Verifying and Prioritization of Physical Causes Influencing absorption of deposit in Saderat Bank in Mazandaran

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Abstract: This research is aiming to verify and prioritize physical variables influencing absorption of deposit in Saderat bank in Mazandaran based on expert viewpoints. In this research, we selected those branches, which ran during a 5-year period from 2006 to 2010. In this case, while comprehensive review of the relevant literature through library method, we used documents in the bank-related books and magazines as well as questionnaires to gather needed data. Statistical society of the research includes experts and managers in 118 branches of Saderat bank in Mazandaran. The theory test done by multiple regression statistical techniques of data panel and entropy. The result of the research showed the most significant relation among bank space, bank equipment, locations of branches, and number of branches and absorption of deposit. There is a direct relation among bank space, bank equipment, locations of branches by absorption of deposit; but there is a reverse relation between the number of branches and the absorption of deposit.

Key words: Bank space, bank equipment, site of branches, the number of branches, absorption of deposit, Saderat bank

INTRODUCTION

A proper communication among financial and economic sectors is one of the most important causes in economic growth and development. Banks as the main part of financial system (bank basic system) play the main role in financing manufacturing, trade, consumable and even government units. In fact, banks are among financial institutions that play an important role in creating mechanism of economic value added through absorption of deposit and their optimal allocation. These receiving-deposit organizations play the financial mediating role using financial levers, absorbent deposit and providing expert facility (Mousavian, 2002).

In doing economic operations, banks face various kinds of hazards which influence those operations. Like most financial and economic organizations, banks pay much attention to profit and profitability and see it as an important indicator to evaluate their own performance; and they try keeping profitability and value added through operational and strategic programming. On one hand, they have to satisfy, depositors who invested for profit and on the other hand, shareholders and beneficiaries (khazra, 2006).

In this research, we analyzed physical causes influencing absorption of deposit such as, number of branches, bank equipment, bank space, and sites of branches. In addition, we provide a general picture of profitability and relation among components from viewpoint of Saderat bank experts.

The main goal of the research is to verify priorities of physical causes influencing on deposit saving in the years of 2006-2010 and provide influential recommendation for increasing bank profitability.

2- Research Background:

1) Yung and Jung (2006), studied long-term profitability in Taiwan banks and found that bank services are the most important causes in profitability of bank branches. In addition, banks’ employees are the most important and fundamental cause to increase profitability.

2) Abhiman and et al., (2009), studied some Indian great state banks, and found human resource, employees’ education, bank environment, locations of banks, governmental rules, and decrease of government interference in banks operation as causes influencing absorption of deposit. They know human resource as the most important and influential cause in absorption of investment.

3) Alipour Shirzavar (2010), in a research on “evaluating influential causes in absorption of bank resource: case study (branches of Saman Banks)” aiming to evaluate influential causes on resource mobilization of Saman Bank in resource attraction. A questionnaire has been distributed among the members of statistical sample (customers and employees of Saman Bank in Gilan). The questionnaire analysis showed that rate of using computer, ideality of inner environment, customer satisfaction of branches employees, and the quality of services influence attraction of bank resources. These causes prioritized as service quality, ideality of inner environment, customer satisfaction of computer technology.
4) Dayee Karimzadeh (2010), carried a research on “Verifying causes influencing bank resource mobilization: case study (branches of Refah Banks in Isfahan)”. The results showed that all five mentioned causes influencing resource mobilization in branches of Refah Banks more than average. Service, physical, communication, human, financial, and organizational dependence causes are among causes influence resource attraction.

3- Methodology:
The method of study is descriptive-analytical. This is an empirical-quantitative research and analysis of variables relations is comparative. In comparative analysis, gathered information verified by descriptive method, and then compare to one another. The variables of the research include:
A) Independent variable: locations of bank branches (urban and rural), the number of branches, indoor and outdoor design, physical features of branches;
B) Dependent variable: absorption of deposit.
In this research, statistical society includes high-rank experts and managers of branches of Saderat Bank in Mazandaran.
We gathered needed information and data by two methods. At first, some information related to research literature gathered from library resources and then needed information for analyzing the relation among data gathered through books and magazines related to Mazandaran Saderat Bank. In addition, we used closed questionnaire to gather information from bank expert.
Then, we sum up data by transferring it to the excel spreadsheet and make it ready for analysis by calculations. Final analysis carried by Entropy and Eviews software through data panel method.

