



Ranking Commercial Bank Branches in the South East of Tehran with the Presence of Interval Data by Using Data Envelopment Analysis

Mohammad Esmail Sajedifar

M.Sc. Business Administration of Azad University Firooz kooch Branch

Shokrollah Ziari

Academic Member of Azad University Firooz kooch Branch

Ali Mehdizadeh Ashrafi

Academic Member of Azad University Firooz kooch Branch

Abstract

Due to the economic and social development of the main objectives of the Fifth Plan, improving the productivity in different economic sectors and considering the role of central banks in the growth and economic development especially monetary system, in this study the efficiency of trade bank branches (including 64 branches in the South East of Tehran) using data envelopment analysis (DEA) in order to identify strengths and weak branches and provide solutions to improve their performance in order to optimize the use of available resources will be presented. Research to applied research that uses existing data on the level of commercial bank branches with the help of mathematical models of data envelopment analysis (DEA) to data bases is done. The study population included all Tejarat bank branches (including 64 branches in the South East of Tehran) which was analyzed by whole number. The results showed 23 branches in North wise, Karim Khan Zand garbi, Miremad, Fedayeen e Islam, Sepahbod Garani shomali, Sepahbod Garani Pul Karim Khan Zand, Karim Khan Zand shargi, petroshimi, nabard, meydan Haft Tir, gaem magame Farahani, pirusy, Iranshahr, Saadi jonobi, Taleghani - Iranshahr, chahar rahe Muhanna, koshk, baharestan, meydan e giam, 17 shahrivar, Shahid kalantari, shahid Afrasyabi, aref at the level of performance (performance) are 100%.

Keywords: Efficiency, Tejarat Bank, Data Envelopment Analysis (DEA)



Introduction

Undoubtedly, economic development, social and cultural development and improving the living standards and welfare for the people of any economic system is lofty goals, but achieving this noble and worthy goals are not easily achieved, and it requires careful planning and all of discrimination for the optimize utilization all facilities and talent in order to increase the GDP is through Refresher. In today's development approaches, only creating new capacities were not effective, but Refresher and upgrading existing capacity, in other words to speak integrative approach and at the same time improving productivity inputs and used them as a model program development and effective in accelerating economic growth and development and therefore is the most important strategies in recent decades as economic growth is the key to solving the problem [5]. In the meantime, for many developing countries that lack of resources and low level of technology investment is a negative factor promoting economic prosperity, enhanced performance alone can be an important part of GDP growth and the welfare of society made it possible to provide [1]. In addition, in the past two decades, efficiency and strategic management it has become one of the most significant and interesting issues in this regard, performance management and continuous action Janbhng interaction in the field of education, assessment and performance management philosophy uses the following three applies: management philosophy based on the result of work; participative management philosophy, philosophy of total quality management. developing, resulting in a stable and continuous development of human resources and intellectual capital in organizations and the national human resource development. Undoubtedly, if the performance management philosophy to be applied effectively in the organization, the sustainable development of human resources and sustainable development of human resources also operates regular and process improvement will help. Organisation at the end of last year, according to factors such as customer satisfaction, employee satisfaction, effective strategic planning, mental processes and business performance management job are factors that greatly affect the efficiency of Iranian organizations and causes greater emphasis on improving the efficiency of that in this regard, the definition of efficiency is presented in a continuous series of measures and actions the policies and procedures to achieve efficiency goals through focusing on organizational aspects of stress [3].

Data envelopment analysis (DEA) is a mathematical programming techniques by Charnes, Cooper and Rhodes in 1978, was developed to evaluate the performance of public sector organizational units Ghyrantfayy respective units by using multiple input multiple output they produce and the input-output no clear relationship together [2]. This study intends to use the results of DEA models fit the data it collects will range trade bank branches with their performance in the time period studied how alert [4]. In this study population, which included 64 branch commercial bank branches in the South East of Tehran. In this study, input variables, number of employees, operating costs, demands and rights of employees and output variables of current accounts and other accounts, net profit, the amount of deposit, and credit facilities [6]. The main problem with this interpretation is that the rate of interest bank branches and trade in South-East of Tehran in the presence of base data using data envelopment analysis What is?

