
Revising the Activity-Based Costing in the Banks via the Electronic Banking Development

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ABSTRACT

Activity-based costing is one of the most effective ways of costing that helps organizations to improve the cost-based performance. This method, as a strategic tool, allocates the costs to the products in a more accurate way than the traditional methods and enables the organizations to make reasonable and more accurate decisions in a competitive environment. Many articles have explained and recommended the use of this method in the banks and financial institutions. This study has been investigated the needs to provide effective, accurate and technological ways in using the activity-based costing in these institutions with expanding the electronic banking and providing all banking services in its form. However, this study intend to represent a practical model in costing the e-banking services in the activity-based way. The results show that in the E-banking, all the processes are recorded and traceable under the title of the transaction in the database. Finally, appropriate type of activity will be the effective step in the establishment of this costing method in the electronic banking.

JEL Classifications: G21; G24.

Keywords: Activity-Based Costing; Electronic Banking; Transaction; Stimulus.

1. INTRODUCTION

Following the development and the expansion of the informational and communicational tools in recent decades, the volume of transactions and e-commerce have enjoyed a significant growth and transformation in comparison to the traditional commerce, so that the experts have calculated the turnover share of this type of commerce (electronic) more than 500 billion dollars of the annual global trade. This particular type of commerce has expanded since the early 90s and it has been considered by the customers due to the easiness in its use and having the features such as the speed, accuracy and security and the customer-oriented in it became a fundamental approach. The wide and profound impact of the e-commerce on the global markets in the last few decades on one hand and the importance and the role of monetary and credit transactions in the commercial and economical activities on the other hand, have made essential necessity to provide grounds and necessary facilities to simplify the transfer and to exchange money more than ever.

The banking system was the first structure that put in priority of its activities. The modern technology in this century is based on the information technology (IT); by the effect of the information technology influence as a factor for integrating and increasing the expansion of its influence domain. Therefore, the banks have been synchronized and cooperated with the informational and communicational modern technologies and their changes to attract more customers and to expand and to create the diversity in their services that in this way they have made the structural changes in receiving systems and payment and facilitate servicing to the customers, so that many banks managers claim attention to the importance and necessity of this phenomenon and their special attentions in creating the banking structure in the electronically way have been one of the main and principal reasons of the public chance to the e-commerce (Malakuti, 2002).

According to this and according to the e-banking customer-oriented approach, we can consider it as a communicational channel between the bank, as a legal character and the customer as a natural and legal character that the web and internet space, mobile phones and SMS, traditional landlines (banking telephone), banking kiosks, fax, ATMs, points of sale devices (POS) and smart cards are the majority of tools and current facilities for creating it (the communication channel) that dependence on the daily cash and check transactions and as a result, the costs associated with printing, storing and transporting the banknote on one hand and the customers transit on the other hand decrease with the spread of these facilities as the means of the received and paid.

2. THE ELECTRONIC BANKING (E-BANKING)

E-banking or the online or internet banking is to provide facilities for personnel to increase their speed and efficiency in providing the banking services at the branch location and also the inter-branch and interbank processes around the world and to offer the hardware and software facilities to the customers that by using them they can carry out their own banking operations without any necessity to be physically present in the bank, through the safe and confident communication channels at any hour of the day (24 hours). In other words, the electronic banking is using the advanced hardware and software technologies based on the networks and telecommunications for sharing the resources and financial information electronically and there is not any need to the physical presence of the customer in the Branch.

The economic problems and difficulties were revealed which gripped the country's economic system, especially the traditional banking system of Iran after the end of the imposed war. That is why the economic and banking policy makers of our country decided to provide the growth and development and prosperity of the national economy by reforming the country's banking system structure. Therefore, Central Bank of the Islamic Republic of Iran with the aim of improving the bank servicing to the customers and efficient use of the allocated funds to the banks informatics projects, the bank automation plan or the electronic banking seriously put in a priority of its activities which includes the optimization of banking methods, branch automation, supervisions and providing a software, hardware and telecommunication model for use of the country's banks. It should be mentioned that the e-banking history goes back to the years of Solar fifties in Iran which during that period a bank known as the "Tehran" marked the first automatic payment of money (in its branches) by installing two to seven ATMs in its branches.

