

**Reducing Costs by Applying Activity-Based Costing System and the Possibility of the Application in the Banking Sector:**

**An-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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**الملخص**

تهدف هذه الدراسة إلى 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 للعام 2013. حيث استند الباحثان على تحليل قائمة الدخل الخاصة بالبنك والتي أظهرت قيام البنك بتحميل التكاليف على حساب ملخص الدخل طبقاً لنظام التكاليف التقليدي. وقد أظهرت نتائج الدراسة بأن 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، احتساب تكلفة العميل بدقة أكثر، وزيادة ربحية البنك.

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

## 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~~Finance. The related data was collected from the ~~relevant literature~~literature of ~~this aspect~~, and the annual report of the Housing Bank for the year 2013. ~~The~~ Where the researchers relied on the ~~bank's~~Bank's income statement analysis for the year 2013, which showed that the bank allocates all the ~~Operation~~operation costs to the income summary account according to the traditional costing system. The results showed that the ~~bank~~Bank is still applying the traditional costing system, ~~notwithstanding the fact that although~~the ABC system can provide the ~~B~~bank with many benefits such as ~~reducing operational costs, accurate computing of customers cost, and increasing the bank~~Bank Profitability.

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

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### **1- Introduction:**

Profitable organizations take special managerial decisions that enable them to ~~are seeking always to~~ achieve a the higher rate of return than the rate ~~competitors~~ competitors usually achieve. ~~by implementing managerial decisions that help in accomplishing such objective.~~ One of these decisions is reducing costs or at least rationalizing e-expenses. ~~Every It is known that every~~ business organization performs its work business through a list group of activities such as: ~~;~~ purchasing, production, marketing, selling, human resources related activities, and others. so on. Also, ~~it is known that~~ each one of these activities is often implemented by a specialized department within the organization that is entitled to its own, ~~resulting in, that each department has its own~~ expenses. ~~Because And because~~ each department may performs several activities, it becomes necessary to specify determine the expenses of each activity for many purposes that pertain to such as; financial financial analysis, decision-making, rationalizing e expenses, customer's costs, ~~rationalize expenses~~ and others.

In industrial organizations it seems that categorization of categorizing the cost is easier than it is ~~in more than~~ service organizations. This is because in the manufacturing process, one can ~~distributes the distribute the cost of raw material cost and of direct labor costs over the product~~ product units. ~~However,~~

~~, but in services organizations, firms one should know how and on whom to how can we distribute the the expenses incurred from like rent, or electricity, etc. for example, and on whom they can be distributed.~~

~~The implementation of ing Activityactivity-Based-based Costing-costing system, can be the optimal solution to such obstacles. The debate of this study is based on turns around~~ 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-statement~~ and questions:

As mentioned earlier, the activity-based costing system can be applied in the industrial sector ~~effectively significantly~~ because it is possible to of the Possibility of track and document ing the cost of every item spent on a certain s and recording every item of cost on its related activity. ~~In the while, in the services sector, however, it is not becomes not~~ easy to inflict cost items on specific activities. In the banking sector, as one of the services sector, determining the customer's cost is very necessary to in identifying ing the customer's profitability, which would ultimately contribute to cost reduction reducing costs by increasing the customer's profitability.

~~Accordingly, Therefore~~ the problem of this study takes is as follows: the following formula:

"Applying activity-based costing system in banks leads to cost reduction." ~~ing costs~~". This problem calls for finding answers to the requires answers for the questions below:

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

## 3- The study ~~Objetivesobjectives~~:

- 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 ing.

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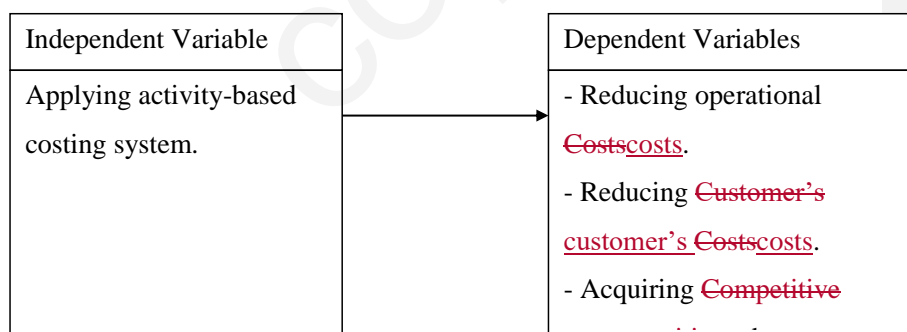
#### 4- The importance of the study ~~Importance:~~

