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# Reducing Costs by Applying Activity-Based Costing System and the Possibility of the Application in the Banking Sector: An Empirical Study on the Housing Bank for Trade and Finance

خفض التكاليف من خلال تطبيق نظام التكاليف على أساس النشاط وإمكانية التطبيق في القطاع المصرفي. دراسة حالة: بنك الإسكان للتجارة والتمويل

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## Abstract

*This study aims at exploring the possibility of applying the Activity-Based Costing in the banks through a Case study of the Housing Bank for Trade and Finance. The related data was collected from the relevant literature, and the annual report of the Housing Bank for the year 2013. The researchers relied on the Bank's income statement analysis for the year 2013, which showed that the bank allocates all the operation costs to the income summary account according to the traditional costing system. The results showed that the Bank is still applying the traditional costing system, notwithstanding the fact that the ABC system can provide the Bank with many benefits such as reducing operational costs, accurate computing of customers cost, and increasing the Bank Profitability.*

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**Keywords:** Activity – Based system, Housing Bank for Trade and finance, Costs assigning.

## الملخص

تهدف هذه الدراسة التحقق من إمكانية تطبيق نظام التكاليف على أساس النشاط في البنوك، وذلك من خلال دراسة حالة بنك الإسكان للتجارة والتمويل. وقد تم جمع البيانات من الأدبيات ذات الصلة، بالإضافة إلى التقرير السنوي لبنك الإسكان للتجارة والتمويل لعام ٢٠١٣. حيث استند الباحثان على تحليل قائمة الدخل الخاصة بالبنك، التي أظهرت قيام البنك بتحميل التكاليف على حساب ملخص الدخل طبقاً لنظام التكاليف التقليدي. وقد أظهرت نتائج الدراسة أن بنك الإسكان لا زال يطبق نظام التكاليف التقليدي، على الرغم من أن تطبيق نظام التكاليف على أساس النشاط يوفر للبنك فوائد عديدة منها: تخفيض التكاليف التشغيلية، واحتساب تكلفة العميل بدقة أكثر، وزيادة ربحية البنك.

**الكلمات المفتاحية:** نظام التكاليف على أساس النشاط، بنك الإسكان للتجارة والتمويل، تخصيص التكاليف.

## 1- Introduction:

Profitable organizations take special managerial decisions that enable them to achieve a higher rate of return than the rate competitors usually achieve. One of these decisions is reducing costs or at least rationalizing expenses. Every business organization performs its work through a list of activities such as: purchasing, production, marketing, selling, human resources-related activities, and others. Also, each one of these activities is often implemented by a specialized department within the organization that is entitled to its own expenses. Because each department may perform several activities, it becomes necessary to specify the expenses of each activity for many purposes that pertain to financial analysis, decision-making, rationalizing expenses, customer's costs, and others.

In industrial organizations it seems that categorization of cost is easier than it is in service organizations. This is because in the manufacturing process, one can distribute the cost of raw material and of direct labor over the product units. However, in service organizations, one should know how and on whom to distribute the expenses incurred from rent, electricity, etc.

The implementation of activity-based costing system can be the optimal solution to such obstacles. The debate of this study is based on the possibility of implementing this system in service organizations that aim to reduce costs through presenting a case study of the Housing Bank for trade and Finance.

## 2- Problem statement and questions:

As mentioned earlier, the activity-based costing system can be applied in the industrial sector effectively because it is possible to track and document the cost of every item spent on a certain activity. In the service sector, however, it is not easy to inflict cost items on specific activities. In the banking sector, as one of the service sector, determining the customer's cost is very necessary to identify the customer's profitability, which would ultimately contribute to cost reduction by increasing the customer's profitability.

Accordingly, the problem of this study takes is as follows:

“Applying activity-based costing system in banks leads to cost reduction.” This problem calls for finding answers to the questions below:

- 1- How can banks apply this system?
- 2- What are the expected advantages of applying the system?

**3- The study objectives:**

- This study aims to achieve the following objectives:
- Recognize the difference between activity-based costing system and the traditional costing system.
- Verification of the possibility of the application of activity based costing system in the banking sector.
- Exploring the extent of this system in costs reduction.

