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EXPLORATORY STUDY ON CAUSES OF VALUABLE COSTUMER'S TURNOVER IN IRAN'S PRIVATE BANKING INDUSTRY (CASE STUDY: PHYSICIAN SPECIALISTS' SOCIETY)

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ABSTRACT

The purpose of the present research is to discuss the causes of valuable costumer's turnover in Iran's private banking industry regarding Physician specialists. It is worth mentioning that the population of this research includes 62 active physician specialists in Tehran. Also for the purpose of data collection, two series of open and close ended questionnaires were used and research methodology is also a combination of VIKOR, ANP and DEMATEL methods which are considered as multi-criteria decision making methods. At the end, interesting results were yielded regarding the causes of Physician specialists' turnover from banking services of a significant branch or bank which can be useful in bank's macro and micro planning in the context of marketing, absorption and maintaining this special class. This research has adopted a survey-exploratory approach and is also undertaken with an applicable purpose.

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Keywords: Turnover, Iran's private banking industry, Physician specialists.

Contribution/ Originality

This study is one of very few studies which have investigated the causes of valuable costumer's turnover in Iran's private banking industry regarding Physician specialists.

1. INTRODUCTION

Customer turnover is defined as a customer's decision regarding cessation of purchasing a special service or generally cessation of getting served from a special firm [1]. Also turnover is a term which points to movement of costumer from one supplier to another [2, 3]. The definition of customer turnover in the literature of this subject is introduced in two types of minor and major turnovers [4]. Major turnover is defined as a customer's orientation towards stopping his or her

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business transactions with a firm in a specific section of time [5] and also the costumer's orientation towards transferring his or her business trades and transactions to a competitor firm [6]. Minor turnover means continuous reduction in customer's lifetime value [7]. In the cycle of customer relationship management which is based on four main principles of customer relationship management (Identification, attraction, maintaining and development), the analysis of customer's turnover has become a main part in customers loyalty programs [8]. Researches in the context of customer turnover are separable in two general approaches; the first approach tends to identify the causes of customer turnover and the second approach is concerned with predicting the rate of turnover [9]. In most of the researches regarding customer's turnover, predicting the rate of turnover is undertaken via transactional data from customer's trades. There are not sufficient researches regarding the identification of causes of turnover and attempts regarding elimination of causes of this phenomenon [10]. This is while studying the rates of customer turnover solely, does not provide anything beyond a general perspective and any attempt towards elimination of causes of this phenomenon is subject to comprehending the up to date causes and statuses of the phenomenon of turnover [11]. In this regard, Shin and Kim [12] conducted a research regarding the problem of customer turnover, the effects of demographic indexes, supplier's change barriers, type of provided services and personnel's behavior. Also Keramati, et al. [13] conducted a research on the elements of customer's turnover from a cellular communications operator in Iran. Three factors of customer dissatisfaction, level of implementing the provided services and demographic characteristics were realized as the most influential elements on customer's turnover.

Researchers believe that as a result of high costs of absorbing and attracting new customers and significant benefits of maintaining current customers, studying customer's turnover is completely essential in competitive industries [14]. One of these industries is the industry of private banking in Iran in which the competition is getting tighter every day by introduction of new rivals and new services. Reichheld and Sasser [15] believes that the five percent increase in the rate of maintaining customers can lead to a 85 percent increase in Bank's revenues. A basic principle regarding customer turnover management is paying attention to key customers. Since not all customers are equal in terms of maintenance value and establishment of a long-term relation; and considering the fact that maintaining customers is costly, efforts or maintaining invaluable customers and or customers who do not intend to turnover, leads to waste of funds. This fact usually holds regarding the relationship between organizations and customers that a large percentage of organization's revenues yield from a small percentage of customers [16]. In addition, a significant part of customers' base is not profitable. On this basis, organizations must only concentrate on customers who hold an acceptable share in organization's profitability [17]. As a result, in banking industry also concentration on profitable customers is considered as a main principle in turnover management. With respect to Iran's ruling economic and social status, it can be claimed that physician specialists are among high income classes of the society and respectively, attracting this class is one of the main purposes of active banks in Iran. As a result, the purpose of the present research is to identify the effective elements on this classes' turnover from services of some banks and their movement towards other banks. It is worth mentioning that this is the first study on physician specialists in terms of customer turnover. The present study is entirely

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innovative in terms of population and the yielded results are also generalizable to this society with high assurance. This research tends to answer the following main questions: (1). what are the causes of turnover from services of a bank (turnover from one bank and moving to another) among the society of physician specialists? And (2). what is the manner of prioritizing these elements in terms of effectiveness?

