay attention to organizational space and appropriate technological infrastructure for transferring and sharing customer knowledge, so that information related to customer place in authorities respond chiefs to customers for better respond and also this information place in authorities to other sectors and individuals of the bank.
- In dimension of applying the customer knowledge; since the effect of applying customer knowledge on customer relationship management were confirmed in this study, So it is recommended in Melli Bank in Mazandaran province to use suitable systems for customers knowledge, and also it is important to enhance skill and ability level of personnel through create training classes in Melli Bank of province.

Resources

1. Akhvan, (2008) "Ckm: were knowledge and customer meet" Km Review volume 11 issue

2. Asgharnejad Amiri, Mehdi (2006) "business cycle representation of Customer Relationship Management» Marketing Management International Conference

3. Bose. Ranjit, sugumaran.Vijayan. (2003) "Application of Know ledge management Technology in Customer Relation ship management" Know ledge and pro cess manaye ment Volome 10 Number

4. Clay comb. Cindy, Droge Cornelia (2005) "Applied Customer Knowledge a manufacturing environment": Flexibility for industrial firms industrial mar ketiny 34

5. Duplessis. M.Boon.JA (2004) "Knowledge management in e Business and Customer relation ship management: South African case study finding international Journal of information management 2443-86

6. Ebrahim-Zadeh, Reza (2007) "review application of knowledge in technology Customer Relationship Management» Business management1386

7. Ebrahimi, B. (1385) "Knowledge Management in connection with the customer, Tadbir-178.

8. Gilbbert Michael, Leibold, marius (2002). "Five styles of customer knowledge management, and how smart companies Use them to create value" European Management Journal Volume 20, No. 5, pp. 459-469

9. Guo Ying chun (2007). "Researches on know ledge-Enabled customer Relationship management in Electric Power Enterprises" Internal journal of Business and management

10. Hosseini khah Ali (2006) "knowledge management", Tehran, Publishing Ystrvn

11. Lin.yichen, suyann, chienshihen (2006) - "A. Knowledge-enabled procedure for customer relation ship management marketing management" 35 446-456

12. Nagai. Ewt, xiu. Li, chau, DCK, (2009) - "Application of data mining techngues in Customer relation ship management" Expert systems with Applicatin 36

13. Salomann.harald, dous. malti, kolbi. lutz (2005) "rejuvenating customer management how to make knowledge for, from and about customers work". European management journal wol.23, no4, pp.392-403

14. sheth jagdish, Parvatiyar.Atul, (2005) "Customer Relation Management" Tata McGraw-Hill publish company Limiteal (2001)

15. Tonsu. Chao, chen.Yung-Chen. (2006) "Linking innovative product development with Customer Knowledge: a data-mining approach".

16. Jorsekog, Karl G., (1970), A general method for analysis of covariance structures, Biometrico, 57, pp. 293-351

17. Du toit, Mathilda, Dutoit, Stephen (2001), Interactive LISREL: users guide, scientific software international.