**4- The importance of the study:**

Service organizations in the present time pay much attention to reduce their own costs as well as their customers' costs

to help them become more competitive and hence secure them more customers. Therefore, the importance of this study stems from its attempt to identify an effective approach that will help both the service sector in general, and the banking sector in particular, to obtain a significant cost reduction.

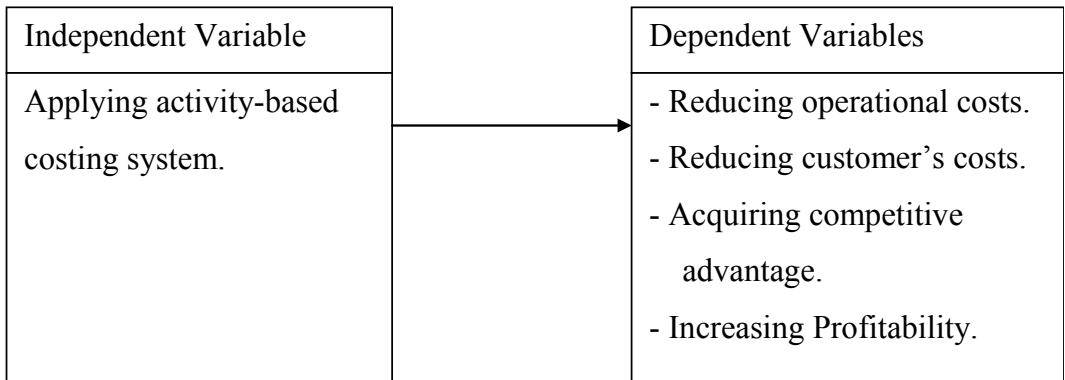
**5- Study Hypotheses:**

HA1: Determining the customer's cost accurately requires that banks start to apply activity-based costing.

HA2: Applying activity-based costing leads to reduction in operational costs of the bank and clients.

HA3: Determining the customer's cost in banks adds another competitive advantage through attracting new customers, and hence increasing the profitability of the banks.

**6- The study model:**



**7- Theoretical and procedural definitions of the study variables:**

-Activity-based costing: It is a cost allocation method that was founded by Cooper and Kaplan in the field of managerial accounting. This system has been successfully applied to industrial and service firms for the purpose of improving tactical and strategic decision-making, and activating corpo-

rate cost control and customer's profitability (Palaiologk and Tjalsma, 2012).

- Operational costs: Operational costs are the costs of running a business; however, these vary in accordance with the business type. Some costs, like the rent cost, are fixed, while others, like the operational costs vary and can go up or down from month to month (Lynn, 2014).

- Customer's costs: It is the total cost that a customer is expected to pay while searching, buying, obtaining, or maintaining a given product or service (Lister, 2014).

- Competitive advantage: A benefit that the organization gains upon providing the same value of its rivals for a lower price, or for a higher price but a greater value through differentiation (Business Dictionary).

### **8- Literature review:**

8.1: Palaiologk and Tjalsma (2012), "An activity-based costing for long-term preservation and dissemination of digital research data, the Case of DANS."

The study has aimed to develop an activity-based costing (ABC) model through conducting a case study on Archiving and Networked Services (DANS) institute. The proposed model was tested on empirical cost data related to activities performed by 51 employees in frames with over 40 different national projects. The results showed that the proposed model enhances the costing of services provided by a data archive, while the combination of the data of Achieving and Networked Services-Activity-Based costing with a Balanced Scorecard would identify areas in the digital preservation process, with the possibility of improving effacer??. This is because the researchers have assigned costs of resources to cost objects through activities and cost drivers.

8.2: Chea (2011), "Activity-Based Costing System in the Service Sector: A Strategic Approach for Enhancing Managerial Decision Making and Competitiveness."

The Study aimed to confirm the possibility of applying the activity-based costing system in the service sector. The study

was conducted based on the previous and current published articles about the applications of activity-based costing system. The results of this study showed that service firms can reap many advantages from the application of this system such as the identification of the most profitable customers, more accurate product and service pricing, more increase in product profitability, and well – organized process cost.