It is worth mentioning that in order to provide a better access for the researcher; this research is conducted on physician specialists in the city of Tehran.

2. RESEARCH METHODOLOGY

The present research is an exploratory-survey research which is entirely applicable and its results could be used by all active banks throughout the country. The survey phase of the research includes the following steps:

1- Identification and inviting some of physician specialists in different contexts for participating in the research

2- Identification of research subjects with at least three times of turnover from services of a bank

3- Identification of elements that lead to physician specialist's turnover from banking services of banks

4- Prioritizing the identified elements based on combined methodology of VIKOR, ANP and DEMATEL

The following provides more specific explanations regarding different aspects of the research.

2.1. Research Population

The preliminary population of this research included 75 specialist doctors in Tehran and with respect to different relations of the author; they were invited to participate in the research. Among them, 13 individuals were omitted from the list because of having less than three times of turnover and respectively, the research entered its main processing with a population of 62 individuals (The reason for determining a condition of at least three turn overs was that we intended to carry out the research on individuals who had adequate experiences regarding turnover and also people who were sensitive regarding different aspects of Banking services providers).

2.2. Data Collection Instruments

The data collection instruments in the present study are divided in two general categories:

- Library and internet method for familiarization with research history and literature
- Field and specially questionnaire method for collecting required information from the population

In this research's field category, according to different phases of research (Identification and prioritization) three types of questionnaires were used. First questionnaire is concerned with the phase of identification of indices and the second questionnaire is regarding the phase of (including two questionnaires) prioritization of elements and sub-elements. The first questionnaire was a closed questionnaire aimed at identification of elements and sub-elements related to physician specialist's turnover in banking industry. The second questionnaire was designed on the basis of the

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output of the first questionnaire and was also based on ANP and DEMATEL methodologies and was used for prioritization of elements and sub-elements.

2.3. Data Analysis Method

In this research, a combined method of VIKOR, ANP and DEMATEL was used for prioritizing and weighting for each element and sub-element. These methods are considered as multi-criteria decision making methods. The following provides an explanation regarding these three methods.

2.3.1. Implementing DEMATEL for Mapping the Relationships in the Network

DEMATEL method was implemented for identification and discussing the mutual relations between criteria and mapping the relations in the network. Since diagraphs are better in showing the relation between the elements of a system, DEMATEl is based on graphs which are able to categorize the engaged elements in two distinct groups and turn their relations into a comprehendible structural model. Steps for DEMATEL method are as follows:

Creation of direct relation matrices, normalizing the direct relation matrices, obtaining general relations matrices and mapping the network relations based on two vectors of r and c. Results must show the level of direct relations between criteria. The numbers 0,1,2,3 and 4 respectively reflect the non-significant to highly-significant effects. The diagraph that shows the relations between criteria is yielded from the sum of these steps. The element of the first matrix, which is also known as direct matrices is shaped upon the effect of element I on element j.

$$A = \begin{vmatrix} a_{11} & \cdots & a_{1j} & \cdots & a_{1n} \\ \vdots & \cdots & \vdots & \cdots & \vdots \\ \vdots & \cdots & \vdots & \cdots & \vdots \\ \vdots & \cdots & \vdots & \cdots & \vdots \\ a_{i1} & \cdots & a_{ij} & \cdots & a_{in} \\ \vdots & \cdots & \vdots & \cdots & \vdots \\ \vdots & \cdots & \vdots & \cdots & \vdots \\ \vdots & \cdots & \vdots & \cdots & \vdots \\ a_{n1} & \cdots & a_{nj} & \cdots & a_{nn} \end{vmatrix}$$

In order to normalize the direct relations matrix, the following relations are implemented.

