Investigations of effective factors on marketing in banking services

Valiolah Rezaee*
Department of accounting, south Tehran branch, Islamic Azad University, Tehran, Iran

Mohammad Sadegh Alipour
Assistant professor, Statistical Research and Training Center, SCI, Tehran, Iran

Dr. Abdullah Naami
Assistant prof. faculty member business Management department, south Tehran branch, Islamic Azad University, Tehran, Iran

Abstract

Commercial intelligence is proceed t wise (intelligence) and exact new approach and architecture that of course containing set of analytic and application programs, that on the strength of analytic and operation data bases it is help to decision making for commercial intelligence and business activities statistical population of this study including 500 (N=500) individual of the Tehran Samen credit institution personnel.

In this study, the tool (device) for data collection is standard questionnaire of commercial intelligence and decision making in banking services area. The results show that, the organizational, has a meaningful and positive effect on decision making in banking services area. In other side, information quality on decision making in banking services area has a meaningful and positive effect, because the significant level was smaller than the error value %5, and the absolute value of statistic ((t)) was bigger than the table value 1/96.

Keywords: The commercial intelligence, banking services, Samen credit institution, Tehran, business.
Introduction:
The purpose of researcher from job satisfaction word, in this study is the score that will be obtained from subjects answer to these questions (25,26,27,28) of standard questionnaire of commercial intelligence measurement commercial intelligence is proceed to wise (intelligent) and exact decision, neither as a product nor as a system, but it is considered as a new approach and architecture that of course containing set of analytic and application programs, that on the strength of analytic and operation data bases it is help to decision-making for commercial intelligence and business activities.

But the commercial intelligence in terms of architecture and process look at the commercial intelligence as a frame that is factor of increasing organization efficiency and process integration, and finally it is focused on decision making process in different organizational level. The market (bazar) considers commercial intelligence as a tool for competitive advantage, monitor and analyze the market and customers. Also in technology point of view, the commercial intelligence is an intelligent system that, with exact processing of data, it counts as involvement of hardware and software in core (brain) of applications (waves).

But in the simple word, the commercial intelligence is not anything except the process of increasing the organization profitability in competitive market, with wisely use from available (existence) data in decision making process. If the commercial intelligence concept, not understood and transferred caused that, the managers expectations cause the problems like stripping the individual confidence especially managers of this system. Because the commercial intelligence aim is, to shorten the inquiry path into information and independently and without need to suitable information can not represent any offer or approach. The business intelligence can consider as a different computer ways and process of data conversation to information and the knowledge.

That finally use, in order to improve decision-making in the organization (Barent and et al 2007) nowadays, because of lack of appropriate tools and suitable analysis technique for analyzing these larger database, the precious information about customer and their buying patterns is constantly lying dormant. The commercial intelligence is consider as a competitive advantage and critical factor in organizations success. Integrated the data commercial intelligence and organization information and lets to manager to control and admittance to key process of organization and it is a base for effective decision making (Mehrabi, 2012, 78).

Mayani and et al( 2012), in the study with the title of ((investigation)) of organization concept aspects effect on commercial intelligence effectiveness investigate with paying attention to knowledge management role, case study: The Saman bank (to consider these matters) to put this contents and results of this study show the positive and meaningful relation between organization concept aspects and commercial intelligence effectiveness and also show that the knowledge management as a moderating variable, intensifies (strengthens) relation between concept aspect(dimension) and commercial intelligence effectiveness.

Ansari and et al(2010), in the study with the title of ((the effect of information technology on managers commercial intelligence (consider these matter) to put this content and base on conclusions of the data in two descriptive and inferential level, effect and role of information technology on managers cognition from competitors, market cognition and facilitate the exchange of information among personnel with 95 percent assurance, proved. Mohaghar and et al (2008), in the study with the title of usage of commercial intelligence as a strategic information technology in banking: inspection and fraud detection, achieved to this condition that, the information to have this insight, of course play a crucial role and can be beneficial.
solely if it was a helper (guider), focused and on time and easily accessible and show both macro and micro aspects of the company.

Sazvar (2011) in the study, investigate presenting of pattern for improving commercial intelligence in electronic insurance industry marketing.

The results of man-Vitni test including gap between current and desired statues in all aspects of commercial intelligence in this organization.

In the second stage, index that have negative gap through canon pattern divided to 3 groups of attractive, operational, necessary needs that represents exercise of 5 index in necessary needs group.

Nikomaram (2011), in the study, investigate assess the impact of management accounting information system base on support of decision and commercial intelligence in economic managers decision-making.

