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The Use of Costing System Based on Activity in Islamic Banks

Abdullah Barakat¹, Hussein Samhan² and Nedal Abu Abboud³

¹Shaqra University, Saudi Arabia.

²Zarqa University, Jordan.

³Al-Balqa Applied University, Jordan.

Abstract: The study aimed to investigate the extent of using Activity Based Costing system in Jordanian Islamic banks. Researchers used descriptive method to test research hypotheses and to conclude results and use statistical tools for analysis. The Study concluded that Islamic banks in Jordan are applying activity Based Costing system, and such application leads to maximize the profitability, The study also concluded that Islamic banks in Jordan are facing obstacles in application of Activity Based costing system.

Keywords: Activity, Costing system, Islamic Banks.

INTRODUCTION

Islamic banks offer many banking services carried out by conventional banks and do not provide some other services. Islamic Banks offer many social services such as Zakat collection, granting interest-free loans, free of charge and also provide needed funding for investment projects in many modes such as Murabaha, Mudaraba, Musharaka Salam, Ijara and Istisna'a.

Islamic banks are exposed to strong competition and to face this competition, it needs to provide services with high quality and competitive prices and in order to be able to set services prices there is a need to know cost of each service accurately.

As a result of increased competition between all banks and multi services offered by these banks to meet their customers desires, it was evident in many banks departments the failure of traditional cost systems to meet these departments needs which led to activity based costing system emergence to addresses the shortcomings of traditional costing systems.

RESEARCH PROBLEM STATEMENT

It is possible to formulate the research problem in the form of the following questions:

1. Do Jordanian Islamic banks apply activity based costing system?
2. Does activity based costing system application in Jordanian Islamic banks maximize profitability?
3. Are there any obstacles that face activity based costing system application in Jordanian Islamic banks?

RESEARCH OBJECTIVES

Research objectives can be summarized as follows:

- To identify if activity based costing is applied or not in Jordanian Islamic banks.
- To investigate activity based costing application role in maximizing the profitability of the Jordanian Islamic banks.
- To identify the obstacles that face application of activity based costing system in Jordanian Islamic banks.

RESEARCH IMPORTANCE

Jordanian Islamic banks constitute an important part of banking sector in Jordan because of their role in providing banking services in Jordanian society. So Jordanian Islamic banks should enjoy a high degree of financial stability that ensures continuity.

Because activity based costing accounting system is an important part of financial system and a tool to control in terms of control in using banking services or in terms of ensuring a reasonable margin of profit to ensure the continuity of Jordanian Islamic banks.

Accordingly, the importance of this research stems from being designed to conclude activity based costing system application or not in Jordanian Islamic banks as well as to investigate the application role of this system in maximizing the profitability of these banks and to identify the obstacles that face the implementation of this system if not being applied.

RESEARCH HYPOTHESES

The First Hypothesis

HO1: Jordanian Islamic banking does not apply activity based costing system.

The Second Hypothesis

HO2: Application of activity based costing system in Jordanian Islamic banks does not lead to maximize profitability.

Third Hypothesis

HO3: There are no obstacles facing activity based costing system application in Jordanian Islamic banks.

RESEARCH METHODOLOGY

Researchers will use descriptive method to test research hypotheses and to conclude results and use statistical tools for analysis.

Population and Sampling

The study population consisted of Jordanian Islamic banks, and the sample will be comprehensive sample that include all banks. A questionnaire will be distributed to employees in finance in these banks.

Arabic Previous Studies

Qabaty (2007) study entitled¹ "Application extent of activity based cost system extent in Islamic banking: A Case Study of banks operating in Republic of Sudan banks"

The study aimed to find the application status of activity based cost accounting in Islamic banks operating in Sudan and barriers of this application. The study concluded that banks do not apply cost accounting system due to the following

1. There is no specialized managerial unit and independent of cost accounting.
2. There are no specialized scientific studies that handle cost accounting system in Islamic banks and take into account the legal aspects.
3. Banks 'Managements are not convinced of cost accounting system importance of bank management cost accounting.
4. There is no obligation from banks supervisory party regarding ABC implementation?

