



# **CUSTOMER PROFITABILITY ANALYSIS BASIS ON ACTIVITIES AND ITS ROLE IN COST MANAGEMENT AND OPERATIONAL PERFORMANCE IMPROVEMENT: APPLIED STUDY IN GENERAL COMPANY FOR ELECTRICAL INDUSTRIES / AIR-COOLED ENGINES FACTORY**

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<b>Article history:</b>		<b>Abstract:</b>
<b>Received:</b>	10 <sup>th</sup> December 2022	<p>The research aims to study the theoretical framework of the customer's profitability and measurement the costs basis on activities and link them through analysis of customer profitability basis on activities for determining the costs and revenues of each customer and thus determine the profitability of each of them, and to show the role of this in providing appropriate information for cost management and operational performance improvement. Research applied in General Company for Electrical Industries / Air-Cooled Engines Factory for the data of the fiscal year 2021. The customer's profitability was analyzed on the basis of the activities in the research sample. The research put a set of conclusions, the most important of which was that customer profitability analysis in the General Company for Electrical Industries can help in providing appropriate information that helps in cost management and operational performance improvement in an appropriate manner to various environmental changes.</p>
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## **1. INTRODUCTION**

The responsibility of economic entity has expanded to meet the needs and desires of customers and manage relationship with them effectively and efficiently. Therefore, it is required to adopt principles and procedures that enable economic unit to achieve this goal and focus on customers in terms of their acquisition and maintenance, as The analysis and measurement of customer profitability is directly related to satisfaction of this customer, and the management's success in achieving this strategic goal is to achieve the necessary balance between customer satisfaction and maintaining and increasing the competitive advantage in long term, and that customer profitability has become the most important variable for economic units in maintaining the share market and work to increase it, In light of the growing management needs for appropriate information on the external environment, and the expenditure of huge amounts of resources, so the need has arisen to invest in the customer sector with the aim of satisfying them in addition to managing the cost effectively and efficiently and improving operational performance

## **The first topic: research methodology and previous studies**

### **1.1. Research problem:**

The problem of research is the lack of sufficient information in economic entity related to the revenues and costs of the customers of these units, and consequently the lack of recognition of the profitability of each of them, which leads to the inability of the administration to make rational decisions related to customers, which can negatively affect the cost management and operational performance, and the broadcasting problem can be expressed through the following question: Is customer profitability analysis basis on activities can help economic units in management of costs and improving operational performance? .

### **1.2 .Research importance:**

The importance of the research comes from the importance of customer profitability analysis as one of the strategic cost management techniques, which refers to the description of revenues and examination of costs for each customer individually or for a group of customers, and then recording the contribution of this customer or these customers to the profits of the economic unit, and the importance increases when the customer profitability analysis on the basis of activities in order to show the role



of this in cost management and improving the operational performance of the economic unit.

### **1.3 .Research objectives:**

The research aims to study the theoretical framework for each of the customer's profitability and determine the costs on the basis of activities and link them through doing the customer profitability analysis basis on activities in order to determine the costs and revenues of each customer and thus determine the profitability of each of them, and to show the role of this in providing appropriate information for cost management and performance operational improvement.

### **1.4 .Research hypothesis:**

The hypothesis of research as follows: The customer profitability analysis basis on activities can help in providing appropriate information for cost management and improving operational performance in economic units.

### **1.5 .Research sample:**

The sample of research is General Company for Electrical Industries / Air-Cooled Engines Factory for the data of the fiscal year 2021.

### **1.6 . Previous studies:**

Some previous studies related to the topic of the current research can be clarified, as shown in the following:

**1. Study (Cokins, 2015):** The study aimed to measure and manage customer profitability. This study emphasized that customers are the source of profits and cash flows into the economic unit and not the production for implement the strategies of the economic unit and stay in the market, and analyze the main activities of the marketing function And a statement of the effect of applying the activity cost accounting system on the costs of these activities in order to ensure the accuracy of the measurement results.

**2. Study (Faria, et.al., 2018):** The study aimed to analysis of customer profitability in hotels by using the activity based costing (ABC) technique, and this study concluded the importance of using activity cost accounting in analyzing of customer profitability in order to distinguish between profitable customers and customers Not profitable, and thus work to provide important information that helps economic units to achieve several advantages compared to other traditional systems.

