Assessment and ranking of factors on success of Sina Bank's Branches through factor analysis approach (Case study: Branches in eastern Azerbaijan and Ardebil)

Evaluación y clasificación de los factores sobre el éxito de las sucursales de Sina Bank a través del enfoque de análisis factorial (estudio de caso: sucursales en el este de Azerbaiyán y Ardebil)
Avaliação e classificação de fatores sobre o sucesso das agências do Sina Bank através da abordagem de análise fatorial (estudo de caso: filiais no leste do Azerbaijão e Ardebil)

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Abstract

The main goal of the present research is the assessment and ranking of success factors in the branches of Sina bank and presenting the model through factor analysis approach in Sina banks in Eastern Azerbaijan and Ardebil. To reach this, by reading books, essays and previous researches, first, 46 factors have been identified. Statistical society is included 66 members of managers, deputies, and credit responsible in Sina bank's branches in Eastern Azerbaijan and Ardebil. They have been selected through the census. The tools to gather the questionnaire's information in the effective factors of Sina bank's success are through the factor analysis which has been given to the statistical society after the validity and stability test. To statistical analysis of gathered information in inferential level, one sample t test has been used. And for presenting the pattern, explanatory and confirmatory factor analysis and for setting a priority in effective factors of success of Sina bank's branches the researcher has used Friedman test by SPSS and LISREL software. The result represents that the success rate in Sina bank in Eastern Azerbaijan and Ardebil is higher than expected. Also considering the results of scale reliability and explanatory and confirmatory factor analysis, from 46 prior identified factors, 37 of them have been categorized in 7 groups: management, office workers, financial, facilities of branch, customer's condition, the place of branch, and technology area. According to the

Resumen

El objetivo principal de la presente investigación es la evaluación y clasificación de los factores de éxito en las sucursales del banco Sina y la presentación del modelo a través del enfoque de análisis factorial en los bancos Sina en el este de Azerbaiyán y Ardebil. Para alcanzar esto, mediante la lectura de libros, ensayos e investigaciones anteriores, en primer lugar, se identificaron 46 factores. La sociedad estadística está integrada por 66 miembros de gerentes, diputados y responsables de crédito en las sucursales del banco Sina en el este de Azerbaiyán y Ardebil. Han sido seleccionados a través del censo. Las herramientas para recopilar la información del cuestionario sobre los factores efectivos del éxito del banco Sina son a través del análisis factorial que se ha entregado a la sociedad estadística después de la prueba de validez y estabilidad. Para el análisis estadístico de la información recopilada en el nivel inferencial, se ha utilizado una prueba t de muestra. Y para presentar el análisis factorial, explicativo y confirmatorio y para establecer una prioridad en los factores efectivos de éxito de las sucursales del banco Sina, el investigador ha utilizado la prueba de Friedman realizada por el software SPSS y LISREL. El resultado representa que la tasa de éxito en el banco Sina en el este de Azerbaiyán y Ardebil es más alta de lo esperado. También considerando los resultados de la confiabilidad de la escala y el análisis factorial

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Friedman test, the main factors for the success of Sina bank in Eastern Azerbaijan and Ardebil are: for managerial factors, providing new banking services; for workers, the treatment of workers with customers; for financial, collection of claims; for branch's facilities, adornment of branch; for customers condition, their trust; for place of branch, the presence of competitors, and for technology area, its management.

Keywords: Success of Sina Bank; effective factors; factor analysis approach; eastern Azerbaijan and Ardebil Branches

explicativo y confirmatorio, de 46 factores identificados previamente, 37 de ellos se han categorizado en 7 grupos: administración, empleados de oficina, finanzas, instalaciones de la sucursal, condición del cliente, el lugar de la sucursal y área de tecnología. Según la prueba de Friedman, los principales factores para el éxito del banco Sina en el este de Azerbaiyán y Ardebil son: para los factores de gestión, proporcionar nuevos servicios bancarios; para los trabajadores, el trato de los trabajadores con clientes; para financiero, cobro de reclamaciones; para las instalaciones de la rama, adorno de rama; Para la condición de los clientes, su confianza; por lugar de sucursal, presencia de competidores, y por área de tecnología, su gestión.