Zuraiqi (2006)² study: entitled: The possibility of using Activity Based Costing in the field of Customer profitability Evaluation in Jordanian Pharmaceutical Companies-field survey.

The study aimed to investigate the possibility of using Activity Based Costing in Customers' profitability evaluation of Jordan commercial companies that operate in pharmaceuticals sector. The researcher showed that the Activity Based Costing system help in cost determination related to certain customers for transferring the from non profitable customers to profitable customers. The study showed that implementation of Activity based Costing system provides basis for customer's profitability evaluation. It also showed that Jordan companies have basic requirement to implement this system and help the organization products pricing and different department's profitability measurement for the purpose of ensuring required profit margin.

Aboura (2005) study entitled³: Application of activity based costing system in hospitals: the case of the Islamic Hospital in Jordan.

The study aimed to show the importance of applying activity based costing system in services systems and applying this system in Islamic hospital in Jordan, and demonstrating its application results and to investigate the outputs correctness and their ability to help the management to take more suitable managerial decisions in the field of planning, and pricing. The study concluded that:

1. The application of Activity-Based Costing System results on selected departments were not retracted to more accurate information but exceeds to accelerate the work in the selected sections through merging some activities and canceling other activities

2. There is a possibility to extent the application to include all hospitals department but due to medical services pricing strategy by the government it is not possible to benefit from the system in pricing process development.

Nour and Addas (2003) study entitled⁶: 'The importance of service cost measurement by using Costing Systems in Jordanian commercial banks.

The study aimed to investigate Jordanian Commercial Banks dependence extent on cost accounting in computing banking services cost and the advantages of cost accounting application in the banks and the most important financial, managerial and technical obstacles that hinder cost accounting application in such banks. The study concluded that banks witch apply coos accounting enjoying high competitive ability and market share more than other banks which do not apply cost accounting despite of the additional cost for application of such systems in services pricing. But the advantage of applying cost accounting is more than the cost. The study also showed that top managements in such banks perceive that application of cost accounting based on activity provides more accurate information and assistance of decision taking.

Foreign Previous Studies

Kumar and Mabto (2013) study entitled⁷: "Current Trends of Application of Activity Based Costing"

The study aimed to understand the need and importance of *ABC* costing in the study of organizations costs... The study concluded that costs based on activity is a tool to determine the real costs and it is used by many industrial companies and with the government, organizations ,and service and financing organizations. It is concluded that *ABC* enables a wider set of companies in operations and job description. And supports accounting strategy based on time and controlling waste and quality along with profits management

*Moll (2005) study entitled⁸: "Activity-Based Costing in New Zealand: An Assessment of *ABC* Users and Non-Users in the New Zealand Firm Environment"*

The study aimed to investigate the activity based costing in New Zealand. Company environment .A questionnaire was distributed to users and non-users of *ABC*, in order to determine the differences between these two groups in relation to the perceived advantages of *ABC*, and, satisfaction with costing, and performance. The influence of top management support was examined. The results indicated that

1. *ABC* users have more optimistic perception of advantages realized from *ABC* than non-users...
2. There is a significant difference in estimating cost between *ABC* users and non users?
3. There is a statistically significant difference is found between the performance of *ABC* users and non-users.
4. *ABC* is beneficial in the New Zealand firm environment.

Cagwin and Bouwman (2000)⁷ entitled: "The Association between Activities–Based Costing and Improvement in Financial Performance"

This study aimed to investigate the improvement in financial performance associated with the use of Activity-Based Costing (*ABC*) and Internal auditors in providing information regarding company financial

performance, and the extent of *ABC* usage, and the enabling conditions to use it the study sample consisted of 204 companies. Results show that there is a positive association between *ABC* and improvement in ROI when *ABC* is used.

Islamic Banks Definition⁸

Those aspects that should be covered by Islamic Bank definition:

1. Foundations of deposits acceptance.
2. Basis of money use.
3. Nature of the Islamic Bank.

So we can say that the Islamic Bank is a financial institution aiming to profit through its acceptance of bank deposits from the public on the basis of loan or investment speculation and all money available through investment financing modes which are not inconsistent with provisions of Islamic Sharia law in any way. This bank is one of the bank's financial components system and committed to the Banking Law, the Central Bank Act, public share holding companies Act, and trade law that does not contradict the application of these laws with legal provisions.