Research Method

Research to applied research that uses existing data on the level of commercial bank branches with the help of mathematical models of data envelopment analysis (DEA) for data bases will be done. And the applications of this research are as follows:

1. Ranking of bank branches to increase the quality level of services trade
2. competition between branches in order to achieve organizational goals
3. Identify and evaluate the strengths and weaknesses of branches and plan to fix the problems

The process of evaluating the efficiency of commercial bank branches in the area south of East Tehran research involves the study was to determine the input and output variables, the weights variables and the ranking is variable weights. Inputs including the number of employees, operating costs, demands and rights of employees and output variables of current accounts and other accounts, net profit, the amount of deposit, and credit facilities The study population included all commercial bank branches (including 64 branches in the South East of Tehran), respectively.
















A sample of 64 branches and sampling in this research is the type whole number..

Of theoretical studies (library) mainly for the study of literature and history research and study on the subject of the research is to evaluate studies and approaches which should be applied. In addition, data collection tools by studying the documents Tejarat bank branches (including 64 branches in the South East of Tehran) or go to library resources including books, journal publications, research centers, academic theses and searching electronic databases information such as the Internet and more.

Findings

In studying and analyzing the performance (performance) and inefficiency South East of Tehran and ranking them in terms of trade bank branches efficiency value is calculated and determined as efficient branches or subsidiaries par Reference Set (Peers) of the software DEA. Excelsolver and Frontier Analyst was used. Chart (1) , efficiency values obtained for each of the branches of Tejarat Bank of the South East of Tehran (DMU) and rank each with branches functioning as branches par for inefficient branches values show Gives.

Table (1): Commerce Bank Branches Efficiency values of the South East of Tehran (DMU) to the aforementioned list



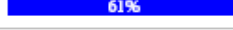
















Efficiency	Graph	
31.7 %		
50 %		
100 %		✓
48.1 %		
100 %		✓
18.5 %		
100 %		✓
62.1 %		
51.4 %		
60 %		
54.5 %		
100 % *		✓
100 %		✓
26.3 %		
44.3 %		



Continue Table (1): Commerce Bank Branches Efficiency values of the South East of Tehran (DMU) to the aforementioned list

Efficiency	Graph	
100 % *	100%	✓
100 % *	100%	✓
17.3 %	17%	
52.6 %	53%	
100 %	100%	✓
100 %	100%	✓
100 %	100%	✓
48.6 %	49%	
63.1 %	63%	
88.4 %	88%	
21 %	21%	
100 %	100%	✓
25.7 %	26%	
43.9 %	44%	
37.2 %	37%	
23.1 %	23%	
46.9 %	47%	
100 %	100%	✓
45.5 %	45%	
76.1 %	76%	
37.5 %	38%	
100 %	100%	✓
60 %	60%	
29.4 %	29%	
100 %	100%	✓
20.8 %	21%	
44.1 %	44%	
75 %	75%	
100 %	100%	✓
42.9 %	43%	

Continue Table (1): Commerce Bank Branches Efficiency values of the South East of Tehran (DMU) to the aforementioned list

Efficiency	Graph	
100 %		✓
34.4 %		
61.4 %		
100 %		✓
71.8 %		
100 %		✓
100 %		✓
84.5 %		
36.9 %		
81.6 %		
57.5 %		
55.3 %		
43.3 %		
37.4 %		
100 %		✓
68.8 %		
100 %		✓
88 %		
100 %		✓

The results showed 23 branches in North wise, Karim Khan Zand garbi, Miremard, Fedayeen e Islam, Sepahbod Garani shomali, , Sepahbod Garani Pul Karim Khan Zand, Karim Khan Zand shargi, petroshimi, nabard, meydan Haft Tir, gaem magame Farahani, piruzy, Iranshahr, Saadi jonobi, Taleghani - Iranshahr, chahar rahe Muhanna, koshk, baharestan, meydan e giam, 17 shahrivar, Shahid kalantari, shahid Afrasyabi, aref at the level of performance (performance) are 100%.