**3. Study (Albalaki & Majeed, 2018):** The study aimed to demonstrate the role of customer profitability analysis for rationalizing administrative decisions, and this study concluded by developing five steps to analyze customer profitability, namely selecting active customers, designing a model for analyzing customer profitability, calculating customer profitability, interpreting the results and setting Appropriate strategies and programs, and this study is useful for current research during these steps.

**4. Study (Meraghni, et.al., 2021):** The study aimed at how to use the activity-based costing (ABC) system in customer profitability analysis (CPA) to improve profitability, in addition to presenting and analyzing the importance of customer profitability in achieving a competitive advantage for economic units, and the study concluded that there are Great possibility of applying the proposed framework in the modern business environment on structure of costs and revenues for customers.

After reviewing the previous studies, it can be said that the current research is complementary to the previous studies and that it started in terms of what these studies finished. .

## **The second topic: the theoretical side of the research**

### **2.1 .Concept and importance of customer profitability analysis:**

Customer profitability analysis is one of strategic cost management techniques (SCMT) that works on describing revenues and examining costs for each customer individually or for each group of customers, and then recording the margin of the customer or those customers to the profits of the economic entity during a particular accounting period (Holm, et .al.,2011:388).

The essence of the interest in customer profitability analysis can be clarified that the economic unit does not achieve profitable products, but it has profitable customers, and this is due to the fact that the production of a particular product causes a cost, while the profit occurs as a result of selling this product to a specific customer who wants to buy it (Abdel-Dayem, 2000: 404).

The real value of customer profitability analysis comes from the management's behavior based on the information obtained from this analysis to give a strong impetus to increase profits, and then management must use the information extracted from customer profitability analysis to determine the reasons that some customers may achieve profits (Meraghni, et.al., 2021:2).

The importance of customer profitability analysis comes from the importance of the role of the information provided by this analysis in detecting profitable and losing customers



(Bonacchi & Perego, 2012:29), which generates new opportunities for the economic unit in three areas, which are as follows:

**1. Cost management:** The importance of cost management comes from primary objective of economic entity is to maximize profits, as this unit can achieve its goals by controlling the cost of performing activities resulting from customer service, and since the customer profitability analysis does not only work on analyzing the costs of products Rather, this analysis extends to the costs of all activities associated with marketing, selling and delivering the product to the customer, and thus identifying programs to improve profitability through target cost management (Mulhern, 1999:35).

**2. Revenue management:** Customer profitability analysis works to identify the losing customers and the profitable customers, which gives management the freedom to determine the prices of products, which leads to increasing profits from the profitable customer, and transforming the losing customer into a profitable customer in the end (Kaplan & Naraynan, 2001: 6) .

**3. Strategic Marketing Management:** Customer profitability analysis helps in making strategic marketing decisions, by dividing the market or customers into segments according to the profitability of each of them and then directing efforts towards the most profitable segments (Raaij, 2003:574).

The researcher believes that customer profitability analysis (CPA) is accounting technique that works to determine the revenues and costs of each customer and thus help in the detection of profitable customers and customer causing losses, and thus work to take appropriate measures.

## **2.2. Elements and steps for measuring and customer profitability analysis basis on activities:**

In light of the adoption of the strategy of focusing on the customer and the emergence of the concept of customer profitability, traditional cost accounting systems have become unable to meet the administration's need for information that helps it make decisions related to customers, which prompted the shift to activity cost accounting as it represents a tangible development through determining the cost of The customer and its profitability, and one of the most important elements of measuring and analyzing customer profitability using the following activity cost accounting: (Al-Dulaimi, 2005: 37), (Fish, et.al., 2017: 36), (Faria, et.al., 2018: 66)

**1. Resources:** It economic elements and resources that are distributed to perform the activity in economic entity.

**2. Activities:** It focus under the activities costing system, and the activities that lead to the production of a specific product can be divided into the following: (Meraghni, et.al., 2021:3)

**a. Activities related to the unit of the product:** It concerned with producing each unit of a particular product.

**b. Activities related to the production batch:** It concerned with each production batch, regardless of the number of units produced.

**c. Activities related to the product:** It concerned with support the different groups of products.

**d. Activities related to the operations of the economic unit as a whole:** It concerned with operations of the economic unit as a whole and are related to the supply of various production and administrative services.

For the purpose of measuring and analyzing customer profitability on the basis of activities, there are a set of steps that can be clarified as follows: - (Al-Batanoni, 2007: 104), (Faria, et.al., 2018: 67).