8.3: Hardan and Shatnawi (2013), "Impact of Applying the ABC on Improving the financial Performance in Telecom Companies."

This study aimed at exploring the impact of applying the activity-based costing system on the financial performance of telecom sector. The study was conducted on five Jordanian telecom companies: Zain, Orange, Umniah, Mada, and Wi Tripe. A questionnaire was distributed to 27 participants who were working in management accounting and financial departments in these companies. Also, interviews were conducted with managers. The results of data analysis showed that there was a significant positive relationship between applying ABC System in the companies and reduction of expenses, which lead to increase in profitability. Also the researcher found that the needed infrastructure to apply the ABC System was available in telecom companies.

8.4: Salehi et al (2010), "Activity-Based Costing Model for Cost Calculation in Gas Companies: Empirical Evidence of Iran."

This study aimed to illustrate the steps and advantages of implementing activity-based costing in Iranian gas companies through the case study of Tehran Gas Company. The researchers compared the

cost of consuming one cub meter of gas in all regions by using the ABC System with the Traditional Costing System. Implementing the ABC System has led the company managers to change their perspective towards the company cost of services and to provide a more effective approach for decision-making process. Also, the system has improved the effectiveness of the costing system and cost management, which enabled the company to price services more accurately.

8.5: Tuckova (2012), "Utilization of Process Oriented Costing Systems in Healthcare Organizations."

The study aimed to clarify the importance of the application of the latest cost systems in health care organizations in the Czech Republic. From the researcher's viewpoint, the application of activity-based costing system requires from the organization to conduct technical steps in relation to the major activities in the daily work of the organization, assigning costs to cost pools/cost centers for each activity, and identifying the best cost driver for every activity. The implementation of these steps makes it then easier to assign the costs of activities to products according to the individual demands on the activities. The results of the study showed that applying ABC System has a positive impact on the efficiency of performance of the organization.

### **9- Theoretical background:**

Organizations nowadays are showing a great interest in analyzing costs and identifying codes of behavior and factors that determine these costs (or what is called cost driver). This interest helps managers in many areas, including rationalizing cost, reducing costs, computing the cus-

tomers' costs accurately, and identifying those activities that cost the organization higher prices. The intensifying competition between organizations in the globalization era has caused managers to improvise their work methods. The emergence of multinational companies and the multiplicity of activities carried out by a single company to secure better and larger marketability motivated work on cost reduction in favor of customers, reducing hereby the total costs and increasing profitability.

The related literature suggested several scenarios and methods that can be used for cost reduction. Kumar et al (2010) pointed out that the company can reduce overall costs and risks by dividing the chain of production or service into discrete pieces. To illustrate such suggestion, the researcher introduced the following example: In a service firm, the process of selling the service to the customer is performed through a chain of practices: Negotiations with the customer → customer's acceptance to buy the service → pricing the service → service delivery to the customer. Assuming that the monthly salary of the employee in the front stage (negotiation) is 600 JD, and the negotiation with the customer takes ½ hour, the total cost of this stage will amount to 1.25 JD – that is if the working hours were 8 daily. This 1.25 JD must be added to the service price.

This action would reduce the cost of providing this service. Moreover, organizations that intend to apply the activity-based costing system must develop a reliable method for an identification of its activities. Almihoub et al (2013) pointed out that the allocation of costs can be achieved by conducting the following tasks:

- After identifying the activities, costs of events must be analyzed.
- Costs should be assigned to each process. In this regard, different packages should be segmented according to their characteristics and functions so as to reduce the indirect cost allocated to simple calculations.
- The organization should determine a cost driver for each type of costs and render it as a standard for cost distribution of the activities.
- Allocating and calculating cost drivers of the operations.

Accordingly, if the organization wants to allocate a general cost item like the cost of public relations, the following equation is useful:

The general costs shared by certain product = allocation ratio according to the cost driver × number of operations for the consumed products (Jing and Songqing, 2011).