Palabras claves: Éxito de Sina Bank; factores efectivos; enfoque de análisis factorial; Azerbaiyán Oriental y Ramas de Ardebil.

Resumo

O principal objetivo da presente pesquisa é a avaliação e classificação de fatores de sucesso nas agências do banco Sina e a apresentação do modelo por meio da análise fatorial nos bancos do Sina no leste do Azerbaijão e Ardebil. Para alcançar isso, lendo livros, ensaios e pesquisas anteriores, em primeiro lugar, 46 fatores foram identificados. A sociedade estatística inclui 66 membros de gerentes, deputados e crédito responsáveis nas filiais do banco Sina no leste do Azerbaijão e Ardebil. Eles foram selecionados através do censo. As ferramentas para reunir as informações do questionário nos fatores efetivos do sucesso do banco Sina são através da análise fatorial que foi dada à sociedade estatística após o teste de validade e estabilidade. Para análise estatística das informações coletadas em nível inferencial, um teste t de amostra foi utilizado. E por apresentar o padrão, a análise fatorial explicativa e confirmatória e por estabelecer uma prioridade em fatores efetivos de sucesso das agências do banco Sina, o pesquisador utilizou o teste de Friedman pelo software SPSS e LISREL. O resultado representa que a taxa de sucesso no banco Sina no leste do Azerbaijão e Ardebil é maior do que o esperado. Considerando também os resultados de confiabilidade de escala e análise fatorial explicativa e confirmatória, de 46 fatores previamente identificados, 37 deles foram categorizados em 7 grupos: gerência, trabalhadores de escritório, financeiro, instalações de filial, condição do cliente, local da agência e área de tecnologia. De acordo com o teste de Friedman, os principais fatores para o sucesso do banco Sina no Azerbaijão Oriental e Ardebil são: para fatores gerenciais, fornecer novos serviços bancários; para os trabalhadores, o tratamento dos trabalhadores com clientes; por financeira, cobrança de sinistros; para as instalações da filial, adorno de filial; para clientes, sua confiança; para local de filial, presença de concorrentes, e para área de tecnologia, sua gestão.

Palavras-chave: Sucesso do Banco Sina; fatores efetivos; abordagem da análise fatorial; Agências do Azerbaijão Oriental e Ardebil.

1.   Introduction

The banks are institutes that collect the properties through different sources and give them to the parts that need it. Therefore, the banks are playing the main role in every country. As the private banks have entered to the financial business, the request for various bank services has been increased. As the result, to win in this competition and to increase their share in

business and earn much profit, the banks are searching the ways to improve their function and attract more customers. In this situation, the success of banks' branches is one of the important parts and it has been become the most important activity of the banks' managers. All around the world, banks and banking industry are the main parts of the country's economic and has an important role in the economics' growth and improvement because of providing various

financial and credit services (micro and macro). Banks and financial institutions collect the sources through investors' money and give them to the investors as a loan. If the banks act tactfully in attraction, allocation, and flow of the sources, they will provide a proper condition for economics' growth. Therefore, the improvement of country's economics is related to the function of banks. As the result, there is one question: how much can the banks act successfully in the economics? (Dousti & et al., 2008). One of the parts that has an important role in optimized allocation of economical sources are banks and financial institutes. Banks are having many activities in the society. They are working in all contexts like giving the loan and credit and managing the worthy documents, facilitating the money transportation and currency exchanges. These actions not only causes the growth of society's economics, but also it gains profit to the banks and all needs the identifying the main factors in banks' success.