Suggestions

1. targeting the number of employees in branch offices as production input, to the fact that during the study period, personnel costs of employees of foreign subsidiaries is available. Costs as a measure of the opportunity cost of capital lease offices, branches are located in areas that have been used.
2. efficiency is the most branches in the south east of Tehran.the customer may have. According to begin the process of privatization in the banking industry and encouraging private sector activity in the financial system and improve competitive environment, in addition to the incentive for banks to adjust costs and optimum use of available resources is created, the quality of services provided and in credit facilities may also be somewhat improved.
3. limited economic resources and inputs (scale), growth continued efficiency and appropriate support to achieve development goals in our financial system.
4. this in the light of more effective use of fixed assets in the banking system as a card reader device and for increasing customer satisfaction and attract deposits wandering people realized.
5. According to the units (branches) North Saadi, Saba, East Taleghani, Lieutenant century - Oil Company, Shahid Namjoo, three-way Narmak, Iran Mehr, Shariati - Spring Shiraz, Shohada, Shariati,



Shahid Bagheri, Tehran New tenants, screw SHEMIRAN, Saadi - Ekbatan, Crossroads SA, S. east, Istanbul, MANOUCHEHRI, street people, wireless, platforms AFSARIYEH, south east of Tehran Fajr trade bank branches, which are inefficient in terms of performance are low, and the due to the decreasing returns to scale are countless details of this branch has, therefore, to achieve the efficiency frontier should reduce the volume of its activities.

6. The branches need to reduce the share of expensive deposits (deposits of long-term investments or raise the share of deposits affordable) investment deposits short-term, interest-free and interest-free current total savings deposits act in combination. Because the impact of interest rate fluctuations on the performance of the branches is undeniable, however, the greater the share of deposits cost of total deposits, branches of flexibility to change the interest rate, and are better able to act more efficiently in terms of cost as well.

7. deregulation of the banking industry may levy charges for services that were previously provided free of charge. Reasonable proportionality between the fees and services is a decisive factor in the success of this policy. Therefore, we can say that the increase in the volume of facilities and service charge revenues to achieve more, can increase the profitability of branches and thereby increase their effectiveness.

References

1. Ihsen Isik, M; and M.Kabir Hassan. (2013). "Evaluating Planning the Postal Sector of Iran with the Help of DEA", Asia-Pacific Productivity Conference 14-16 July, Brisbane, Australia.
2. Lei Dracke, w; and Maximi Lian J. Hall. (2012). "Using DEA to Improve the Management of Congestion in Chinese Industries", Socio-Economic Planning Sciences, Vol. 35.
3. Maroyama, A; and E. Nakajima. (2011). "Measuring the Efficiency of Decision Making Units", European Journal of Operational Research 2.
4. Rowaisi, R. (2014), "Evaluating Planning the Postal Sector of Iran with the Help of DEA", Asia-Pacific Productivity Conference 14-16 July, Brisbane, Australia.
5. Burns, M. (2014). "Organizational Performance, Harper & row", New York Press.
6. Thampson, M; and Barnett, S. (2014). "The role of perspective-taking and empathy in employee Performance, prosocial behavior and motive for helping", Journal of Genetic Psychology, Vol. 148, No. 3, pp 295-305.
7. Grigorian, D. (2014). "Determinants of Commercial Bank Performance in Transition". Policy Research Working Paper (www.daneshyar.com).
8. Hauner, D. (2014). "Explaining Efficiency Differences Among Large German and Austrian Banks", IMF Working Paper, African Department.
9. Wei-Kang Wang and Hao-Chen Huang. (2013). "Measuring the Relative Efficiency of Commercial Banks: A Comparative Study on Different Ownership Modes in China". The Journal of American Academy of Business, Cambridge. Vol 7. No. 2.
10. Charnes, A., Cooper, W.W. and Rhodes, E. (2013). "Evaluating Program and Managerial Efficiency: an Application of Data Envelopment Analysis to Program Follow Throug h". Management Science, June, Vol. 27, No. 6.
11. Coelli, T. (2014). "A Guide to DEAP Version 2.1: A Data Envelopment Analysis Program". Departemant of Econometrics, University of new England. (www.cepa.com).