For the purpose of this study, the researcher sees that it is useful to apply this equation on the banking sector through this practical case:

The total expenses of the Public Relation Department for the previous month amounted to 40 000 JD, including the salaries of the employees. The assumption is that the main activity of this department attends to customers' complaints, which were in the previous month 40 complaints distributed as follows: 15 complaint to the Department of Deposits, 10 complaints the Loans Department, and 15 to Remittances Department. Note that the Public Relation Department is a cost center, while the rest of the sections are profit-based sections. Applying

ABC system requires firstly determining the cost driver, which is represented in this case by the number of complaints; therefore:  $40000 \div 40 = 1000$  JD, which is the cost of each complaint.

The cost driver ratio is  $15 \div 40 = 37.5\%$  for deposits department, and  $10 \div 40 = 25\%$  for loans department, and  $15 \div 40 = 37.5\%$  for remittances department.

Allocating the total cost:

$40000 \times 37.5\% =$	15000
$40000 \times 25\% =$	10000
$40000 \times 37.5\% =$	15000
Total.	40000

In this way, these costs will be assigned to profit-based sections that can cover these costs through adding them to the customer's costs that can be charged to the customer's account as "account management fees." This process would reduce the total costs of the bank.

#### 9.1: The situation in the Housing Bank for Trade and Finance:

Referring to the annual report of the Housing Bank for Trade and Finance for the year 2013, the income statement of the bank shows that the bank is still using the traditional costing system, as shown in the table below:

**Consolidated Income Statement for 31 December 2013**

<b>Statement</b>	<b>Amount</b>
Interest income	364,415,097
Interest expense	(107,298,100)
Net interest income	257,616,997
Net commission income	33,522,764
Net interest and commission income	291,139,761
Net gain from foreign currency exchange	27,159,715
(Loss) Gain from financial assets at fair value through profit or loss	1,341,553
Other income	37,334,924
Gross Income	356,975,953
Employees expenses	69,132,882
Depreciation and amortization	11,388,374
Other expenses	46,214,120
Impairment loss on direct credit facilities	74,733,731
Impairment loss on other financial assets at amortized cost	-
Sundry provisions	5,379,843
Total Expenses	206,848,950
Profit before income tax	150,127,003
Income tax expense	(43,200,374)
Profit for the year	106,926,629

Source: the annual report of the bank for the year 2013.

One can note here that the Housing Bank for Trade and Finance does not implement the activity-based costing system in allocating and assigning costs to the related activities, especially those costs that were consumed in the cost centers in the bank.

9.2: Proposed scenario to apply activity-based costing system:

Costs of one cost centers in the bank:

In the income statement, there is an item under the name "other expenses." This item includes 8 sub-items; one of these is



the stationary expenses which amounted to 2,807,042 JD. The activity-based costing system requires to identify the activities on which this amount of money was spent, and to select a cost driver in order to distribute

this amount on activities. The selected cost driver is the number of transactions executed in each department of the bank. The table below shows this data

Type of cost (expenses)					
Stationary	2,807,042				
Activities	New accounts	Granted loans	Internal memos	L. Cs documents	Total
Number of transactions	1500	650	3200	4700	10050
Activity share of the cost	418,961	181,550	893,785	1,312,746	

Source: By the researchers

In order to achieve the benefits of applying the activity-based costing, the costs of granted loans and the cost of LCs documents must be charged to the customer's account.

**10- Hypothesis testing:**

In the light of the previous debates, one can conclude that applying A.B.C system provides banks with an accurate method for computing the customer's cost. Therefore, the first hypothesis is accepted.

Also, when adding the cost of the provided service to the customer's account, this would reduce the operational costs of the bank. This does not only lead to accept the second hypothesis, but also ensures more accuracy in determining the customer's. This finally works to attract more customers to deal with the bank and, thus, increase the bank's profitability. As such, the third hypothesis is accepted.

**11- Results and recommendations:**

The results of the study can be summarized as follows:

- Applying ABC system in the banking sector is more beneficial than the traditional costing system.
- ABC system provides banks with accurate costs for banking transactions.
- ABC system would decrease the operational costs of the bank and increase the bank's profitability.

**12- Recommendations:**

The researchers recommend that the banking sector in Jordan better shift from applying the traditional costing system to the activity-based costing system and work seriously to develop the infrastructure needed to apply ABC system.

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