Electronic banking initially was founded based on the ATMs in Iran and was defined as the means of money payment at different hours of the day which this type of image and definition of the e-banking related to the viewpoint of the developed issues five decades ago, a new definition of the electronic banking has come to mind due to the attention to issues such as the customer respect and satisfaction, the need for reducing the maintenance cost and for using the cash, the increase of the authorities on the country's economic system cycle and the reduction of the inflation and liquidity (Sadr et al., 2006). Anyway, after the country's banking system computerized, the banking operations in the Solar 60s, the banking automation plan represented to the banking system enlisted in the form of a suggested plan for a comprehensive development for the informatics activities of the banks so that with the approval of the banks general assembly, this plan was officially accepted in 1993. Central Bank, in order to operationalize this bill, established the Informatics Services Company as an executive agency of this plan and from those years also heard the rumors of making the national switch for the e-banking and in this regard, the network created between the national bank and Citizen stores until in June 2002 with the approval of the set of the current regulations on the Network Center of the interbank information exchange (the so-called accelerated), new developments started in the country electronic banking system.

3. ACTIVITY-BASED COSTING

Activity-based costing is provided with various definitions in the accounting literature: a group of people believed that "activity-based costing is a costing method that obtains the finished price of the products from the total cost of activities that leads to produce the product. Another group wrote: "Activity-based costing is a method where costs are assigned based on the share proportion of the spent activities by each product, of cost storage to different products. Actually it can be said that the activity-based costing system is one of the modern systems of the products and services costing that provides the needs, such as the correct calculation of the product finished cost, the production process improvement, the redundant activities elimination, the cost stimuluses' identification, the planning of the operation and the business strategies determination for the economic unit (Carenys & Sales, 2008). This system evaluates the reason of making cost and production instead of dealing with the caused, and if an activity has not the justification philosophy and added value, it provides its elimination, modification or improvement ground. Activity-based costing principles are presenting as follow:

1. Costs allocated to products / services should reflect the extra costs that really spent on those products.
2. This goal will be achieved through an analysis of the activities and causes of their engendering.
3. Activities (what the company does) as an example, are an action, process, or a deal that is part of a production of a product or a service.

4. Activities can be defined in different levels of detail.
5. The activities consume resources and should create value for the business.
6. Resource consumption causes the making of the costs.
7. Activities engender the costs.
8. The past managers, tried to manage costs directly.
9. This method states that it is better to manage the activities that are causing the costs. In other words, managing is the origin and cause of the costs engendering.

The good is a physical and tangible object that can prepare or transform it. It exists physically during a specific time period, so it can be created and be used later. But many authors have described the service as follows: all economic activities that their output are not physical goods or structures, are considered as the service section, that usually are consumed at the same time of creating, and they create the added value in different ways as intangible (Fuster, 2007). In the other words, the service is an occurrence, event or intangible process which is created and used simultaneously or shortly after being created and the customer cannot maintain the real services after the creation, but he can hold its effect. Servicing Features are presenting as follow:

1. Being Intangible

Services are intangible basically. It means that we cannot see or touch them before buying them. That is why the service buyers will be looking for the evidences to reduce risks which are indicative of the service quality. Judgment and the buyers conclusions about the quality of a service, are the results of their observations about the place, people, equipment, means of communication and the price. Therefore, the task by serving the service is providing a way to make the service tangible.

2. Inseparability

The tangible goods are stored after the production, then are sold and may take some time to consume. In the case of services, the situation is different. First service is sold, then it is produced and consumed simultaneously. So, service is inseparable from its provider, regardless of this that whether the provider is a person or a machine, if the person is provider of a service, he is part of the service. Because the customer usually is present during the creation of the service. There exists a kind of interaction between the server and customer, as a special form of the marketing, and as a result, the server and customer both affect the outcome of the service.

3. Immutability

The service quality is highly variable. This means that the quality of a service depends on the provider and time and place and the way of servicing. For example, some banks have good reputation and authority in terms of the services quality, also it can be seen, the cheerful and efficient or sullen and tardy personnel within the branches. Even the quality of the provided service may vary by an employee also it may depend on the individual patient.