Islamic Banking Accounting Characteristics⁹

1. Islamic banks depend on rules derived from Koran and the Sunnah.
2. Islamic banks are concerned with Stability and objectivity because their rules are derived from the Koran and the Sunnah.
3. Dealing with money through Islam view regarding the money, which recognizes that money is God money and man is the successor and therefore, the accounting errors will be held accountable by the intended distant accountant so that the accountant must be proficient in his work, and is characterized by honesty, trust and accuracy.
4. The considered financial operations are the operations that do not contradict with the provisions of Islamic Sharia law.

Activity based Costing Systems

Traditional costing system is defined as a system that depends on size where indirect costs are allocated based on cost drivers and these drivers do not reflect the causal relationship of products and services consumption of available resources, leading to obtain un real costing figures which assumes that the company that is achieving profits while in reality it achieves losses in certain products while the company is losing competing opportunities in other products which its real cost is less than shown in the figures¹⁰

The importance of activity based costing system application in banking sector

The importance of cost accounting system application in banking sector stems from the following:¹¹

1. Identification of banking activity unit cost.
2. Measuring the cost of each service provided by the bank and measure the cost of departments and sections the bank have.

3. Cost control through determining departments and services cost of in advance and then comparing the actual cost with the estimated.
4. It helps top managements to take managerial decisions concerning the addition of a new service or cancelation existed service Creation of a new banking unit or cancelation existed unit Granting in-kind advantages to some customers .Using new methods in work that serve reviewing and evaluate of services prices provided by the bank to its customers .

Origination of Activity based Costing System

Emergence of activity based costing is rooted to 1987 with an article published in School of management of the Harvard University Department of Accounting and Administration titled How does accounting cost distributes the costs of products. Then many articles and case studies followed. In 1994 was the first success in *ABC* application was documented in Telecommunications Company¹².

ABC Definition and Concept

The International Federation of advanced manufacturing companies defined activity based costing as an approach that measures performance activity and resources cost and cost purposes of the cost and the cost of distributing resources on activities and distributes cost activities on cost purposes through depending on their use and discriminates causal relationships to cost drivers by activities cost.¹³

System Elements¹⁴

1. *Resources*: resources are allocated to carry out the activities which are the cost source such as salaries and depreciation.
2. *Activities*: they defined as units of completed work from organization's resources or they are a series of designed tasks that apply products value of and lead to achieve the work and increase the cost such depositing and the issuance of credit cards.
3. *Goal Cost*: it is the final point which cost is moving to and it is the reason why the work done for
4. *Resources Drive*: it is the influential factor in achieving different operating levels within the facility, which is used to calculate the cost of resources distribution rate on the activities.
5. *Activity cost drive*: It connects activities cost with cost aim through measuring the level of activities consumed by the cost of each goal

System Advantages¹⁵

1. Activities analyzing and determination of their cost and comparing with the resulted returns from them, which allows to get rid of activities that do not add value or reduced to a minimum.
2. Redesign Organization's operations through the development of specific activities or canceled, merged or reorganized.
3. Re designed end product to reduce the need for certain services activities.
4. To follow new technology methods.
5. Converting some indirect costs to direct costs.

System Phases¹⁶

- *Initial model*: explains activity based costing system principles. And its concepts based on examples
- *A pilot project*: Activity based costing system is applied at level of part of the company using the actual or estimated costs for the purpose of developing of cost rates and determination of product cost.
- *Phased project*: Activity based costing system is applied an on a number of company's parts in order to determine the costs.

HYPOTHESES TESTING

Study Sample Characteristics

1. Educational Level

Table 1 indicates that 14.3% of respondents have diploma, 71.4% of the sample are bachelor holders and 14.3% of the sample have master's degree.

Table 1
Frequencies and Percentages of Respondents according to their Education level

<i>Academic Level</i>	<i>Frequency</i>	<i>Percentage %</i>
Diploma	3	14.3%
BSC	15	71.4%
High Diploma	0	0
MSC	3	14.3%
PhD	0	0
Total	21	%100

2. Specialization

Table 2 indicates that 47.6% of respondents are specialized in accounting 42.9% of the sample are specializes in business administration and 9.5% of the sample are specialized in economy.