4- Research Questions:
A- Main Question:
1. Verifying and ranking physical causes influencing absorption of deposit in Saderat Bank.

B- Secondary Questions:
1. How the number of branches influence absorption of deposit in Saderat Bank?
2. How Bank equipment influences absorption of deposit in Saderat Bank?
3. How Bank space influences absorption of deposit in Saderat Bank?
4. How location of the bank influence absorption of deposit in Saderat Bank?

5. Results and Findings:
5-1- Research Question Analysis by Entropy Method:
Table 1-1: entropy analysis of physical causes influencing absorption of deposit

<table>
<thead>
<tr>
<th>The Number of Branches</th>
<th>Location of Bank</th>
<th>Bank Space</th>
<th>Bank Equipments</th>
<th>Entropy Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.4</td>
<td>5.911</td>
<td>1.464</td>
<td>E1</td>
</tr>
</tbody>
</table>

According table 1-1, entropy for each physical variable includes bank equipment: 1.64, bank space: 5.911, location of bank: 1.4, which shows a direct relation with the absorption of deposit.

B- Calculating Amount of Uncertainty:
Table 2-1: Analyzing amount of uncertainty calculation of physical causes influencing absorption of deposit

<table>
<thead>
<tr>
<th>The Number of Branches</th>
<th>Location of Bank</th>
<th>Bank Space</th>
<th>Bank Equipment</th>
<th>Entropy Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.4</td>
<td>-4.911</td>
<td>-0.464</td>
<td>1-Ej</td>
</tr>
</tbody>
</table>

B- Calculating Amount of Uncertainty:
Table 2-1: Analyzing Amount Of Uncertainty Calculation:
According to table 2-1, amount of uncertainty for each physical variable includes bank equipments: -0.464, bank space: -4.911, location of the bank: -0.4 and the number of branches: 1 which show influential relation with absorption of deposit.

C- Calculating Indices’ Weights:
According table 3-1, index of effectiveness for bank equipment, bank space, location of the bank, and the number of the branches are 0.0907, 1.028, 0.084, and -0.209, respectively. The most effective causes include inside and outside the bank, physical equipment of the bank, location of the bank, and the number of the branches, respectively.

5-1-1-1- Analysis of Research Questions by Entropy Method:
5-1-1-1- Analysis of Question One:
The relation between numbers of branches and index of effectiveness equals -0.209 and shows a reverse relation between the numbers of branches and absorption of deposit.

5-1-1-2- Analysis Question Two:
Index of effectiveness of bank equipment equals 0.0907 and shows a direct relation between bank equipment and absorption of deposit.

5-1-1-3- Analysis of Question Three:
Bank space by index of effectiveness of 1.028 shows a direct relation between bank space and absorption of deposit.

5-1-1-4 Analysis of Question Four:
Location of the bank by index of effectiveness of 0.084 shows a direct relation between bank location and absorption of deposit.

5-2-Studying Influence of Each Physical Variable on absorption of deposit by Panel Data Method:
5-2-1- The Main Question of Research:

Table 4-1: Choosing From Integrated Model And Fix Effects In The Main Hypothesis

<table>
<thead>
<tr>
<th>Significance Level</th>
<th>Freedom Ratio</th>
<th>Statistic</th>
<th>Effects Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2961</td>
<td>8.31</td>
<td>1.26671</td>
<td>Cross-section F</td>
</tr>
<tr>
<td>0.1216</td>
<td>8</td>
<td>12.7278</td>
<td>Cross-section chi-square</td>
</tr>
</tbody>
</table>

According the test result of integrated model and fix effects in table 1-4, the best research model is integrated one. We used F-test to choose from fix effects test and integrated model.