The results of nonparametric regression test, spearman’s rank (orders) correlation coefficient show that, the most of components of management accounting information system base on decision making support and commercial intelligence on the frame of systems that are base on communication and reasoning, the alarming (warning) reporting systems, the analysis and effective decision-making tools don’t have meaningful relation with decision-making variables.

Monfared (2012), in the study with the title of investigating the impact of organization concept aspects (dimension) on commercial intelligence effectiveness investigate it with paying attention to knowledge management role with case study, bank Saman.

The results of this study show the meaningful and positive relation between the organization concept aspects and commercial intelligence effectiveness and also show that knowledge management as a moderating variable, intensifies (strengthens) relation between concept aspects (dimensions) and commercial intelligence effectiveness.

The research studies show that, the commercial intelligence role in marketing area has a positive effect on efficiency of customer-personnel. Also founds suggests, importance of create (building) the deep links between personnel and customers, personnel and organization respectively as a tool for strengthening the customer and personnel satisfaction. These favorable results with the recent research findings show that the commercial intelligence is steamy with level of employee compliance with customers.

**The aim (purpose)**

With pay attention (consider) the aim of this study that is investigating variables impact the role of commercial intelligence in the field of bank services marketing, this issue has been less attention, so the current study with presenting the final model present the different aspects theoretically about commercial intelligence and investigate its aspects. From this side, cause the development and excellence above concepts, and it cabbed path finding for next investigation. This study with pay attention to designed issue and the way (How) variable impact each other, practically investigate and identify the issues that are related to the subject and with pay attention to conceptual model and presented back ground, present some solution for organization. also this study investigate, the impact between variables of commercial intelligence and banking services marketing area, that cause the relation improvement between personnel-customer and increasing the managers and administrators effectiveness in adjustment the relation and roles of the work and improving assurance level in organization.
services environment, that this in turns, is effective on personnel perception from customer compliance and sense of belonging to the organization.

**Research methodology**
Statistical population of this study including 500 (N=500) individual of the Tehran Samen credit institution personnel since the size of the under study population is 500 individual, with using from determining the sampling volume table Morgan-Gorjesi (table 1-3), 217 number (n=217) individual it has been done with simple random sampling.

**The research hypothesis**
1-the technological commercial intelligence on banking services marketing has a meaningful and positive impact.
2- The organizational commercial intelligence on banking services marketing has a meaningful and positive impact.

The current research in terms of time realm, including period of six months (from April to September) 2015. The place realm of the current research is takes by Samen credit institution. The topical (thematic) ream of this study including the impact of commercial intelligence role in banking services marketing area in Samen credit institution in Tehran city.

**Data collection tools:**
Data collection tools in this study, the standard questionnaire of commercial intelligence and decision making in banking services area for options, using from Likert pattern scale in the whole five (from I’m absolutely agree = 5 till I’m absolutely disagree=1).

The technical commercial intelligence questionnaire including information quality items, adaptation with other systems and access to information composed 14 questions.
The decision environment questionnaire including types of decision items and process need composed 10 questions and decision making in marketing questionnaire as a dependent variable include (composed) 10 questions.

**The method data analysis**
In this study, for analysis the statistical data, and investigating of research questions and fit (suitable) with types of the research variables from descriptive statistic in the form of pie charts and bar is used for investigating the demographic characteristics, and in inferential statistics part from Climograph – Smeryonf is used for investigating the data normalization and multiple linear regression to recognize the impact or lack of impact of variable with help of SPSS software, the 21 edition.

**Results:**
**Table 1 – distribution and frequency percent the education rate of respondents personnel**

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Frequency Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma or under diploma</td>
<td>19</td>
<td>8/8</td>
</tr>
<tr>
<td>Associate degree</td>
<td>43</td>
<td>19/8</td>
</tr>
<tr>
<td>Bachelor</td>
<td>113</td>
<td>52/1</td>
</tr>
<tr>
<td>Master Art (MA)</td>
<td>42</td>
<td>19/4</td>
</tr>
<tr>
<td>Total number</td>
<td>217</td>
<td>100</td>
</tr>
</tbody>
</table>

http://www.ijhcs.com/index.php/ijhcs/index
Regarding to 1-4 table, it is observed that, the education rate 8/8 percent of under diploma and diploma, 19/8 percent associate degree, 52/1 percent bachelor and 19/4 percent MA.

Table 1 – Score average of main indexes.