Table 2
Frequencies and Percentages of Respondents according to their specialization

<i>Academic Level</i>	<i>Frequency</i>	<i>Percentage %</i>
Accounting	10	47.6%
Business Administration	9	42.9%
Economy	2	9.5%
Other	0	0
Total	21	100%

3. Experience

Table 3 indicates that 90.5% of respondents have experience from one year to 10 years, 9.5% of the sample have experience from (11-20) years experience.

Table 3
Frequencies and Percentages of Respondents according to their specialization

<i>Academic Level</i>	<i>Frequency</i>	<i>Percentage %</i>
From one year to ten years	19	90.5%
From 11-20 years	2	9.5%
From 21-30 years	0	0
31 and above	0	0
Total	21	100%

STUDY RESULTS DISCUSSIONS

Mean and Standard Deviation were derived to describe sample's responses towards the following statements

Table 4

<i>No.</i>	<i>Questions</i>	<i>Mean</i>	<i>S. Deviation</i>
1.	There is specialized in the bank to determine the cost of banking services offered to customers.	4.0476	.58959
2.	Revenue of Islamic banking activities is defined based on its cost.	3.9048	.53896
3.	Employees have knowledge of how to apply activity based costing	3.8571	.72703
4.	Bank has automated accounting system that provides detailed data for the purpose of determining the cost according to needed activities.	3.9524	.74001
5.	Management of the bank is not convinced with the usefulness of activity based costing system.	2.8095	1.12335
6.	The bank's success in allocation the cost of banking services provided to customers contributes to improve its competitive position and then to maximize profitability.	4.2381	.62488
7.	The activity based costing system enables determination of banking services offered to customers better costs, which leads to maximizing profitability.	4.1429	.65465
8.	Activity based costing system provides information about the cost that helps decision-makers to identify the most profitable banking services.	4.2857	.64365
9.	Specified employees are involved in specialized courses in the use of activity based costing system.	3.6667	.48305
10.	Activity based costing system is applied because of its advantages and benefits for the purposes of pricing of services.	4.0000	.54772
11.	Lack of sufficient number of staff who are able to run the system efficiently and effectively is considered as one of the obstacles that prevent the use Activity based costing in the bank	3.1905	1.16701
12.	Expected increase of activity based costing system application than the expected benefits.	3.0476	.74001
13.	Lack of enthusiasm of Bank's management to implement the activity based costing is deemed as an obstacle for its implementation.	3.4286	1.24786
14.	Bank has suitable Technology to apply the Activity based costing system	4.0952	.83095

Table indicates that sample's attitude towards q_5 is negative because its mean is less than the virtual mean 930, while sample's attitude is positive for the rest because their means are more than the virtual mean (3)

Reliability

Cronbach Alpha test was used to measure the instrument reliability, which was 81.1%. It is a good percent since it is more than 60%

Study hypothesis testing and results discussions

First hypothesis

HO1: Jordan Islamic banks do not implement Activity Based Costing.

Ha1: Jordan Islamic banks implement Activity Based Costing.

Table 8
T-Test results of first hypothesis

<i>Result</i>	<i>T calculated</i>	<i>T-tabulated</i>	<i>T-Sig</i>
Rejection	6.895	2.086	0.000

One sample test was used. table shows that T calculated values is more than T -tabulated value = 6.895 is more than its tabulated value, and according to decision rule H_0 hypothesis is accepted if the calculated value is less than the tabulated value and the significance (sig) value is less than 0.05 therefore we reject null hypotheses H_0 and accept the alternative one H_a , this means that Islamic banks implement Activity based costing

Second hypothesis

HO1: Implement of Activity Based Costing in Jordan Islamic banks do not lead to maximize profitability

Ha1: Implement of Activity Based Costing in Jordan Islamic banks leads to maximize profitability

Table 9
T-Test results of second hypothesis

<i>Result</i>	<i>T calculated</i>	<i>T-tabulated</i>	<i>T-Sig</i>
Rejection	10.941	2.086	0.000

One sample test was used. table shows that T calculated values is more than T -tabulated value=10.941 is more than its tabulated value, and according to decision rule H_0 hypothesis is accepted if the calculated value is less than the tabulated value and the significance(sig) value is less than 0.05.. Therefore we reject null hypotheses H_0 and accept the alternative one H_a , this means that implementation of Activity based costing leads to maximize profitability.