The current finished cost systems could not provide the useful information in relation to the variety of the bank services in our country, however, the need to reconsider the finished cost system of this type of institutions is felt due to the important role of the finished cost of the products in the decision-making process. The major part of the banks costs are formed by the extra costs, so their optimal allocation to the presentable services is the main activity of the costing. Finding a direct relationship between the costs and services is not affordable, due to the variety of banking services and also the speed of representing them, while the common framework for calculating the initial cost of the product is not applicable to the banks and financial institutions in the manufacturing companies (Mabrly, 2009). Raw materials are required for the construction and completion of the product in the manufacturing institutions, but it is required to borrow cash from customers to provide services in the financial institutions. The feature of the banking products servicing and not being tangible of them in it has been one of the major factors of complexity in sharing the extra costs to the products.

Activity-based costing systems, focused on activities should be carried out to produce products. The activities costs are shared to the products, due to the amount of usage of each product of the activities.

Since all processes related to representing services are processed through the data input into the database by the computerized records system, finally, each information entry can be considered as a separate activity. The effect of each action is visible and tracking as the transaction in this system. Thus, in the electronic banking system, the activities are divided into four categories.

1. Branches
- 2- A.T.M
3. Internet Banking
4. P.O.S

Activities that are done in a bank are so many that the establishment of a costing system lacks the economic justification by their arrival into the division, so the above classification is the result of combining different activities. The first part mainly includes all the activities which are offered within the branches as the banking services such as absorbing the resources, granting facilities, etc. The second part includes a number of the representable services in the branches containing only the payment and receipt of cash, accounts report, bills and other receipts payment items. Third part includes the majority of the provided services by branches except items that for doing them, it is required primarily to go through administrative procedures and specified forms flow to obtain the relevant licenses. Finally, the fourth section that is located at the connection point with the retail systems includes all the payments and transfers of the funds between the customers' accounts.

4. CLASSIFICATION OF RESOURCES

Applied topics have reporting aspects in the accounting system of banks and their use is not an appropriate in the activity-based costing. Costs are classified with their relationship with banking services into two categories: direct and indirect. Direct costs; include the doubtful receivables which directly are attributable to the facilities and the paid profit on deposits that can be assigned to a variety of customers deposits in the Bank. Indirect costs include all the costs associated with the software, hardware and personnel costs, which each of them is assigned to activities with an appropriate cost stimulus. It also includes part of the administrative requirements and depreciation costs, which are directly assigned to the related activity, without the use of stimulus.

Three costs sources can be assigned to activities through cost stimulus in this model. Costs associated with hardware and software, including repairs, maintenance and depreciation of them, which the appropriate stimulus to assign is the investment amount of these assets, in each of the activities. Appropriate Stimulus for the assignment of the personnel costs are as well, the number of personnel that providing the services in branches and or the electronic activity centers support. Everything which is done in the internet banking, mobile banking and SMS banking is related to the transactions these days.

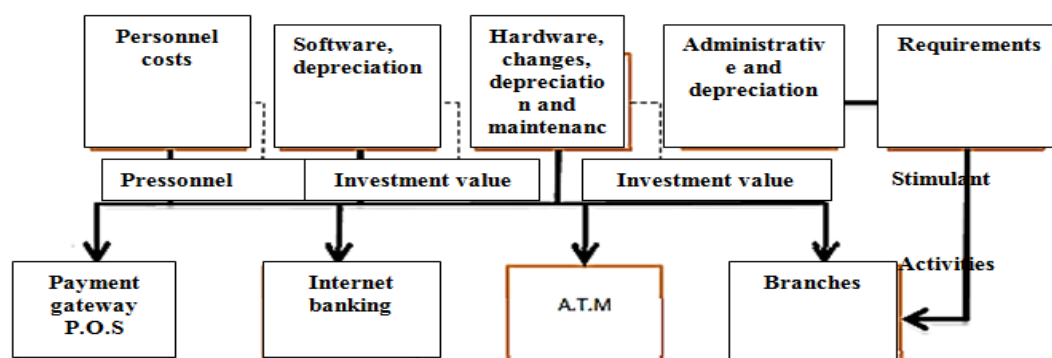


Figure 1.
Determining the Stimulus and Activities

According to Figure 1, transaction is the act of running the orders in the database management system. In the more simple words, transaction is the act of running the users' orders in the database. Transaction can succeed or fail. The main difference between transactions with a common program in the non-bank environment is that the transaction is submitted to the database management system (DBMS) and this system is free in applying any control, and even to postpone and to cancel it. The main objective of these controls and the removes and postponements are maintaining the database comprehensiveness and accuracy. What is paramount in the database is "data" not an application.