In 217 individuals sample, among main indexes, access to the information with score average 4/11 is located in first rank. Decision environment, effect of information quality, compatibility, access to information, flexibility, moderated the risk management support on decision making in banking services area.

Table 2 – The study of moderator role of decision environment in effect of information quality in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator change model</td>
<td>2/490</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/116</td>
<td>-</td>
</tr>
<tr>
<td>With moderator change model</td>
<td>2/341</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/104</td>
<td>-0/012</td>
</tr>
</tbody>
</table>

Regarding to table 2 conclusion, in without moderator change model, the amount of effect of information quality on decision making in services area equal to 0/116 and in with moderator change model the decision environment equal to 0/104.

Table 3 – The study of moderator role of decision environment in compatibility impact with other systems on decision making in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator change model</td>
<td>1/061</td>
<td>1/98</td>
<td>doesn’t have an effect</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>With moderator change model</td>
<td>1/469</td>
<td>1/96</td>
<td>doesn’t have an effect</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Regarding to, table 3 conclusion, in without moderator change model, compatibility with other systems on decision making in services area doesn’t have an impact and in with moderator change model the decision environment also doesn’t have an impact.

Table 4 – The study of moderator role of decision environment in access to information impact on decision making in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator change model</td>
<td>2/443</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/182</td>
<td>-</td>
</tr>
<tr>
<td>With moderator change model</td>
<td>2/012</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/144</td>
<td>-0/038</td>
</tr>
</tbody>
</table>

Regarding to table 4 conclusions, in without moderator change model, the amount of access to information effect on decision making in services area equal to 0/182 and in model with moderator variable the decision environment, the effect amount is equal to 0/144.
Table 5 – The study of moderator role of decision environment in flexibility effect on decision making in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator change model</td>
<td>2/566</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/204</td>
<td>-</td>
</tr>
<tr>
<td>With moderator change model</td>
<td>2/717</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/204</td>
<td>-</td>
</tr>
</tbody>
</table>

Regarding to table 5 conclusions, in without moderator change model, amount of flexibility effect on decision making in services area equal to 0/204 and in model with moderator variable of decision environment, the effect amount is equal to 0/204.

Table 6 – The study of moderator role of decision environment in risk management support in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator change model</td>
<td>5/665</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/376</td>
<td>-</td>
</tr>
<tr>
<td>With moderator change model</td>
<td>3/882</td>
<td>1/96</td>
<td>has an effect</td>
<td>0/263</td>
<td>0/0113</td>
</tr>
</tbody>
</table>

Regarding to table 6 conclusions, in without moderate variable, effect amount of risk management support on decision making in services area is equal to 0/376 and in, with moderate variable of decision environment, the effect amount is equal to 0/263.

-The multiple linear regression
For this regression we use the Enter method

Table 7 – summary of the model

<table>
<thead>
<tr>
<th>correlation coefficient</th>
<th>determination coefficient</th>
<th>correlated determination coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/800</td>
<td>0/640</td>
<td>0/636</td>
</tr>
</tbody>
</table>

Regarding to table 7 conclusion, in this regression the correlation coefficient is 0/800.

The linearity study of regression (Anova test)

Table 8 – Anova test

<table>
<thead>
<tr>
<th>The significance level</th>
<th>Statistic amount (t)</th>
<th>Freedom degree</th>
<th>Error amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/000</td>
<td>189/842</td>
<td>2</td>
<td>0/05</td>
</tr>
</tbody>
</table>

*sig<0/05

Regarding to table 8 conclusions, because the significance level amount is equal to 0/000 and it is smaller than the error amount 0/05.

Watson – Camera test (the error test independence)
In last regression. The statistic amount Watson-Camera is equal to 1/788 that is placed between 1/5 till 2/5 range, so the statue is very desirable there is n’t any problem in this case.

Table 9 – Tolerance and VIF
The independent variables | tolerance | VIF
---|---|---
Technical commercial intelligence | 0/336 | 2/973
Organizational commercial intelligence | 0/336 | 2/973

Regarding to table 9 conclusion, the tolerance amount for both independent variable bigger than 0/01 and VIF amount is also fewer (smaller) than number 10, 50 the status is very desirable and there is not linearity.

**Main theory 1**: technical commercial intelligence in decision – making in banking services area has a positive and meaningful impact.

**Theory test:**

$H_0$: technical commercial intelligence in decision –making in banking services area doesn’t have positive and meaningful impact ($H_1: \beta_1 \neq 0$).

Table 10 – The study of technical commercial intelligence impact on decision making.