Third hypothesis

HO1: There are no barriers facing Activity based costing system implementation in Jordanian Islamic banks

Ha1: There are barriers facing Activity based costing system implementation in Jordanian Islamic banks

Table 10
T-Test results of third hypothesis

<i>Result</i>	<i>T calculated</i>	<i>T-tabulated</i>	<i>T-Sig</i>
Rejection	3.689	2.086	0.001

One sample test was used. table shows that *T* calculated values is more that *T*- tabulated value=3.689 is more than its tabulated value, and according to decision role Ho1 hypothesis is accepted if the calculated value is less than the tabulated value and the significance (sig) value is less than 0.05 Therefore we reject null hypotheses Ho1 and accept the alternative one Ha1, this means that there are barriers facing Activity based costing system implementation in Jordanian Islamic banks

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on study statistical results it is possible to demonstrate the most important study conclusions as follows

1. Jordanian Islamic banking system implement activity based costing system.
2. The application of activity based costing system in Jordanian Islamic banks leads to maximize profitability.
3. There are obstacles facing the application of activity based costing system in Jordanian Islamic banks.

Study's Suggestions and Recommendations

Based on study conclusions the following suggestions are recommend:

1. Top management in Jordanian Islamic banks has to prepare conditions for the success of activities based costing in Jordanian Islamic banks.
2. To hold educational and training courses and to educate staff of activity based costing system.
3. Top management and employees in Jordanian Islamic banks have to overcome all the obstacles facing the application of *ABC*
4. Further research related to activity based costing system application in Islamic banks and other financial institutions.

The Questionnaire

Dear Respondents

The researchers aimed to carry out a study entitled “Using activity based costing system in Islamic banking”.

To achieve this requires research requirements and as part of this study a questionnaire to find out the relevant views.

You are kindly requested to answer the questionnaire in order to achieve the desired objectives, Taking in consideration that the obtained will remain confidential until the study achieve its desired objectives and it will only be used for the purposes of scientific research.

Thank you very much for your cooperation and appreciation.

Researchers

Demographic Information

1. Education Level
 - Diploma,
 - BSC,
 - High Diploma
 - Master
 - PhD
2. Major
 - accounting
 - Business administration
 - Economy
 - other
3. Experience
 - 1-10
 - 10-20
 - 21-30
 - 30+

Questionnaire Statements

Please tick X in the box that fit your answer:

No.	Statements	Strongly agree	Agree	To some Extent	Disagree	S. Disagree
1.	There is specialized in the bank to determine the cost of banking services offered to customers.					
2.	Revenue of Islamic banking activities is defined based on its cost.					
3.	Employees have knowledge of how to apply activity based costing					
4.	Bank has automated accounting system that provides detailed data for the purpose of determining the cost according to needed activities.					
5.	Management of the bank is not convinced with the usefulness of activity based costing system.					
6.	The bank's success in allocation the cost of banking services provided to customers contributes to improve its competitive position and then to maximize profitability.					
7.	The activity based costing system enables determination of banking services offered to customers better costs, which leads to maximizing profitability.					
8.	Activity based costing system provides information about the cost that helps decision-makers to identify the most profitable banking services.					
9.	Specified employees are involved in specialized courses in the use of activity based costing system.					
10.	Activity based costing system is applied because of its advantages and benefits for the purposes of pricing of services.					
11.	Lack of sufficient number of staff who are able to run the system efficiently and effectively is considered as one of the obstacles that prevent the use Activity based costing in the bank.					
12.	Expected increase of activity based costing system application than the expected benefits.					
13.	Lack of enthusiasm of Bank's management to implement the activity based costing is deemed as an obstacle for its implementation.					
14.	Bank has suitable Technology to apply the Activity based costing system.					
15.	Difficulty in dividing banking services costs leads to management fear of application activity based costing system application failure.					

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