The banking business depends on the networking of the branches that has a main relation between the customers and bank center. The loans that are given by the banks' branches are the sources that have been collected by different fund of investors. Also according to marketing, the banks' branches are giving services which are representing the rate of participation and cooperation of banks in perception of customers' needs and providing the best services. There for, the banks are under the pressure to improve their function in order to continue in the society and increase their share in the activities of country's economics in competition with other banks (Abbasgholipour, M., 2010).

The system of investigation of branches' function depicts the rate of customer's fund attraction (source attraction), management of expenses, and services quality. These are the three criteria of investigation system of branch's function which is considered through the branch's facility, fund, manpower, and so on (Sorayyayi & et al, 2011). The topic of investigation of the success of an organization has become such an important issue that the experts in management knowledge believe that "if a thing can't be measured, it won't be managed". Because of that many ways and technics have been provided in measuring the function. However, the most important thing is to have a systematic look at the topic of investigation of the success of an organization (Alvani & et al, 2010).

This research aims to investigate and rank the effective factors on success of Sina bank's branches and provide a pattern for its success. Therefore, these factors are identified by reading the books, essays, previous researches, and the opinions of related experts, and the vague and unclear part of the research is these effective factors on Sina bank's branches and aims to answer these questions: How successful are branches of Sina bank in eastern Azerbaijan and Ardebil; and How is the best pattern of effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil?

2. Methodology

2.1. Theory and basics of research

In this research to survey the effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil is to find the pattern for the success of Sina bank's branches which have been gotten by reading the books, essays, and previous researches. It has been chosen as the theoretical framework.

This research aims to find the best pattern of the success of Sina bank's branches in eastern Azerbaijan and Ardebil. Therefore, the effective factors on success of Sina bank's branches are the vague and unclear aspect of this research and the researcher is going to find and identify them. The independent variable is the effective factors on the success of Sina bank's branches and the dependent variable is the success of bank's branch.

This research is practical according to the goal, and upon the way of collecting the information is quantitative, descriptive research and exploratory. It's practical because it's following the new knowledge which is practiced in product or real process. It's descriptive because it describes whatever is and it considers the being condition and relation, current believes, current processes, clear effects or improving procedures. On the other hand, it's explanatory because it identifies the effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil.

2.2. Statistical society

The statistical society of this research are managers, deputies, and credit responsible of

Sinabank's branches in eastern Azerbaijan and Ardebil that through the received information the number of them during the research was 66 members. Because of the limitation and availability of statistical society, they are chosen selectively. Therefore, 66 questioners were given and after essential consistency, 65 were collected.

2.3. Tools for collecting information

To collect the information through the statistical society and to answer the questions of this research, a questioner is used that was arranged according to the research variables. The research questioner includes two types of questions. First, is coded alphabetically and arranged to identify the specifications of statistical society: sex, marital status, education, age, and job history. The second is about the effective factors on success of Sina bank's branches according to the factor analysis and includes 46 questions and have collected through the different research and ideas.

2.4. Validity and stability of tools

In this research to identify the validity of the tools, face validity has been used. First, the prepared questioner is given to the university professors and experts to find out that whether the given questions can measure the intended parts or not. Then the opinions of professors and experts are taken and the essential changes given to the questions. To identify the stability of the questioner, Cronbach's alpha test has been used. According to this test, 35 members of managers have been studied and through APSS software the stability of the questions of effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebilwere given 0/914. The quantity of this statistics depicts that first, the questions of questioner have more cohesion and second, the questioner has the desirable stability.

Propolis or bee glue is a sticky dark colored material resinous mixture of saliva and beeswax, that has been used to treat many diseases since ancient times, and is a significant source of drug derivatives and bioactive natural compounds (Pasupuleti et al, 2017).

Table 1: validity test of questioner's questions on effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil

Cronbach's alpha	Number
0/914	46

Because the quantity of stability is effective in identifying the effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil, so first, the role of each question in stability is studied. To find the premier stability, Cronbach's alpha has been used and the result was 0/914.