The effect of each action is recorded and traceable as an activity under the title of the transaction in the electronic system. As well, each activity center creates the transaction assigned to it. Therefore, by calculating the transaction final cost of each activity, in fact the stimulation of that activity has been determined and measured to costing for each service.

$$ct_j = \frac{C_j}{n_j} \quad (1)$$

Where, the final cost of a single activity transaction: ct_j

The number of the activity transaction : n_j

The total cost allocated to the activity: C_j

Activity: j

The final cost of the banking products in the activity-based costing method is calculated as follows.

$$C_i = \sum_{j=1}^n (ct_j \cdot n_j) \quad (2)$$

Where, c_i is final cost of product.

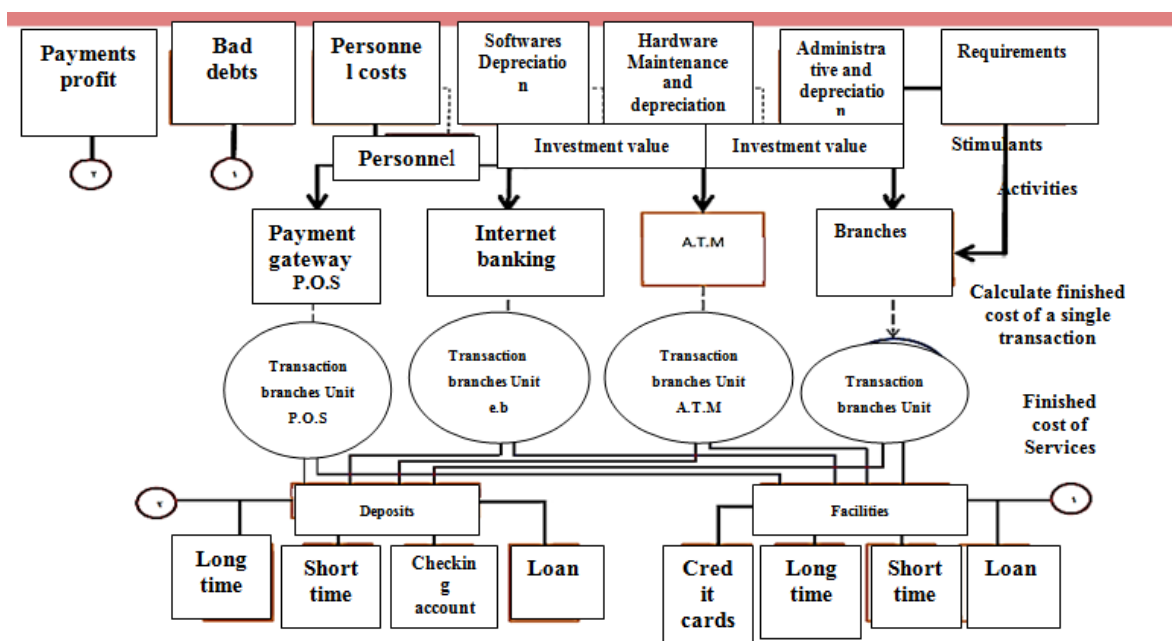


Figure 2.
Costing Model of the Electronic Banking Services in ABC Method

According to Figure 1, Each of the banking services as the final product of the system is consisted of the number of done transactions that the activity centers have done to complete and to provide that service. However, cost of the banking products in the activity-based costing method will calculate based on equation 2.

5. CONCLUSION

This study has been investigated the needs to provide effective, accurate and technological ways in using the activity-based costing in these institutions with expanding the electronic banking and providing all banking services in its form. However, this study intend to represent a practical model in costing the e-banking services in the activity-based way. Activity Based costing approach is an effective way to calculate the final cost of the products and at last, to provide the accurate and relevant information in decision-making. Regards to the results, the traditional costing systems that are used in the financial institutions have failed to keep pace with the fundamental changes in banking to provide the management informational need in the various branches. Because the spread and introduction of new services in modern banking has made the final cost structure more complicated. Finally, this study shows that in the E-banking system, all the processes are recorded and traceable under the title of the transaction in the database, so calculating the final cost of each transaction appropriate to the type of activity will be the effective step in the establishment of this costing method in the electronic banking.

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