1. Determining the direct costs and the indirect costs so that the sources of indirect costs are used as a first step to measure the profitability of the customer using activity cost accounting.

2. Determining the cost vectors that represent the appropriate basis used for distributing each type of cost to the activities of the different economic unit.

3. Distribution of indirect costs to each activity according to the percentages extracted in the light of the cost vectors of indirect costs, then distributing the costs of activities to each product according to the percentages extracted in the light of the cost vectors of the activities.

4. Determining the total cost of the product or service, which represents the total costs obtained by the product or service from each activity.

The researcher stresses the importance of these steps in order to measure customer profitability using activity cost accounting and benefit from it in order to manage cost and improve operational performance.

## **2.3.The importance of customer profitability analysis basis on activities in cost management and improving operational performance:**

Cost management is one of the administrative approaches that are concerned with cost analysis in a broad framework and the use of the information it provides in formulating

competitive strategies and selecting and implementing the best ones (Al-Nuaimi, 2007: 41).

Cost management is a framework through which all relevant aspects can be integrated in order to solve problems and overcome difficulties. It is a tool for continuous improvement that seeks to plan, control and reduce costs, and thus help the economic unit to enhance its competitive position (El-Kelety, 2006:139). The information provided by customer profitability analysis basis on activities can meet the basic needs of managing the economic unit, which includes financial information about costs and revenues, and non-financial information about productivity, quality, time and value, as the focus is on the customer in order to achieve his satisfaction and loyalty and determining the cost vectors that represent the appropriate basis used for distributing each type of cost to the activities of the different economic unit. (Blocher, et. al.,2010:6).

Customer profitability analysis based on activities can help in cost management and improve operational performance through the following: (Harvey & Service, 2009:167), (Cardos & Cardos, 2014:53)

1. Determining the customers, and their needs concerned with cost, price, quality and time.
2. Analyze the value chain of the economic unit and try to identify the activities that do not add value and work on excluding them or merging them with other activities.
3. Linking the value chain of the economic unit with the value chain of suppliers and customers in order to reduce time and increase the effectiveness and efficiency of activities.

The researcher believes that customer profitability analysis basis on activities can help in cost management and improve operational performance by helping to reduce and control costs, as well as improving profitability and productivity indicators and increasing market share for achieving the satisfaction and loyalty and determining the cost vectors that represent the appropriate basis used for distributing each type of cost to the activities.

### **The third topic: the practical aspect of research** **3.1 .Introduction to the General Company for Electrical Industries / Air-cooled Engines Factory:**

The General Company for Electrical Industries was established in 1967. It is located in Baghdad in the Al-Waziriyah area. It is one of the companies of the Iraqi Ministry of Industry and Minerals. The company produces many products for domestic and industrial use. The air-cooled engine factory is one of important in the sample company, as it produces two types of products, namely, the 1/4HP air cooled motor product

and the 1/2HP air cooled motor.

### **3.2.Applied customer profitability analysis basis on activities in air-cooled engine factory and its use in cost management and operational performance improvement:**

During this paragraph, the customer's profitability will be analyzed based on the activities in the air cooled motor plant, and this analysis will be used in cost management and operational performance improvement. This plant produces two types of products, which are 1/4HP air-cooled motor product and 1/2HP air-cooled motor product, and the number of units produced and sold of 1/4HP air-cooled motor product is 3400 units, The number of units produced and sold of the 1/2HP air-cooled engine product is 5600 units during the year 2021, and the direct costs in the air-cooled engine factory during the year 2021 can be clarified through the following table:

Table (1): Direct costs in an air cooled motor factory during the year 2021.

Details	1/4 air cooled motor	1/2 air cooled motor	Total
Direct materials	75820000	143920000	219740000
Direct labor	36720000	90720000	127440000
Total	112540000	234640000	347180000

Source: Prepared by researcher based on the available data in the research sample.

It can be seen from the table (1) the direct costs of the 1/4 HP air cooled motor product were (112540000) dinars, and for the 1/2 HP air cooled motor product was (234640,000) dinars, where the total cost of direct materials at the factory level was (219740000) dinars, and the total cost of direct labor at the factory level was (1274400,000) dinars, meaning that the total direct costs at the factory level were (347180,000) dinars. The indirect industrial costs by activity centers in the air-cooled engines plant during the year 2021 can be explained through the following table:

Table (2): Indirect factory overhead costs by activity centers in an air-cooled engine factory during the year 2021.