2.5. Explanatory factor research

In factor research, the researcher aims to find the structure of the enormous category of variables and their premier assumption is that each variable can be related to each factor.

Question 3. What is the proper pattern for the effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil?

To answer this question, confirmatory factor analysis technic by LISEREL software has been used and the results are following. To prove the received factor structure and testing the strength and meaningfulness of the variables in the effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil, the confirmatory factor analysis has been done.

Table 2 shows the effect of extraneous latent variable (the effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil) on endogenous latent variables (managerial, workers, property, facility of branch, customer's situation, the place of branch, technology era).

Table 2. The effect of extraneous latent variable on endogenous latent variables

Direction	Estimated parameter	Standardized parameter b	T
Managerial	0/75	0/75	4/11
Workers	0/83	0/83	8/70
Property	0/92	0/93	11/40
Facility	0/95	0/96	9/07
Customer's situation	0/86	0/84	8/78
Place of the branch	0/86	0/87	7/54
Technology area	1/11	1/11	9/71

T shows that the success of Sina bank's branches in Eastern Azerbaijan and Ardebil is meaningful, between 1 and 7 with possibility of 95%. Because the measured t is 95% more that table t.

Table 3 shows the goodness of fit of the received pattern through confirmatory factor analysis which represents the goodness of model with visual data. In other words, definition of success of Sina bank's branches in eastern Azerbaijan and Ardebil with the 7 criteria is adapted with data.

Table 3. The goodness of fit of the received success pattern of Sina bank's branches in eastern Azerbaijan and Ardebil

Chi-squared	Freedom degree	p-value	RMSE	GFI
1886/41	622	0/000	0/056	0/81

The most important fit statistics is chi-squared statistics. This measures the different rate of observed matrix and the estimated rate. Meaninglessness of that shows the fit of pattern and data. But the drawback of this is its sensitivity to sample's volume. It means in samples with high volume, the meaninglessness is decreased. If RMSE is less than 0/05 and GFI more than 0/9, they are considered as the adapted criteria for data. Therefore, the result for the model of effective factors on success of Sina bank's

branches in eastern Azerbaijan and Ardebil with 7 groups is proven.

Question 4. How is the ranking of effective factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil?

The results of freedman test related to the effective managerial factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil have been shown in table 4.

Table 4: The results of freedman test related to the effective managerial factors on success of Sina bank's branches in eastern Azerbaijan and Ardebil

Explanation	Quantity
Number	65
Degree of freedom	8
p-value	0/000

Row	Factors	Average rating
1	Providing new banking services	6/09
2	Identifying and considering the customers' needs	5/98
3	Fame of the bank	5/31
4	Workers' reward system	5/28
5	Workers' salary and wage	5/04
6	Security in bank's relation	4/59
7	assessment of workers' function	4/44
8	Providing loan chances	4/40
9	Telling the bank's goals and plans	3/80

As seen in table 4, because the p-value of freedman test is less than 0/05, the influence of each effective managerial factor on the success of Sina bank's branches in eastern Azerbaijan and Ardebil has a meaningful difference. In a way that among the managerial factors, providing the new banking services is the highest and telling the bank's goals and plans is the least effective on success of Sina bank's branches in eastern Azerbaijan and Ardebil.

Table 5. The effective factors on the success of Sina bank's branches in eastern Azerbaijan and Ardebil

Effective factors on success of Sina bank's branches	Managerial factors	
		Reward system of workers
		Salary and wage of workers
		Providing new banking services
		Assessment of workers' function
		Telling the plans and goals of the bank
		Identifying and providing the customers' needs
		Providing loan opportunities