Service organizations, in the ~~present time is era~~ pay much ~~show high~~ attention to ~~in reduce ing~~ their ~~own costs as well as~~ ~~and~~ their customers' costs to help them ~~become more competitive and hence secure them more customers. as a competitive advantage, which contribute significantly in attracting new customers.~~ Therefore, the importance of this study ~~stems from lies in~~ its attempt to ~~identify describe~~ an effective approach ~~that will help both in this area for~~ 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 of~~ banks ~~start to~~ applying activity-based costing.
- HA2: Applying activity-based costing leads to ~~reduction in declining the~~ operational costs of the bank and clients.
- HA3: Determining the customer's cost in banks ~~adds another leads to acquire a~~ competitive advantage ~~through which would~~ attracting new customers, and ~~hence which would~~ increasing the profitability of the banks.

#### 6- The Study study Model ~~model:~~



## 7- Theoretical and ~~Procedural~~ procedural ~~Definitions~~ definitions of the study variables:

- Activity-based costing: It is a cost allocation method ~~that~~ was founded by ~~Cooper~~ 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 ~~for activating on~~ corporate cost control and customer's profitability (Palaiologk and Tjalsma, 2012).
- Operational ~~Costs~~ costs: Operational costs are the costs of running a business; ~~however, these vary, but they are varying in~~ accordance with ~~ing to~~ the business type ~~of the business~~. Some ~~of these costs, like the~~ are fixed such as rent cost, are fixed, while others, like the ~~while, other~~ operational costs vary and are variable and can may go up or down from month to month (Lynn, 2014).
- Customer's ~~Costs~~ costs: It is the t ~~Total cost that a customer~~ cost ~~is the complete packet or fees a customer~~ expected to pay while in the researching, buying, obtaining, or and maintaining ~~of~~ a given product or service (Lister, 2014).
- Competitive advantage: A advantage ~~benefit that the~~ superiority gained by an organization gains upon when it can providing ~~e~~ the same value of as its rivals for but at a lower price, or for a with higher pPrices but a by providing greater value through differentiation (Business Dictionary).

## 8- Literature review:

8.1: Palaiologk and Tjalsma (2012), ~~under the title:~~ "An activity-~~Based 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 on~~ a case study on Archiving and Networked Services (DANS) institute. ~~The, the~~ proposed model was tested on empirical cost data related to activities performed by 51 employees in frames with of 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 ies areas in the digital preservation process, with the possibility of in improving effacer??. This is because the

researchers have assigned costs of resources to cost objects through activities and cost drivers.

8.2: Chea (2011). ~~Under the title:~~ “Activity-Based Costing System in the ~~service~~ ~~Service sector~~ Sector: A Strategic Approach for Enhancing Managerial Decision Making and Competitiveness.”

The Study aimed to confirm the ~~p~~Possibility of applying ~~ication~~the activity-based costing system in the service sector. The study was conducted ~~based y-relying~~ on the previous and current ~~p~~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 ~~p~~Pricing, ~~more~~ increase ~~in~~ product ~~p~~Profitability, and well – organized ~~p~~Process cost.

8.3: Hardan and Shatnawi (2013). ~~Under the title:~~ “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~~ ~~by~~ ~~distributing~~ a questionnaire ~~was distributed~~ to 27 ~~p~~Participants who ~~were are~~ working in management accounting and ~~f~~Financial departments in these ~~c~~Companies. ~~Also~~ ~~,~~ ~~in~~ ~~addition to~~ interviews ~~were conducted~~ with managers. The results of data analysis showed that there ~~is-was~~ a significant positive relationship between applying ABC System in the companies and ~~reduction of ing their~~ expenses, which ~~will~~ lead to increase ~~in ptheir~~ Profitability. Also the researcher found that the needed infrastructure to apply the ABC System ~~was is~~ available in telecom companies.

8.4: Salehi et al (2010). ~~Under the title:~~ “Activity-~~Based~~ Costing Model for Cost Calculation ~~in In~~ Gas Companies: Empirical Evidence of Iran.