Activity centers	Costs allocated to each activity center
Work center	45600000
Machine center	50800000
Factory management center	10600000
Quality Inspection Center	8400000
Total	115400000

Source: Prepared by researcher.



It can be seen from table (2) the total indirect factory overhead costs by activity centers were in the amount of (115400000) dinars distributed over the work center, machinery center, factory management center

and quality inspection center. The cost vectors and their number for each product in the air-cooled engines plant during the year 2021 can be clarified through the following table:

Table (3): Cost drivers and their number for each product in an air-cooled engine factory during the year 2021.

Activity centers	Cost drivers	Total drivers	Number of drivers for product	
			1/4 HP	1/2 HP
Work center	Direct labor hours	20000 hours	8000	12000
Machine center	Machine operating hours	120000 hours	40000	80000
Factory management center	Number of employees	50 employees	20	30
Quality Inspection Center	The number of time inspections	25 times	10	15

Source: Prepared by the researcher.

The calculation of the indirect industrial costs charge rates based on the activities in the air-cooled engines

plant during the year 2021 can be clarified through the following table:

Table (4): Calculation of overhead rates for factory overheads based on activities in an air-cooled engine factory during the year 2021.

Activity centers	Costs allocated to each activity center	Total drivers to each activity center	Rate allocated to each activity center
Work center	45600000	20000	2280 dinars/hour
Machine center	50800000	120000	423.33334 dinars/hour
Factory management center	10600000	50	212000 dinars/employee
Quality Inspection Center	8400000	25	336000 dinars/time

Source: Prepared by the researcher.

It is clear from the above table that the loading center for the work center was (2280) dinars / hour, and for the machine center (42333334) dinars / hour, and for the center of the plant management (212000) workers, and

for the quality inspection center (336000) times. The indirect industrial costs for each activity in the air cooled motor plant can be calculated during the year 2021 as follows:

Table (5): Calculating the indirect industrial costs for each activity in the air-cooled engine factory during the year 2021.

Activity centers	1/4HP air cooled motor	1/2HP air cooled motor	Total
Work center	18240000	27360000	45600000
Machine center	16933333	33866667	50800000
Factory management center	4240000	6360000	10600000
Quality Inspection Center	3360000	5040000	8400000
Total	42773333	72626667	115400000

Source: Prepared by the researcher.

The above table shows the share of each product in the costs of the activity centers. After calculating the loading rates for each activity center, the indirect industrial costs were calculated for each activity. For example, for the

work center, the share of the 1/4 HP air cooled motor product of the indirect industrial costs was (18240000) dinars (8000 hours \* 2280 dinar / hour), and the share of the product of the air-cooled engine with 1/2 horse of indirect industrial costs was (27360000) dinars (12,000 hour \* 2,280 dinar / hour), and so on for the rest of the

activity centers. After determining the direct costs and indirect costs at the level of each of the laboratory products, the research sample will be determined for the

total costs of the products of the air-cooled engines plant during the year 2021, as shown in the following table:

Table (6): Total costs of air cooled motor factory products during the year 2021

Details	1/4HP air cooled motor	1/2HP air cooled motor	Total
Direct material	75820000	143920000	219740000
Direct labor	36720000	90720000	127440000
Factory over head	42773333	72626667	115400000
Total	155313333	307266667	462580000
(÷) Produced units	3400	5600	9000
Cost per unit	45680	54869	51398

Source: Prepared by the researcher.

It can be seen from the table (6) the unit cost of the air-cooled engine product of 1/4 HP was (45680) dinars, and the cost of the unit produced of the air-cooled engine product of 1/4 HP was (54869) dinars. The customer

profitability analysis basis on activities of the 1/4 HP air cooled engine product during the year 2021 through the following table:

Table (7): Customer profitability analysis basis on activities of 1/4HP air cooled motor product during 2021

Details	Government sector customers	Mixed sector customers	Private sector customers	Total
Number of units sold	1800	500	1100	3400
(×) Selling price per unit	53000	53000	53000	53000
Total sales revenue	95400000	26500000	58300000	180200000
(-) Sales discount	(4770000)	(1325000)	-	(6095000)
= Net sales revenue	90630000	25175000	58300000	174105000
(-) Cost of goods sold	(82224000)	(22840000)	(50248000)	(155312000)
= gross profit	8406000	2335000	8052000	18793000
(-) Other costs:				
Cost of purchase orders	224000	156000	112000	492000
transportation fees	2786000	2305000	1378000	6469000
<u>Urgent order costs</u>	<u>1343000</u>	<u>1416000</u>	<u>826000</u>	<u>3585000</u>
Total	(4353000)	(3877000)	(2316000)	(10546000)
Net profit (loss) per customer	4053000	(1542000)	5736000	8247000
(÷) Number of units sold	1800	500	1100	3400
= profitability (loss) of the customer	2252	(3084)	5215	2426

Source: Prepared by the researcher.