<table>
<thead>
<tr>
<th>Not standardized coefficients regression</th>
<th>standardized coefficients regression</th>
<th>Statistic amount (t)</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\beta$</td>
<td>Standard error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>technical commercial intelligence</td>
<td>0/393</td>
<td>0/103</td>
<td>0/270</td>
</tr>
</tbody>
</table>

*Sig < 0/05

Regarding to table 10 results, because the significance level equals to 0/000 and it is smaller than error amount 0/05.

So the multiple linear regression equation will be as follows: $Y = 0.393X_1 + 0.670X_2$

(Organizational commercial intelligence) + (technical commercial intelligence) = decision making in area

**Table 11** – study of moderating role of decision environment in technical commercial intelligence impact on decision making in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator variable model</td>
<td>3/816</td>
<td>1/96</td>
<td>has an impact</td>
<td>0/270</td>
<td>-</td>
</tr>
<tr>
<td>With moderator model</td>
<td>3/851</td>
<td>1/96</td>
<td>has an impact</td>
<td>0/259</td>
<td>0/011</td>
</tr>
</tbody>
</table>

Regarding to table 11 conclusion in, without moderator variable model, technical – organizational intelligence effect amount in decision making risk, is services area equals to 0/270 and in with moderator model decision environment, the impact amount is equal to 0/259.

**Table 12** – study of moderating role of decision environment in organizational commercial intelligence impact on decision making in services area.

<table>
<thead>
<tr>
<th>Models</th>
<th>Statistic</th>
<th>Table amount</th>
<th>conclusion</th>
<th>Impact amount</th>
<th>Different of impact in two models</th>
</tr>
</thead>
<tbody>
<tr>
<td>without moderator</td>
<td>7/974</td>
<td>1/96</td>
<td>has an</td>
<td>0/564</td>
<td>-</td>
</tr>
</tbody>
</table>
variable model | effect | table 12 conclusion in, without moderator variable model, organizational intelligence effect amount in decision making risk, is services area is equal to 0/564 and in, with moderator model decision environment, the impact amount is equal to 0/446.

## Discussion and Conclusion

Technical commercial intelligence in decision making in banking services area has positive and significant impact because the significant level amount is smaller than error amount %5, and absolute value of statistic (t) is bigger than the table amount 1/96 with 95 percent assurance we conclude that technical commercial intelligence has a positive and significant impact in banking services area and the impact amount is equal to 27 percent, that its amount is positive (direct).

The organizational commercial intelligence on decision making has a positive and significant impact in bank services area, because the significant amount is smaller than error amount 0/05 and absolute value (t) is bigger than the table amount 1/96 with 95 percent assurance. We conclude that technical commercial intelligence on decision making has a positive and significant impact in banking services area and impact value is equal to 56/4 percent, that its amount is positive (direct).

Compatibility with other systems on decision making in banking services area doesn’t have positive and significant because the significant level amount is bigger than error amount %5 and absolute value of statistic (t) is smaller than table amount 1/96, with 95 assurance we conclude that compatibility with other systems doesn’t have positive and significant impact in decision making in banking services area.

Access to information on decision making in banking services area has positive and significant impact because the significant level amount is smaller than error amount %5 and absolute value statistic (t) is bigger than table amount 1/96, with 95 percent assurance we can conclude that access to information has a positive and significant impact on decision making in banking services area and impact amount is also equal to 18/9 percent, that its amount is positive (direct).

Flexibility on decision making in banking services has positive and effective impact because the significant level amount is lower that error amount %5 and absolute value of ((t)) is bigger than table amount 1/96, with 95 assurance conclude that, flexibility has a positive and significant impact on decision making in banking services area and impact value is equal to 20/4 percent, that its amount is positive (direct).

Risk management support has a positive and significant effect on decision making in bank services area. because the significant level amount is smaller than error amount %5 and absolute value of statistic t is bigger than table amount 1/96, with 95 percent assurance, we can conclude that risk management support has a positive and significant effect on decision making in bank services area and impact amount is equal to 37/6 percent, that is positive (direct).
References

4-Javad. Mehrabi. Ayob.Kjosh Nazar.(2012).evaluation of name origin and trade mark effect on special value of name and trade mark from customer point of view.
5-Mayani and co-workers ) :2012(In a study entitled Effect of dimensions, according to the organization on the effectiveness of Business Intelligence Knowledge Management Case Study
6-Ansari and co-workers (2010) : Impact of information technology on business intelligence managers
7-Sazvar and co-workers (2011) :Reviews provide a model for improved business intelligence marketing electronic insurance industry