	Security in relations
	The fame of the bank
	Teaching the workers
	Treatment of workers with customers
	Having professional skills
Personnel factors	Continues creativity and innovation
	Education of workers
	Clean and tidy appearance of workers
	Politeness of workers
	The amount of property attraction
	Given loans
	Collecting debt
Property factors	Earning profit
	The number of current account
	The number of savings account
	Long term savings account
	Number of counters
	The rating of the branch
Facilities of branch	The number of workers
	Decoration of bank
	Customer's trust to the bank
Customer's situation	Satisfaction of customer
	Being in trading center
Place of the bank	Having car parking
	Presence of competitors
	Having ATM
	Management of IT
Technology area	Having poses
	Internet bank
	Bank's message terminal

3. Discussion

The effective factors on the success of Sina bank's branches in eastern Azerbaijan and Ardebil have been categorized in 7 groups: managerial, personnel, property, branches' facilities, customer's situation, place of branch, and technology area. They are identified through reading books, essays, previous research in 46 factors, and by use of explanatory factor analysis from 46 factors, 37 have been identified in 7 groups.

According to received results, in managerial group providing new services was put as the most effective factor and the others are following: Reward system of workers, Salary and wage of workers, Assessment of workers' function, Telling the plans and goals of the bank, Identifying and providing the, customers' needs, Providing loan opportunities, Security in relations, The fame of the bank.

In personnel group the most effective is treatment of workers with customers and the rests are: Teaching the workers, having professional skills, Continues creativity and innovation, Education of workers, clean and tidy appearance of workers, Politeness of workers.

In property group, the most effective is collecting of the debt, and the rest come as: The amount of property attraction, given loans, Earning profit, the number of current account, the number of savings account, Long term savings account.

In facility group, the decoration of bank is the most important factor and in continuous we have: Number of counters, the rating of the branch, the number of workers.

In customer's situation, for the first one we have Customer's trust to the bank and as the second there is satisfaction of customer.

About the place of the bank, presence of competitors is the most effective one and then come: Being in trading center, having car parking.

In technology area, management of IT is number one and then there are: Having ATM, Having POSES, Internet bank, Bank's message terminal.

The rate of the Sina bank's branches' success was measured by one sample t test and the result depicted that the rate of the Sina bank's branches' success was 3/9778 in average and higher than mediocre. The research literature shows the effects of factors such as managerial, personnel, property, branches' facilities, customer's situation, place of branch, and technology area on the success of Sina bank's branches in eastern Azerbaijan and Ardebil.

Chen (1999) has mentioned the effective factors on the success of banks as credit and fame of the bank, security, politeness of workers, and price of profit. Young and Chang (2006) said that earning profit and workers are important. Sorayyayi and et al (1389) mentioned 4 factors: personnel, management, customer, and property. Rasoulian and Abedinpour (1388) have chosen the variables such as the place of the branch, services quality, and treatment of workers and physical facilities of bank. MalekAkhlagh and et al (1392) said that technical factors in technology area, man power sources, are important. Therefore, these results are adapted with the result of this research.

4. Conclusion

In this research, the effective factors in the success of Sina bank branches were assessed and a model through factor analysis approach in Sina banks in Eastern Azerbaijan and Ardebil was presented. The assessments showed that there are 46 effective factors. Statistical society is included 66 members of managers, deputies, and credit responsible in Sina bank's branches in Eastern Azerbaijan and Ardebil. They were selected through the census. The questionnaire was designed based on the factor analysis which was given to the statistical society after the validity and stability test. The result indicated that the success rate in Sina bank in Eastern Azerbaijan and Ardebil was higher than expected. Also considering the results of scale reliability and explanatory and confirmatory factor analysis, from 46 prior identified factors, 37 of them have been categorized in 7 groups: management, office workers, financial, facilities of branch, customer's condition, the place of branch, and technology area. According to the Friedman test, it was found out that the main factors for the success of Sina bank in Eastern Azerbaijan and Ardebil were: for managerial factors, providing new banking services; for workers, the treatment of workers with customers; for financial, collection of claims; for branch's facilities, adornment of branch; for customers condition, their trust; for place of branch, the presence of competitors, and for technology area, its management.

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