It is evident from the above table that the customers of the government sector and customers of the private sector were profitable from the product of the air-cooled engine with 1/4 HP, where the profitability of the customers of the government sector was (2252) dinars per unit, and the profitability of the customers of the private sector was (5215) dinars per unit, while the profitability of the customers of the private sector was (5215) dinars per unit. The customers of the mixed sector are not profitable, as the loss from this sector was (3,084) dinars per unit, so the factory management should focus on the customers of the private sector because they are more profitable than the customers of other sectors. The customer profitability analysis basis on activities of the 1/2HP air cooled motor product during

the year 2021 through the following table:

It is clear from the above table that the customers of the government sector and customers of the private sector were profitable from the product of air cooled motor with 1/2HP, where the profitability of the customers of the government sector was (4608) dinars per unit, and the profitability of the customers of the private sector was (6512) dinars per unit, while the profitability of the customers of the private sector was (6512) dinars per unit. The customers of the mixed sector are not profitable, as the loss from this sector was (419) dinars per unit, so the factory management must focus on the customers of the private sector and the government sector because they are profitable and reconsider the customers of the mixed sector.

Table (8): Customer profitability analysis basis on activities of 1/2HP air cooled motor product during 2021

Details	Government sector customers	Mixed sector customers	Private sector customers	Total
Number of units sold	3100	900	1600	5600
(×) Selling price per unit	65000	65000	65000	65000
Total sales revenue	201500000	58500000	104000000	364000000
(-) Sales discount	(10075000)	(2925000)	0	(13000000)
= Net sales revenue	191425000	55575000	104000000	351000000
(-) Cost of goods sold	(170093900)	(49382100)	(87790400)	(307266400)
= gross profit	21331100	6192900	16209600	43733600
(-) Other costs:				
Cost of purchase orders	987000	1134000	2134000	4255000
transportation fees	3544000	2159000	2533000	10236000
<u>Urgent order costs</u>	<u>2516000</u>	<u>3277000</u>	<u>1123000</u>	<u>6916000</u>
Total	(7047000)	(6570000)	(5790000)	(19407000)
Net profit (loss) per customer	14284100	(377100)	10419600	24326600
(÷) Number of units sold	3100	900	1600	5600
= profitability (loss) of the customer	4608	(419)	6512	4344

Source: Prepared by the researcher.

Based on the foregoing, it can be said that customer profitability analysis basis on activities in an air-cooled engine factory can provide appropriate and useful information for making the necessary decisions to manage cost and improve operational performance with regard to profitability indicators by taking the necessary measures regarding unprofitable customers. Thus, the research hypothesis was proven.

#### **Fourth topic: conclusions and recommendations**

##### **4.1 .Conclusions:**

The research shows the following conclusions:

1. Customer profitability analysis (CPA) is one of strategic cost management techniques. It works to

determine the revenues and costs of each customer and thus help in the detection of profitable customers and customers causing losses, and thus work to take appropriate measures.

2. In light of the adoption of the strategy of focusing on the customer and the emergence of the concept of customer profitability, traditional cost accounting systems have become unable to meet the administration's need for information that helps it make decisions related to customers. Therefore, it is necessary

to switch to activity cost accounting in order to determine the customer's cost and profitability.

3. The information provided by customer profitability analysis basis on activities can meet the basic needs of managing the economic unit, as the focus is on the customer in order to achieve his satisfaction and loyalty.

4. In light of competition and the direction of the company, the research sample to establish good relations with all its customers without measuring the profitability of each of them will expose it to great risks in the future.

5. The customer profitability analysis basis on activities in the company the research sample can help in cost management and improve operational performance by helping to reduce costs and control over them as well as improving profitability indicators.