(1) D= S x A

In which: (2) $$S = Min\left[\frac{1}{Max_{1\le i\le n} \sum_{j=1}^{n} |a_{ij}|} , \frac{1}{Max_{1\le i\le n} \sum_{i=1}^{n} |a_{ij}|} \right]$$

$$Lim_{l\to\infty} D^l = [0]_{n\times n} \quad , \qquad 0 \le d_{ij} \le 1$$

The total relations matrix (T) is calculated by the help of matrix (D) through the relation (3). In this relation, (I) is the unit matrix.

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(3) $T = D + D^2 + ... + D^l = D(I - D)^{-1}$ When $l \longrightarrow \infty$

In order to map the relations of the network, C and R vectors are used which are respectively the sum of rows and columns of matrix (T). Relations (4) and (5) show their manner of calculation.

$$T = \lfloor t_{ij} \rfloor, \qquad i, j = 1,2,...., n$$

(4) and (5)

$$r = \left[r_i\right]_{n\times 1} = \left[\sum_{j=1}^{n} t_{ij}\right]_{n\times 1} \quad , \quad c = \left[c_j\right]_{n\times 1} = \left[\sum_{i=1}^{n} t_{ij}\right]'_{1\times n}$$

The term Ri is the sum of (T) matrixes' I row and shows the sum of direct and indirect impacts of criterion I on other criteria. Also the term Dj is the sum of (T) matrixes' j column and shows the sum of direct and indirect impacts which is posed on criterion J by other criteria. In addition, $(r_i + d_j)$ reveals the level of main impacts of I factor in the problem. If $(r_i - d_j)$ is negative, other factors impact I factor and in this regard the relations on the network are mapped.

2.3.2. Implementing ANP for Calculation of Weight of Each Criterion According to Network Relations Map

ANP is a generalized type of AHP method which has been able to desirably solve the problem of correlation and feedback between criteria. In this method, first the problem is divided into several clusters and respectively, each criterion is assigned to a specific cluster. The relation between clusters is known as the external relation and the relation between criteria in each cluster is known as internal relation. Relations and feedbacks between criteria is determined via the mapping resulted from DEMATEL method. As a result, in addition to paired comparison between criteria, the next step calculates the eigenvalues and eigenvectors. Values 1 to 9 re implemented for showing the significance of comparisons. After construction of the paired comparison matrix, the eigenvector of Wi is calculated by the help of relation (6).

(6) $AW = \lambda_{max} \qquad , \quad w = (w_1, w_2,..., w_n)$

In this regard, A is the paired comparison matrix, W is the eigenvector, Wi is the eigenvalue and n is the number of comparable criteria.

(7) $$\lambda_{max} = \frac{1}{n}\sum_{i=1}^{n}\frac{(Aw)}{w_i}$$

(8) $$(Aw)_i = \sum_{j=1}^{n} a_{ij} w_j$$

In the last step, the ultimate matrix is obtained through a dependency table which is yielded from the relation between variables and the eigenvector which is the result of paired comparison matrix. Next, the weight matrix of W becomes limited so that the values of each line are equal. On this basis, weights in each criterion could be calculated via the following relation.

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2.3.3. Implementing VIKOR for Prioritizing Options

The VIKOR method is implemented for optimization of complex systems in terms of a multi-criteria method. This method concentrates on ranking and selecting a set of options with existence of conflict among criteria. Multi-criteria ranking in VIKOR method is based on the closest answer to the ideal answer. In this method, options are viewed as $A_1,...,A_j,...,A_J$. f_{ij} Signifies the value of I criterion for option j and also the ranking of criterion J for option Aj is viewed by it. Also J shows the number of options and n shows the number of criteria. The development of VIKOR method is introduced as relation (9).