Table 5-1: Analyzing Multivariable Regression of Physical Causes Influencing absorption of deposit

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>y-intercept of C</td>
<td>824209</td>
<td>2.16685</td>
<td>0.00264</td>
</tr>
<tr>
<td>Number of Branches</td>
<td>-2477510</td>
<td>-3.75831</td>
<td>0.0006</td>
</tr>
<tr>
<td>Equipment of Bank Branches</td>
<td>46.05222</td>
<td>3.212668</td>
<td>0.0026</td>
</tr>
<tr>
<td>Space of Bank Branches</td>
<td>302.6565</td>
<td>3.044827</td>
<td>0.0029</td>
</tr>
<tr>
<td>Location of Bank in Village</td>
<td>22.26876</td>
<td>3.214707</td>
<td>0.0026</td>
</tr>
<tr>
<td>Location of Bank in City</td>
<td>21.48504</td>
<td>3.180043</td>
<td>0.0029</td>
</tr>
<tr>
<td>Adjusted Coefficient of Determination</td>
<td>0.513562</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f-statistic</td>
<td>34.03692</td>
<td></td>
<td>0.00007</td>
</tr>
</tbody>
</table>

According analysis in table 5-1, linear regression model is:

= 824209 - 2477510x + 46.05222x + 302.6565x + 22.26876x + 21.48504x + u1

According table 5-1, the following regression is statistically confident. Adjusted coefficient of determination Watson Camera statistic of this model is 5.1% and 1.79, respectively, which shows no autocorrelation among model errors elements.

5-2-2- Findings of Research Questions by Panel Data Method:
5-2-2-1- Analysis of Question One:
The number of branches with t-statistic of -3.75831 and p-value of 0.0006 is significant in error level of 5%. Coefficient of this variable is -2477510 and shows a reverse relation between the number of branches and absorption of deposit.
5-2-2-2- Analysis of Question Two:
The bank equipment by t-statistic of 3.212668 and possibility of 0.0026 is significant in error level of 5%. Coefficient of this variable is 46.5222 and shows a direct relation between bank equipment and absorption of deposit.

5-2-2-3- Analysis of Question Three:
The bank space by t-statistic of 3.044827 and possibility of 0.0042 is significant in error level of 5%. Coefficient of this variable is 302.6565 and shows a direct relation between bank space and absorption of deposit.

5-2-2-4- Analysis of Question Four:
Location of bank in village by t-statistic of 3.214707 and possibility of 0.0026 is significant in error level of 5%. Coefficient of this variable is 22.26876 and shows a direct relation between bank location in village and absorption of deposit.

5-2-2-5- Analysis of Question Five:
Bank location in city by t-statistic of 3.180043 and possibility of 0.0029 is significant in error level of 5%. The variable coefficient is 21.48504 and shows a direct relation between bank location in city and absorption of deposit.

6. Discussion and Result:
The results of research question analysis show a significant relation between deposit attraction and physical causes of all studied Saderat Banks in Mazandaran. It means that using physical causes for absorbent deposit could be useful. In this research, we studied the effect of physical causes and each variable separately on absorption of deposit in Saderat Banks in Mazandaran. We assumed there is a negative relation between the number of branches and absorption of deposit; and there is a positive relation among the physical environment of the bank, bank equipment and bank location (in villages and cities) and absorption of deposit. Therefore, inside and outside the bank, bank equipment and location of the bank has the most effect on the absorption of deposit, respectively. The findings show the importance of physical causes in absorption of deposit in the banks. It seems that any suitable information could be useful in manager’s decision making for investment and more deposit in banks.

7. Recommendation Based on Research Result:
1) Since there is a positive relation between bank space and absorption of deposit, one can say a suitable environment affects the growth of employees’ value and increase of productivity. Variation of bank service, organizing work environment, and creating calm and productive environment in organizations is necessary for more activation of human workforce, their succulence, depression decrease, increase of positive service and at last more productivity.

2) Since there is a positive relation between bank location and the deposit attraction, one can say bank locations and financial organizations is an important factor in absorption of customers and bank marketing should bear it in mind. Therefore, banks need scientific evaluation and subtle feasibility study to establish branches. Establishing branches in suitable temporal and spatial distance, establishing branches in important places like industrial estates, residential and business places, and establishing the branches near public parking lots are among the causes influencing deposit attraction.

3) Since the number of the branches has the most effective negative and reverse relation with absorption of deposit, we recommended that banks’ managers and experts pay more attention to changes of the variables.

4) Since there is a positive relation between equipment and absorption of deposit, one can say physical equipment of banks and financial organizations is an important factor in customer attraction. Bank equipment is important itself, but using this equipment like internet accounts needs cultural and scientific backgrounds for customers and staff which banks’ experts have to pay more attention to.

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