This study aimed to illustrate the steps and advantages of implementing ~~Activity~~ ~~activity-~~ ~~Based~~ ~~based~~ ~~Costing~~ ~~costing~~ in Iranian ~~Gas~~ ~~gas~~ ~~Companies~~ ~~companies~~ through ~~the~~ a case study of Tehran Gas Company. The researchers compared the cost of ~~consuming~~ one cub meter of ~~gas~~ ~~consuming~~ ~~gas~~ in all regions by using ~~the~~ ABC System with the Traditional Costing System, ~~and they found that~~ ~~Implementing~~ ~~the~~ ABC System has ~~led~~ ~~changes~~ ~~the~~ ~~Prospective~~ ~~of~~ the company managers ~~to~~ ~~change~~ ~~their~~ ~~perspective~~ towards the company cost of services ~~and~~ ~~to~~ ~~Provided~~ ~~provide~~ a more

effective approach for decision- making pProcess. Also, the system has improved the effectiveness of the costing system and cost management, which ~~enabled the would help the company to in-price ing of services more accurately. in a correct manner.~~

8.5: Tuckova (2012). ~~Under the title:~~ "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 ~~Activityactivity-Based-based Costing-costing~~ system requires from the organization to conduct technical steps ~~in relation to the ; what are the~~ major activities in the daily work of the organization, assigning costs to cost pools/cost centers for each activity, ~~and identifying who is~~ the best cost driver for every activity. ~~The implementation of these steps makes it then And then it becomes~~ easier to assign the costs of activities to products according to the ~~if~~ 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 ~~Backgroundbackground~~:

Organizations nowadays are showing a great ~~interest in quest towards analyzing understanding their~~ costs and ~~identifying codes of the behavior and factors of the factors~~ that ~~determine here~~ these costs (~~or what is called costs driver~~). ~~This interest helps Such understanding would help~~ managers in many areas ~~such as, including ;~~ rationalizing cost, reducing costs, computing the customer's costs accurately, and ~~to identifyidentifying those -which of the activities that cost exercised by~~ the organization ~~may cause in higher prices. the total costs of the organization.~~ ~~The intensifying is concern can be attributed to the intensification of~~ competition between organizations ~~in the of the a global market which has changed the individual role of the organization for the organization and the global market.~~ 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 order to expand market by reducing the cost of the customer, including by reducing the cost of the customer and increasing e-profitability.~~



In this regard, the related literature were 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 → and service delivery to the customer. By 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 equals 1.25 JD – that is if the working hours were 8 Hours-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 good 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 number of 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 costs distribution among the activities.
- Allocating and Calculating Cost drivers of the operations cost.

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 ×  $\frac{\text{Operations number of operations number of for the products consumed}}{\text{products}}$  (Jing and Songqing, 2011).

For the purposes 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 salaries~~ By assuming that the main activity of this department attends to is solving customers' complaints, which were in the previous month 40 ~~Complaint-complaints~~ distributed as follows: ~~15~~ 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 ~~able~~ 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-complaint.

The ~~Cost-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.	<u>40000</u>

In this way, these costs will be assigned to profit-based ~~able~~ sections that who can be able to 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, which would reduce the total costs of the bank.

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

~~By Referring reference~~ to the annual report of the Housing Bank for ~~trade~~ Trade and ~~finance~~ 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 ~~the year ended~~ 31 December 2013**

Statement	Amount
Interest income	364,415,097
Interest expense	(107,298,100)
Net <del>Interest-interest</del> <u>Income</u>	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-scenario~~ to apply ~~Activityactivity-Based-based Costing-costing Systemsystem~~:

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 that consumed~~ 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)	
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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 customer's account.

## 10- Hypothesis testing:

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

Also, when ~~adding recording~~ the cost of the provided service ~~to on~~ the customer's account, this would reduce the operational costs of the bank. ~~This does not only lead~~ ~~And this leads~~ to accept the second hypothesis, ~~but also ensures moreover this action means~~ more accuracy ~~in of the~~ determining the customer's. ~~This finally works to cost which would attract more~~ ~~tempt new~~ customers to deal with the bank and, ~~thus,~~ increases the bank's profitability. ~~As such, So,~~ the third hypothesis is accepted.

## 11- Results and ~~Recommendations~~ recommendations:

The ~~results of the~~ study ~~results~~ 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-operational~~ ~~Costs-costs~~ of the bank and increase the bank's profitability.

## 12- Recommendations:

The researcher's recommends ~~that~~ the banking sector in Jordan ~~To-better~~ shift from applying the traditional costing system to the activity-based costing system ~~and -~~ ~~And to~~ work seriously to develop the ~~infrastructure~~ ~~infrastructure~~ needed to apply ABC system.

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