$$(9) \quad L_j^{'} = \left\{ \sum_{i=1}^{n} \left[w_i \left(\left| f_i^* - f_{ji} \right| \right) / \left(\left| f_i^* - f_i^- \right| \right) \right]^p \right\}^{vp}$$
$$1 \leq p \leq \infty \quad , \; j = 1,2,...,J$$

The weight w is calculated from ANP and in order to turn it into a mathematical relation for ranking and evaluation of distance between $L_j^{p=1}$ and $L_j^{p=\infty}$, relations (10) and (11) are used in VIKOR method.

$$(10) \quad S_j = L_j^{p=1} = \sum_{i=1}^{n} \left[w_i \left(\left| f_i^* - f_{ji} \right| \right) / \left(\left| f_i^* - f_i^- \right| \right) \right]$$

$$(11) \quad R_i = L_j^{p=\infty} = \max_i \left\{ w_i \left(\left| f_i^* - f_{ji} \right| \right) / \left(\left| f_i^* - f_i^- \right| \right) \middle| \, i = 1,2,...,n \right\}$$

The compromised solution of $\min_j L_j^p$ shows the combined distance for minimalizing since its value was the closest answer to the expected value, it is selected. When the value of p is smaller (E.g. p=1) it may provide information for decision makers regarding the maximum group desirability or opposing majority. Also when the value of P goes toward infinites, it can provide information regarding minimum personal disagreement effect for decision makers. In VIKOR method, with respect to provided concepts, there are four steps namely as calculation of the best and worse value, calculation of maximum group desirability and minimum opposing personal effect and calculation of index values and ranking or optimizing options for a compromised solution.

For calculating the best and the worst value for all criteria, the best value and the worst value, in case that function I shows the revenues, are respectively $f_i^* = \max_j f_{ij}$ and $f_i^- = \min_j f_{ij}$, and in case function I shows the cost, $f_i^* = \min_j f_{ij}$ and $f_i^- = \max_j f_{ij}$ the term $i = 1,2,...,n$ are used. In addition, the main ranking matrix can be turned into the normal weight-rank matrix via the following relation

$$(12) \quad r_{ij} = \left(\left| f_i^* - f_{ij} \right| \right) \setminus \left(\left| f_i^* - f_i^- \right| \right)$$

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For calculating group maximum and minimum personal effect, respectively the relations of $S_j = \sum_{i=1}^{n} w_j r_{ij}$ and $R_j = \max_i \{r_{ij} \mid j = 1,2,...,J\}$ are used.

The index value is also calculated from relation (13).

$$(13) \quad Q_i = v(S_i - S^*)\setminus(S^- - S^*) + (1-v)(R_j - R^*)\setminus(R^- - R^*)$$

In this relation, $S^* = \min_j S_j$, $S^* = 0$, $S^- = \max_j S_j$, $S^- = 1$, $R^* = \min_j R_j$, $R^* = 0$, $R^- = \max_j R_j$, $R^- = 1$ and V are considered as the weight of maximum group desirability which is usually considered as 0.5.

3. RESULTS OF DATA ANALYSES

As it was mentioned in the previous section, the present research was carried out in two phases. The first phase is about identification of elements and the second phase is also about ranking or prioritization of elements and sub-elements. The following includes the results of these two phases.

3.1. Results of the First Phase (Identification of Elements)

After distribution and collecting the first questionnaire and further investigations and categorizing the introduced issues, the ultimate elements and sub-elements are categorized as table1.

Table-1. Identified causes of turnover

Factors	Sub-Factors
Physical location shift	Clinic's location shift
	Bank's location shift
Behavioral issues	Employee's behavior
	Manager's behavior
Facilities	Earnings
	Long-term earnings
Electronic services	Diversity of internet services
	Diversity of cell-phone services
	Providing periodic reports
	Amount of allowed daily transfers
	POS machine's speed
Subsidiary elements	Change in management
	Bank's reputation
	Suggestions of coworkers

3.2. Results of the Second Phase (Ranking Elements)

As it was clearly defined in research methodology section, the present research has adopted three methods of VIKOR, ANP and DEMATEl for weighting and ranking elements and sub-

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elements of turnover. Implication of these three methods has included application of several matrices which are briefly explained. The following presents the final result of implementing these three methods.

