

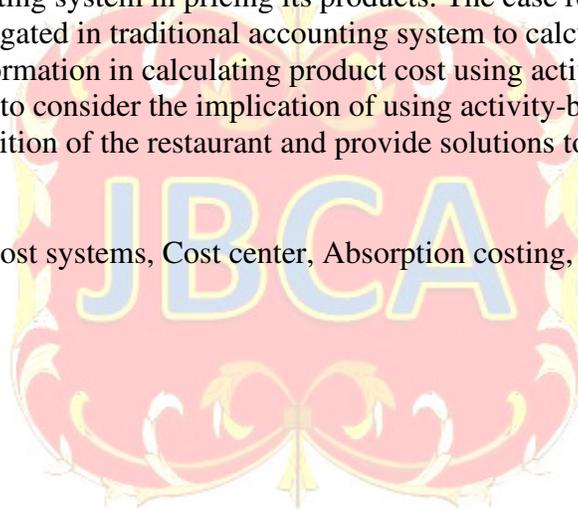
## **Activity Based Costing and its Effectiveness to Management Resource Allocation in a Service Organization**

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### **ABSTRACT**

Activity-Based Costing has predominantly been used within the manufacturing sector in explaining how cost can be disaggregated into those activities that drive cost. However, the use of activity-based costing usefulness in the service industry been under explored. Activity-based costing and its analysis can reveal several weaknesses in an organizations' costing structure and provide the roadmap to increasing efficiency and effectiveness of cost allocation. This case presents information about the importance of activity-based costing within a service organizational (restaurant) setting whose finance director has relied heavily on the use of the traditional absorption costing system in pricing its products. The case requires students to use current information aggregated in traditional accounting system to calculate using absorption costing and use same information in calculating product cost using activity-based costing. Students were also asked to consider the implication of using activity-based costing to improve the current financial condition of the restaurant and provide solutions to how the restaurant can achieve efficiency.

Keywords: Cost driver, Cost systems, Cost center, Absorption costing, Activity-Based Costing



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## INTRODUCTION

Organizations have reduced their over reliance on traditional costing systems in recent years by adopting the Activity Based Management system. Initially management viewed the Activity Based Costing (ABC) as an accurate measure of product cost. However, ABC has emerged as colossal to management's action on increasing corporate profitability. More so, ABC can be applied within different industries not just confined to the manufacturing sector. ABC highlights the linkage between business operations and how those linkage creates demands on corporate resources. It also provides an overview how products, customers, facilities, regions, distributions channels and brands generate revenue and consumes resources. The analysis of ABC allows management to drive their attention towards departments, sectors or activities with greater impact on corporate profitability. As a result, management can strategize on how to improve low performing sectors or departments.

Fully harnessing the ABC concept requires a conceptual breakdown from the traditional costing system. The move away from the traditional costing system requires the stoppage of allocating all expenses to department units or centers and develop a system through the allocation of expenses to those activities that drive cost. In simpler terms, segregation is required between the costs of producing one product/service from the cost of several products/services. The exploration of different ways of using less resources in the production of products and services should be key on management agenda. This requires that the cost of production is reduced or output increased for the same resources increase used.

Usually, the traditional costing system has mostly been geared towards increasing revenue and managing expenses. The traditional costing system places higher reliance on the income statement in making future predictions on revenue and expenses. The projections are made on the face value of revenues, gross profit, general, selling, and administrative expenses. The analysis of these accounts is performed on the aggregate level of revenue and expenses in a broad functional category. For example, when an organization intends to increase its sales from 10% to say 25% in next 5 years, management might project that with expected increase of sales by 8% per year, the company can achieve its forecast if it can hold expense growth to say 7% after 5 years.

However, managing organizations at the aggregate level of income statement and balance sheet does not work. When management look at the gross number and project to hold expense growth by 7% and revenue by 8%, they assume that they can control future years' financial statement. In determining what action can increase income and reduce expenses, management needs to understand factors that impact resource consumption at the micro level where activities take place.

## BACKGROUND

The introduction of activity-based costing systems (ABC) within organizations started in the early 1980s (Kaplan & Bruns, 1987). The objective was to achieve more accurate calculation of product cost. It however proved to have wider use than just calculating the cost per unit of product or service. Management decision making process was later premised on the identification of cost drivers and the reduction of the level of cost within businesses. This led to the introduction of Activity-Based Management (ABM) which concept was similar to ABC. ABM can be defined as set of actions that can be taken on better informed decisions using ABC

information. Its objective was to achieve the same level of output with lower costs. The initial stages of ABC were threefold; (1) identifying the activities that organization undertakes, (2) calculating the cost of each activity, and (3) identifying the activity cost driver for each activity.