#### **4.2. Recommendations:**

The research recommends the following:

1. The necessity of establishing a special department in the company, the sample of the research, concerned with managing the relationship with the customer, and collecting customer data to identify the customer's needs and desires on an ongoing basis, so that it has its own strategy and objectives that would increase the company's profits.

2. Work on customer profitability analysis basis on activities in order to provide information that helps the management of the research sample company to increase the number of profitable customers, which leads to improving profitability indicators.

3. The necessity of applying the activity cost accounting system in order to accurately measure customer profitability, and then identify and classify customers according to level of their profitability, in order to save effort and time in drawing appropriate strategies within the conditions of competition.

4. Expanding the identification of activities related to customer service, as well as expanding the analysis of customer costs in order to eliminate the aspects of waste and extravagance and try to convert unprofitable customers into profitable customers.

5. The need for the company, the research sample, to customer profitability analysis basis on activities in the air-cooled in factory and the rest of the company's laboratories in order to manage costs and improve operational performance by improving profitability indicators.

#### **REFERENCE**

1. Abdel-Dayem, Safaa, (2000), "A proposed framework for using the activity management approach to analyze customer profitability – an applied study –" Journal of the Faculty of Commerce for Scientific Research, Faculty of Commerce, Alexandria University, first issue, Egypt.
2. Albalaki, F. M., & Majeed, R. J. (2018), Customer Profitability Analysis, Cost System Purposes and Decision Making Process: A Research Framework. pp. 1547-1552.
3. Al-Batanoni Alaa Mohamed, (2007), "Using the Activity-Based Cost System in Customer Profitability Analysis – An Applied Study", The Egyptian Journal of Business Studies, Faculty of Commerce, Mansoura University, No.2.
4. Al-Dulaimi Khalil, (2005), "The activity-based costing system and its applicability in the industrial joint stock companies in Jordan: a field study", Yarmouk Research - Human and Social Sciences Series, Yarmouk University.
5. Al-Naimi, Sabah Abdul-Wahhab (2007), "Strategic cost management techniques and their role in implementing and evaluating functional strategies in the contemporary business environment - by application in the General Company for the Vegetable Oil Industry", PhD thesis in accounting, University of Baghdad.
6. Blocher, Edward J. ; Stout, David E. & Cokins, Gary R. (2010), "Cost Management : A Strategic Emphasis", 5<sup>th</sup> ed., McGraw-Hill Irwin Inc., USA .
7. Bonacchi, M. & Perego, P. (2012), "Measuring and Managing Customer Life time Value", Management Accounting Quarterly, 2012, vol. 14, no. 1, pp. 27-39.
8. Cardoso, I. R., & Cardoso, V. D. (2014). Measuring customer profitability with activity based costing and balanced scorecard. 16 (1), pp. 52-60.
9. Cokins, G. (2015), Measuring and managing customer profitability Accounting Journal, 96 (8), pp. 23-30.
10. El-Kelety, Ibrahim Abed El-Mageed Ali (2006), "Towards a Conceptual Framework for Strategic Cost Management : The Concept,





Objectives and Instruments", PHD Thesis in Accounting, Chemnitz University, German .

11. Faria, A. R., Ferreira, L., & Trigueiros, D. (2018), Analyzing customer profitability in hotels using activity based costing. 14 (3), pp. 65-74.
12. Fish, M., Miller, W., & Pernstein, A. (2017). The role of organizational culture in the adoption of customer profitability analysis: a field study. 14 (1), pp. 34-47.
13. Harvey, J., & Service, T. I. (2009). Customer profitability analysis: Topic Gateway Series No. 55. CIMA.
14. Holm, M., Kumar, V., Rohde, C. (2011): Measuring Customer Profitability in Complex Environments: An Interdisciplinary Contingency Framework. Academy of Marketing Science, Journal of the Academy of Marketing Science, 2011, vol. 40, no. 3, pp. 387-401.
15. Kaplan, R. & Naraynan V. (2001), "Customer Profitability Measurement and Management", Working paper, Harvard Business School.
16. Meraghni, O. ; Bekkouche, L. & Demdoun, Z. (2021), " Customer Profitability Analysis Through Activity-Based Costing Approach in the Algerian Telecom Sector, A Field Study", The first international conference in Algeria, Volume 5, No.1.
17. Mulhern, Francis J., (1999), "Customer Profitability analysis : Measurement, concentration, and research direction", Journal of Interactive Marketing, vol. 13, Issue 1.