As you can see in table2, according to calculations from aforementioned methods, the rank of elements and sub-elements is determined as follows:

Table-2. Results of analyses of questionnaire No.2 according to VIKOR, DEMATEl and ANP

	Weight-based ANP	VIKOR			
		Vikor Index	Ranking factors	Ranking in the factors	Ranking based on all the sub-factors
Physical location shift	0.177	0.20366	3	---	---
Clinic's location shift	0.731	0.24619	---	1	5
Bank's location shift	0.269	- 0.25372	---	2	11
Behavioral issues	0.216	0.30079	2	---	---
Employee's behavior	0.385	0.28369	---	2	4
Manager's behavior	0.615	0.40061	---	1	2
Facilities	0.386	0.51022	1	---	---
Earnings	0.588	0.42857	---	1	1
Long-term earnings	0.412	0.21557	---	2	6
Electronic services	0.149	- 0.20513	4	---	---
Diversity of internet services	0.09	0.33826	---	1	3
Diversity of cell-phone services	0.42	0.200481	---	2	7
Providing periodic reports	0.17	- 0.32953	---	4	13
Amount of allowed daily transfers	0.28	0.14056	---	3	9
POS machine's speed	0.04	- 0.35729	---	5	14
Subsidiary elements	0.072	- 0.38599	5	---	---
Change in management	0.306	0.00689	---	2	10
Bank's reputation	0.461	0.18341	---	1	8
Suggestions of coworkers	0.233	- 0.30188	---	3	12

4. DISCUSSION, RESULTS AND SUGGESTIONS

As the results of analyses have shown, ranking the elements and sub-elements for physician specialist's turnover are summarized in tables 3 and 4.

Table-3. Ranking turnover factors for physician specialists from a certain bank or services

Rank	Factor
1	Facilities
2	Behavioral issues
3	Physical location shift
4	Electronic services
5	Subsidiary elements

Table-4. Ranking turnover sub-factors for physician specialists from a certain bank or services

Rank	Sub-Factors
1	Earnings
2	Manager's behavior
3	Diversity of internet services
4	Employee's behavior
5	Clinic's location shift
6	Long-term earnings
7	Diversity of cell-phone services
8	Bank's reputation
	Continue

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9	Amount of allowed daily transfers
10	Change in management
11	Bank's location shift
12	Suggestions of coworkers
13	Providing periodic reports
14	POS machine's speed

As shown in table3, the issue of received facilities and the type of comprehended behaviors had the most significant effects on physician specialist's turnover process from banking services of a specific bank. Also the results show that in general, subsidiary elements for this special class had the least effects on the problem of customer turnover.

Also table4 revealed that among the entire sub-elements identified during the research, revenues, manager's behavior and diversity of banking services provided through the bank's website has the most influences on this issue. These elements are somehow considered as crucial elements for success in the context of attraction and maintenance of this special class. Also among the entire identified sub-elements, providing reports via e-mail and performance speed of POS machines had the least level of impact. It is worth mentioning that the aforementioned results are in compliance with the results of researches conducted by Shin and Kim [12] and Keramati, et al. [13]

According to the yielded results of this research, the following applicable suggestions are recommended for a better maintenance of doctors in banking industry:

- Providing daily interests for investments with different volumes
- Manager's attention to the quality of manner of communicating this special class which requires more sensitivity
- Inviting specialist costumers to bank's meetings without presence of other costumers
- Providing some special services for doctors and physician specialists. For example, providing higher interests or providing some special services in clinics (undertaking bank affairs in the clinic, transferring cash daily to the bank by bank's agents and etc.)
- Creating diversity in providing electronic services through bank's website in a way that the need for individual's presence at bank is minimalized
- Providing special services for physician specialists through bank's website and even terming a part of the website in this name and assigning these costumers a private user account. This leads to attraction and creation of loyalty among this class.

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