ABC allows the traditional aggregate levels of revenue and expenditure to be disaggregated in many ways such as by product, by segment, by customers or client, and by distribution channels and provides a closer view of the parts being considered (Roodhooft, & Konings, 1997). ABC also highlights precisely how activities are related to parts of business and how those activities relate to the generation of revenue and consumption of resources. Through the highlight of those relationships, ABC directs an organization on areas within the business that require direction to increase profitability.

The case below uses a generic service company that provide food services to high end corporate entities. The case is designed to provide an explanation on the use of ABC within service organizations. Most examples of ABC are centered on manufacturing organizations and such this example of ABC will be used to provide detailed explanation on the use of ABC within service organizations. The restaurant food serves mainly two food; standard and deluxe.

### **CASE FOR ACTIVITY- BASED COSTING**

Below is an example a restaurant that sell two foods to a high-end corporate organization. The restaurant sells to two of foods; standard and deluxe Food. The restaurant undertook some research and realized that it is not providing the right selling price to its clientele due to an ineffective cost allocation process. Lately, deluxe food has experienced a sharp decline in customer orders and a recent survey conducted by management noted customers complaints on the high cost of deluxe foods compared to other restaurants. Management is concerned about this development and would like to find ways of reducing the price of deluxe foods without affecting their profit margins. The CEO has just returned from a conference where ABC was introduced and believes the magic to solving its pricing dilemma is the use of ABC. He also believes if the pricing is done right, the restaurant could make a lot of profit from its deluxe food and is requesting your assistance as the management accountant to provide solution for the pricing of its two foods using activity-based costing.

The CEO is first concerned about the customer care department as it is believed the current cost allocation gives an unrealistic result for the two foods. The Chief Finance Officer presently allocates customer experience cost into the cost of the product on unit cost basis using the information provided in the table 1. The finance director attempts to correct the problem of incorrect cost allocation by adding an additional \$145 to the deluxe food to cover the extra work involved in taking orders and preparing the deluxe food.

Information has been prepared by the Management Accountant in table 2 through interviewing the finance and customer experience department. The CEO requires your assistance as senior management accountant to undertake an analysis to compare the results of calculations between the standard absorption and activity-based costing for both standard and deluxe food, When those analysis are completed, he is also interested in you considering the effects of the customer experience department process of cost identification of each activity. Particularly, the CEO want you to identify those non-value-added activities and how that affect the quality of cost management at the firm.

Below is the financial information obtained from June 30, 2019 about the cost structures of standard and deluxe food as currently existing.

Restaurant Food (information for the year ending June 30, 2019).

Customer Experience Department

Table 1 Data of Cost

Cost item	Amount
Salaries	\$800,000
Technology	360,000
Communication	150,000
Supplies	60,000
Depreciation	72,000
<b>Total</b>	<b>\$1,442,000</b>

#### Information 1

The customer experience department at present allocates the cost of food based on 16,000 orders each year. On an average, every order contains 5.5 foods

**Table 2: Activity-costing data**

Customer Experience Department processes	Percent of Staff Time	Additional Information
Inquiries from customers and preparing a price list for likely orders	40	There are 35,000 enquiries/price list per year
Actual orders received	10	There are 16,000 actual orders completed in a year
Clients credit Check	10	Credit check is performed once in a year
Food Supervision through processing and delivering	15	
Time spent in handling clients' complaints	25	There are 3,200 complaints in a year
Total	100%	

#### Additional information

1. The total cost of the customer experience department is assigned using the percentage of staff time as this driver of cost in the department
2. Of the total inquiries obtained standard food account for ninety percent (90%) and the rest of the 10% relates to deluxe food.
3. The deluxe food accounts for 20% of inquiries from customers and preparing price list for potential orders.
4. There is an equal percentage of time related to actual orders received, preparing credit checks for clients and food supervision for deluxe and standard food.
5. With the 3200 complaints received, half relates deluxe food and the half to stanard food.
6. For each standard order, there is an average six foods prepared

7. Each deluxe order has only one food

Required:

1. Calculate the cost per food using the traditional costing method
2. As a management accountant, using the information above calculate the cost of the customer experience department using the activity-based
3. Using both the activity-based costing and traditional costing method calculated above comment on the two costing methods

## **CASE LEARNING AND IMPLEMENTATION GUIDELINES.**

### **Case Learning Objectives**

The design of this case is to enable businesses and students to understand ABC in service offering context. Traditionally many examples of ABC have been applied within the manufacturing sector. This case is particularly useful for the application of ABC within a service organization. The case also aims at directing students on understanding how overhead cost can be disaggregated into several activities of cost centers. The case has five learning objectives. On completing the case students or businesses must be to comprehend and understand the following:

1. The splitting of fixed overheads into activities known as the cost pools
2. For every cost pool, the student must be able to identify what causes those cost. This is known as the cost driver
3. The calculation of cost per unit by dividing cost pool by the total number of cost driver
4. Allocating the cost of the food based on how much each food uses the cost driver
5. Explaining the difference between the two cost concepts.

### **Implementation Guidance**

The case is intended to be used in illustrating ABC to service organizations and undergraduate students. It should be used after explaining direct cost, indirect cost, traditional costing system, product pricing, and Activity-Based Costing. The case can also be used in graduate-level class. It is recommended that students are assigned questions using ABC in a manufacturing sector and showed the importance of using ABC in service organizations. It will also be important for students to understand the flow of cost in determining the cost of production and appreciate the difference between the allocation of overhead cost using the traditional costing process and ABC method.

From the case, the main cost of activities for the Customer Care department is preorder preparation (handling inquiries and quotes) and post-order complaints handling which accounts for 65% of total cost of the customer care department. The prework inquiries for the restaurant are critical component of their operations which the restaurants convert 46% (16000/35000) into actual orders for the restaurant. As part explaining the restaurant performance, it will be important to benchmark this percent to other similar restaurants.

Complaints handling represents a non-value-added activity in activity-based costing examination. Nonvalue activities represent activities that do not increase the value of the food to the customers. While the restaurant cannot eliminate the non-value-added activities, it can minimize it. Inspection and idle time for example are non-added value activities. Customer complaints is non-value adding as it arises due to the restaurant inability to fulfil thier service

responsibilities. Complaints handling correlates with quality management and as the restaurant such complaints, it cost should also reduce. Currently, customer complaints stand at 20% (3200/16000) of the actual orders. These complaints might arise due to a number of factors and it important for the restaurant ascertain the cause of these complaints. For example, those complaints might arise from taking the actual orders (pre- handling of quotes) where food orders are not properly understood or incorrectly specified. It is also important to explain prevention cost and conformance cost. Not fully understanding the order leads to non- conformance cost as product does not meet specified criteria.

Food quality will be impacted though supervision department Quality of the food prepared could also be affected by the supervision. To ensure that food prepared meets the required specifications, the customer experience department should be given the authority to intervene with other department in correcting errors for food prepared. This will ensure that food prepared meet specifications and prevents customer complaints. The restaurant prior to delivery must ensure that food meets customer specifications.

Other areas that will be of benefit to the firm is administration of the restaurant and the quality of their performance will be captured in the financial information system. The quality of the way an order is processed will benchmarked to number of invoice disputes and credit offered to customers in resolving customer complaints. Failure to undertake an effective credit checks will result in higher bad debts and hence the effectiveness of department should be evaluated against the level of bad debts

### **Conclusion**

The main objective of this paper was to develop a case to underscore the use of ABC system within service organizations. The ABC system has been used predominantly within manufacturing settings. This case study rightly highlights the benefits of ABC in a service organization and how it can be used to improve overall performance. It identifies areas of wastage and provide direction on how the restaurant can improve the pricing of their two food instead of adding an arbitrary amount to the deluxe food under the traditional costing system

Pricing of products and services or the discontinuations of it is an important business decision within organizations. The satisfactions of customers are an important decision for every business that desire to continue operations in the long run. Customer satisfaction is ensured by meeting their needs or organizations must make profit whiles meeting those needs. This requirement of making profit and meeting customers expectation is function that management cannot abdicate. As a result of changes that have occurred over the years, there is level of pressure for organizations to produce goods or provide services at a relatively reduced price. Providing goods or services at reduced prices whiles meeting customer expectations and making profit is a strategic objective



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